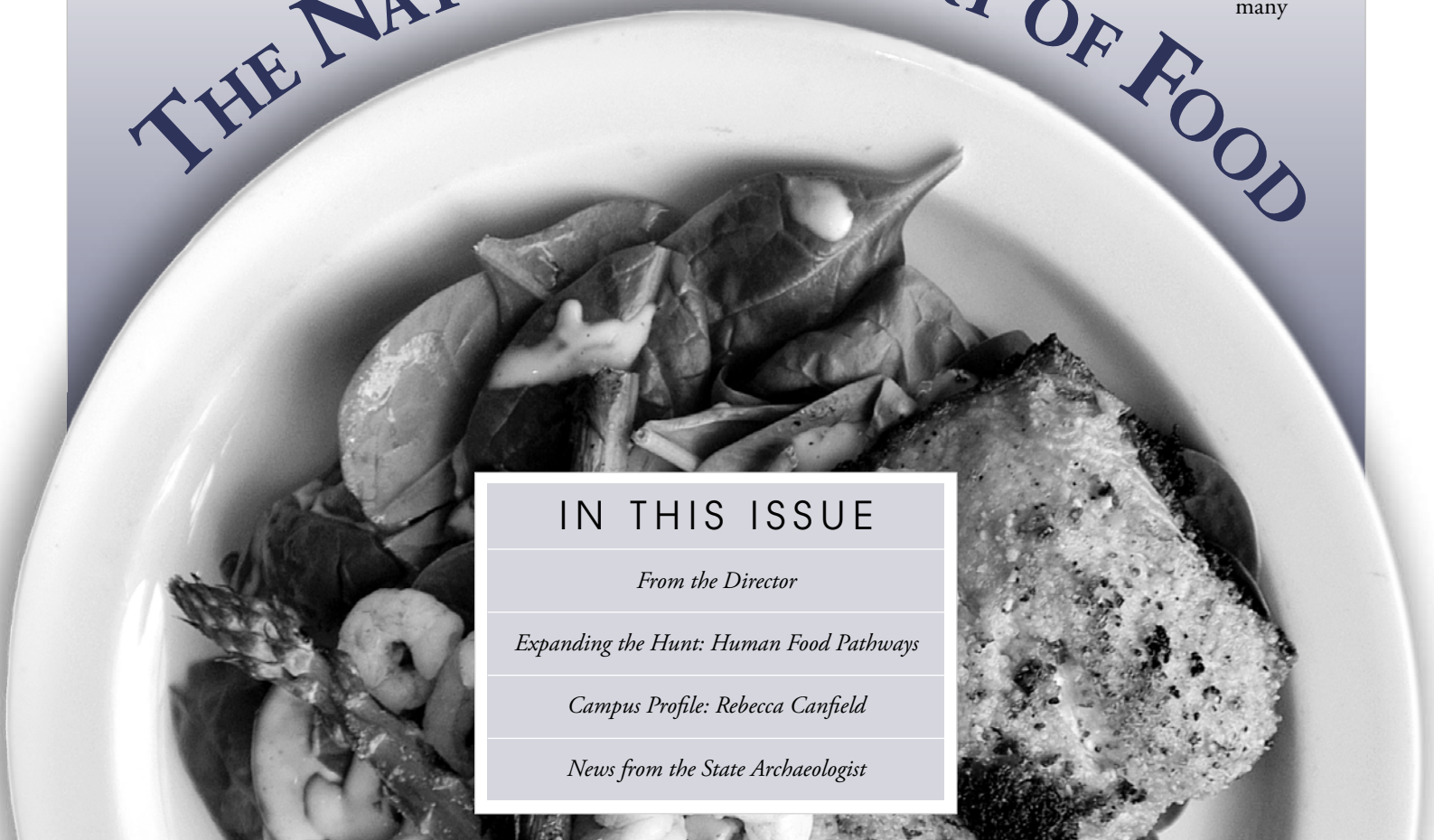
News from the
CONNECTICUT STATE MUSEUM OF NATURAL HISTORY
& CONNECTICUT ARCHAEOLOGY CENTER
University of Connecticut • Winter 2009

The Natural History of Food

The need to obtain the fuel and nutrients required to survive has shaped every organism on the planet. In the human population, the things we eat not only shape our physiology, they have helped shape our culture. Throughout history, our relationship to food has influenced our population distribution, technologies, politics, social interaction, and aesthetic expression. Over the next year the Connecticut State Museum of Natural History and Connecticut Archaeology Center will be looking closer at how what we eat has shaped who we are in a new series: *The Natural History of Food*. Through lectures, programs, and workshops, we will bring together experts from the University of Connecticut and beyond who will explore how the physical and biological processes occurring around us impact the way we eat, and how what we eat shapes our culture.

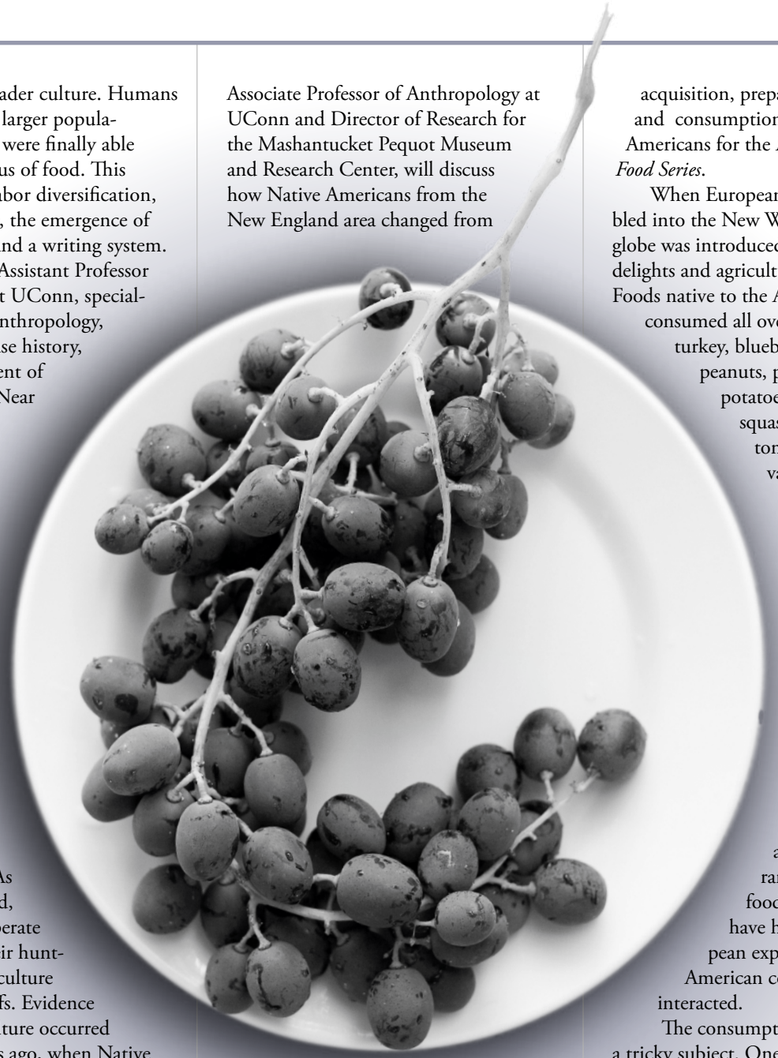
The first humans moved from hunting and gathering to agriculture about 10,000 years ago in the Middle East. The Mediterranean climate consists of a long dry season complimented by a short period of rain, making it an ideal location for growing wheat and barley. The domestication of plants and animals encouraged many



IN THIS ISSUE

changes in the broader culture. Humans could now sustain larger populations because they were finally able to produce a surplus of food. This eventually led to labor diversification, trading economies, the emergence of political systems, and a writing system. Dr. Alexia Smith, Assistant Professor of Anthropology at UConn, specializes in ecological anthropology, climate and land use history, and the development of agriculture in the Near East. Join us this spring when she will discuss the beginnings of agriculture in the Middle East as part of the *Natural History of Food Series*.

During roughly the same time period, Native Americans were moving into the Northeast regions on the tail of a retreating glacier. As the climate warmed, the emerging temperate forest provided their hunting and gathering culture abundant foodstuffs. Evidence of the first horticulture occurred around 8,000 years ago, when Native peoples began culling unwanted trees in favor of those that produced food. Around 2,000 years ago, indigenous crops such as sunflower and Chenopodium became domesticated. Perhaps the most important change in Native American history was the introduction of maize, which took place roughly 1,000 years ago in the Northeast. With maize came increased populations and the first truly sedentary villages. Archaeologists have found clear evidence of morphological changes in the plant over time, as it was manipulated to produce larger, more abundant cobs. As part of the *Natural History of Food Series*, Kevin McBride, Associate Professor of Anthropology at UConn and Director of Research for the Mashantucket Pequot Museum and Research Center, will discuss how Native Americans from the New England area changed from gathering and hunting food to sophisticated agriculture practices.



Native American foodways were closely connected to seasonal changes. Food, clothing, houses, medicine, and tools were all obtained from the natural environment, and each season provided specific resources vital for survival. Today, foods are shipped to supermarkets from around the world, year round, so the connection between food and the seasons has been minimized. Meg Harper, Director of the Public Archaeology Survey Team, Inc., will reconnect us with what we eat in her workshop about the seasonal acquisition, preparations, rituals, and consumption of food by Native Americans for the *Natural History of Food Series*.

When European explorers stumbled into the New World, the entire globe was introduced to new culinary delights and agricultural practices. Foods native to the Americas are now consumed all over the world: corn, turkey, blueberries, cranberries, peanuts, peppers, popcorn, potatoes, pumpkins, squash, sunflowers, tomatoes, and even vanilla and cacao beans. For the *Natural History of Food Series,* Dr. Marge Bruchac, from UConn's Anthropology Department and Coordinator of the Native American Studies Program at the Avery Point campus, will talk about the wide-ranging impact the foods of the Americas have had since European explorers and Native American communities first interacted.

The consumption of food can be a tricky subject. One moment, it provides essential nourishment, the next—it is a vector for disease. The development of food preservation techniques opened up new opportunities for the evolution of human culture. From crossing the ocean to the New World to orbiting the planet from the space shuttle, food preservation has allowed for humans' survival in hostile environments and expansion to areas once unattainable. Cheryl Rautio, Expanded Food & Nutrition Education Program Coordinator with the UConn Cooperative Extension System, and antique canning jar expert Cameron Boum will explore the cultural and environmental impact of canning: past, present, and future.

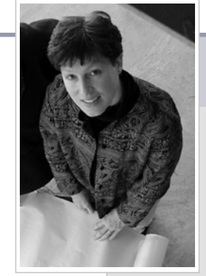
From providing exciting flavors to keeping us healthy with their medicinal properties, plants are an essential component of human life. The University of Connecticut's Ecology & Evolutionary Biology Plant Growth Greenhouses have one of the most diverse teaching plant collections in the United States, including many connected to the food and medical industries. For the *Natural History of Food Series*, participants in our special guided greenhouse tour will have the uncommon opportunity to see many foods, spices, and medicines in their pre-harvested and unprocessed forms—the plant.

When it comes to the food products synonymous with New England, maple syrup is near the top of the list. Buckets, tubing, and taps donning the base of sugar maple trees in the last weeks of winter signify the height of maple sugaring season. When the days are above freezing and the nights are still below, sugarhouses are in full production, slowly boiling sap down into the sweet amber-colored syrup. UConn's Forestry and Wildlife Club, based out of the College of Agriculture and Natural Resources, operates its own sugarhouse on the Storrs campus, and will offer a hands-on visit to their sugarhouse this winter as part of the *Natural History of Food Series*.

Orbiting satellites offer a unique lens on how humans interact with their environment. Using remote sensing techniques and satellite imagery, Russell Schimmer, a PhD candidate in UConn's Department of Natural Resources Management and Engineering and UConn Law School student, seeks to uncover the impacts human behaviors, such as war and genocide, have on the environment and the availability of resources such as food. The data has offered an uncommon look and understanding of how the availability of resources can lead to competition, conflict, and large-scale violence. The hope is that the use of satellite remote sensing will help quantify people's impact on their environment, leading to better management of resources such as food, and thus preventing conflict. Mr. Schimmer will showcase some of his findings for the *The Natural History of Food Series.*

These are just a sampling of the food stories being presented during *The Natural History of Food Series* this spring. Hungry for more? Join us over the next year while we will eat, think, and explore how our relationship with food reflects the intimate connections between natural history and our cultural history.

For more information on specific programs in our *Natural History of Food* series check our events calendar at www.mnh.uconn.edu/currentcalendar.html.



FROM THE DIRECTOR

Dear Friends,

In the spring of 2007, we opened the doors to our newly renovated museum. Our new exhibits and dedicated programming space have allowed us to significantly expand and better serve our visitors. Starting earlier this year, we undertook the task of re-evaluating our 5 year strategic plan, taking a good hard look at where the Museum and Archaeology Center currently are, where we want to go, and articulating a strategy for how to get there. Just as we were completing the new Strategic Plan this fall, the harsh realities of the nation's financial crisis began to come clear. It will be months before we fully understand the effect this crisis will have on the State's budget, the University, the College of Liberal Arts and Sciences, and our museum. But for now, like everyone else, we are faced with the challenge of assessing how these new realities fit into our vision of the future.

There are clear challenges ahead. We will be striving to do more with less. But already we are realizing that there will be new opportunities too. Times like these inspire new ways of approaching problems. More creative collaborations can spring out of the need to maximize and share resources and ideas. For example, through the recently-established Dorothy C. Goodwin Fund we will have the opportunity to help improve teacher preparation at UConn by supporting the Teachers for a New Era program in the Neag School of Education. We are proud that this new partnership will begin at a time of decreasing resources, as projects like this work to maximize educational impact while minimizing costs. In tough economic times the Museum's investment in creative collaboration, public engagement, and interdisciplinary activities—our core strategic strengths—are proving more valuable than ever.

Thanks, as always.

Leanne Harty

Leanne Harty, Director

EXPANDING THE HUNT

CHANGING HUMAN FOODWAYS IN THE NORTHEAST • BY NICK BELLANTONI

Over a mere span of centuries, humans have gone from using and understanding the natural resources around them on a local level, to understanding and exploiting nature on a global scale. Nowhere is this made more evident than when we examine our archaeological and historicial understanding of changing human foodways.

The science of archaeology uses a multi-disciplinary approach to understanding the human past. Due to the diverse nature of the archaeological record, our ability to understand the foodways of past cultures relies on analyses from many sciences. For example, from the analysis of animal remains (i.e., bone and shell), charred wood fragments (i.e., species identification and radiocarbon dating), and plant products (i.e., nuts and seeds), archaeologists can reconstruct past diets and, hence, estimate the degree of nutrition, understand paleo-environmental conditions, and even determine the season of the year a site was occupied.

So, what have we learned about ancient foodways?

Over the last 2-3 million years, much of the northern hemisphere was covered in sheets of ice. This era is known as the Pleistocene. Though there were many advances and recessions of the ice front, a major melting began around 18,000 years ago, and the land we call Connecticut became ice-free around 15,000 years ago. In this Post-Pleistocene environment, soils were relatively sterile and plant remains reveal a habitat of mostly spruce park tundra. Large mammals, such as mastodon, caribou, and giant beaver, inhabited the area in quantities that probably rivaled that of Africa. The first human inhabitants of Connecticut arrived around 11,000 years ago. They lived in small nomadic hunting groups occupying campsites that tended to be located along major river valleys. While we have no direct archaeological evidence that Native Americans hunted mastodon, it is largely accepted that the earliest people here were probably getting their protein and calories from large mammals, fishing, and plant gathering.

Climatic conditions began to warm dramatically around 9-10,000 years ago in a period called the Holocene. As the climate warmed, new plant species moved into the area. The archaeological record tells of the spread of the mixed-deciduous forest into Connecticut. With this new habitat came a higher degree of biodiversity including increased populations of birds, rabbits, turkeys, wild vegetables and other plants, and white-tailed deer. These offered a host of new food sources. Native Americans adapted to these increased food supplies by developing a complex semi-nomadic settlement system revolving around the seasons. There is strong archaeological evidence to indicate that Native Americans exploited fishing and plant gathering camps along major rivers in the spring; then they would move on to summer shellfish and coastal camps. In the fall, they moved inland for hunting, to gather acorns and hickory nuts, and build winter settlements in areas of sheltered valleys. Seasonal movement between ecological territories was a strategy that provided the largest and most diverse food yields. As a result, populations increased. The archaeological record reveals the number and size of these camps expanded rapidly in this time period.

A little over one thousand years ago, Indians in Connecticut began to switch to crop cultivation, primarily planting corn, beans, and squash. As a result of the need to tend, protect and harvest their crops, semi-sedentary villages formed. They were still hunting and gathering, as Connecticut's environment yielded so much natural food and Native peoples were adept at using plant and animal resources. Ecological territories eventually became tribal territories. Populations dramatically increased, ceramic technologies developed, and the bow and arrow diffused into the area.

The productivity of these Indian villages, especially along major rivers where floodplains provided fertile soils for cultivation, was acclaimed by the first European explorers to arrive in New England. The initial contact between these two cultural systems led to social disruptions in both groups. The interaction of different cultural traditions regarding food use had biological and cultural consequences. The diffusion of foods went east and west across the Atlantic Ocean. New World plants like corn, beans, squash, tomatoes, potatoes, wild grapes, berries and nuts traveled eastward and became important parts of European diets. Domestic animals like cows, pig, and sheep travelled westward and entered New England in the 17th century. The Old World and the New World would never be the same.

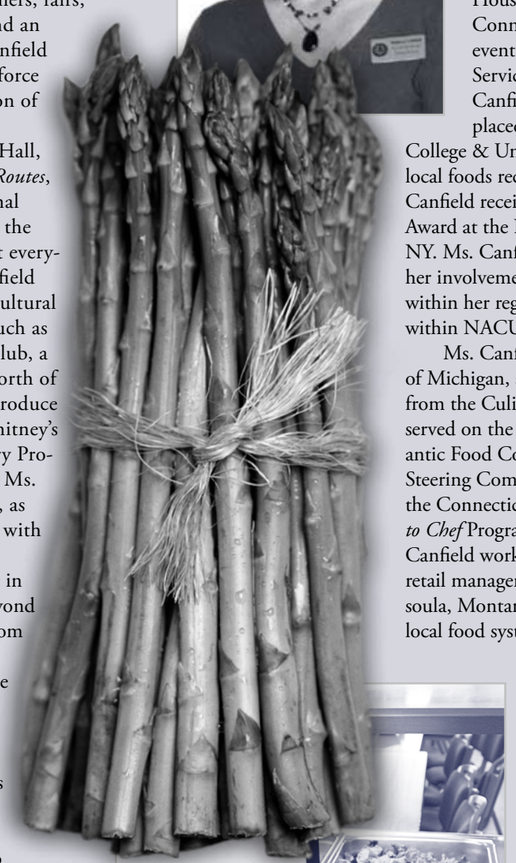
Foodstuffs were not the only cultural items exchanged. Diseases and technology transformed the environment as well as shifted patterns of population distribution. Domesticated animals directly and indirectly led to the development of many Old World diseases that devastated Native populations in America who previously had no exposure to these pathogens. The use of plow technology and the need for heating and cooking fuels led to the clearing of vast areas of Connecticut's woodland. Populations greatly increased and continued to do so at unprecedented rates with the rise of the Industrial Revolution. The communities that developed around water-powered mills and factories created even greater pressure to feed more people per a given area of land. With advances in transportation (i.e., shipping and railroad), the only practical solution to feeding the people in these growing urban centers was to bring food in from distant farmlands.

Today, we don't think twice about eating a banana picked in Guatemala a week ago. In a sense, we still hunt and gather, except now it is at a neighborhood grocery store. With tremendous advancements in transportation, refrigeration, and processing, the shelf life of food can be maintained for longer periods of time. Our technologies allow the things we eat to be brought to us so that we can live in one place all year long and do our foraging in conveniently located spaces (stores). Native people's supermarkets were the land itself. They needed to know where food plants grew, what seasons they grew in, which ones were medicines, which poisonous, and how to procure and process them to their advantage. We have often lost touch with where our food is grown or what season it is grown in, but, like the breadwinners of a thousand years ago, we are still concerned with the nutritional content, value, and freshness of what we provide for our families. Our basic needs remain the same, but we are guided by changing cultural traditions and technologies.

REBECCA CANFIELD

Rebecca Canfield has radically changed the way that the University of Connecticut views food. As a member of the management team for the Department of Dining Services at UConn, Ms. Canfield coordinates the University's *Local Routes* program. *Local Routes* educates the university community about the importance of supporting local, sustainable foods through special dinners, fairs, festivals, presentations, and an online newsletter. Ms. Canfield has also been the driving force behind the implementation of the sustainable food program at Whitney Dining Hall, which, as a part of *Local Routes*, brings regional and seasonal foods to student diners at the University of Connecticut everyday. Specifically, Ms. Canfield supports on-campus agricultural groups in this program, such as the UConn EcoGarden Club, a student run garden just north of UConn's campus whose produce is commonly a part of Whitney's menu. The UConn Poultry Program is also supported by Ms. Canfield and *Local Routes*, as they provide the program with cage-free eggs.

Local Routes is evident in dining areas of campus beyond Whitney Hall. Products from New England are used in the University cafés and the seven other dining halls on campus. *Local Routes* is an incredibly important program as it demonstrates how large universities can effectively cater a locally grown dining hall menu to students. This encourages the use of Connecticut farm products by other institutions and individual people, which not only supports local business but also decreases the reliance on food produced by international conglomerates.

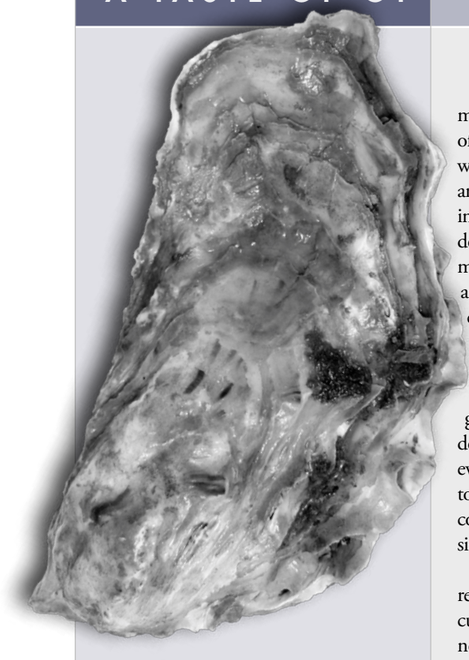


On November 19, 2008, at the State Capital in Hartford, Ms. Canfield participated in the Annual Legislative Luncheon Meeting of the Working Lands Alliance with Rob Landolphi, the Culinary Operations Manager at UConn. Their recipe for Maple Baked Roots was made from locally grown turnips, potatoes, and carrots roasted with maple syrup from River's Edge Sugar House in Ashford, CT. The University of Connecticut Bakery made Baklava for the event using honey produced by Dining Services' on-campus apiary. In 2007, Ms. Canfield's recipe for cider braised pot roast placed first in the National Association of College & University Food Services (NACUFS) best local foods recipe contest. Yet another honor Ms. Canfield received was the Regional Appreciation Award at the NACUFS conference in Cobleskill, NY. Ms. Canfield was presented this award for her involvement and sponsorship of sustainability within her region, as well as for overall volunteerism within NACUFS.

Ms. Canfield is a graduate of the University of Michigan, and received her A.O.S. with honors from the Culinary Institute of America. She has served on the Board of Directors for the Willimantic Food Co-op and the *Buy Connecticut Grown* Steering Committee. Also, Ms. Canfield is active in the Connecticut Department of Agriculture's *Farm to Chef* Program. Prior to her work at UConn, Ms. Canfield worked for eight years in natural foods retail management at the Good Food Store in Missoula, Montana, where her passion for supporting local food systems ignited. She currently lives in Storrs, Connecticut, where she volunteers as a market master for the Storrs Farmers' Market and struggles to get her 9 year-old son to eat his vegetables, local or otherwise!

As part of the *Natural History of Food Series*, Ms. Canfield will offer a talk exploring the effects our food purchases have on the economy, environment, and the people and animals involved in food production. She will share information about UConn's *Local Routes* program and the importance of supporting local food producers as well as sustainable methods of production.

A TASTE OF CT



The **oysters** of Long Island Sound have been a highly desirable food since ancient times. Shoreline archaeological middens record a long history of oyster consumption. During early colonial times, settlements flourished alongside oyster beds. Soon after, oysters became a major industry. By the 19th century, Connecticut oysters were shipped all over the United States and Europe. Oysters take on flavors reflecting their native waters. Thus, we still enjoy Connecticut oysters today, notably the Connecticut Blue Point and Stonington Select varieties. Today, oysters are primarily obtained by farming, known as aquaculture. The State Department of Agriculture leases more than 70,000 acres of shellfish grounds to oystermen. In the late 1990s, there was a major die-off of the oysters. Fortunately, Connecticut acted quickly to reduce contaminants released into the Long Island Sound. Now, the oyster population has rebounded and is well on its way to recovery.

STATE ARCHAEOLOGIST

One of the legislative mandates for the Office of State Archaeology is to work with municipalities around the state, reviewing proposed economic development projects that might have an impact on archaeological and historical resources. Our office normally reviews over 300 proposed subdivisions, shopping centers, golf courses, and other development undertakings every year. We also work closely with town planners, planning and zoning commissions, conservation commissions, and regional planning agencies.

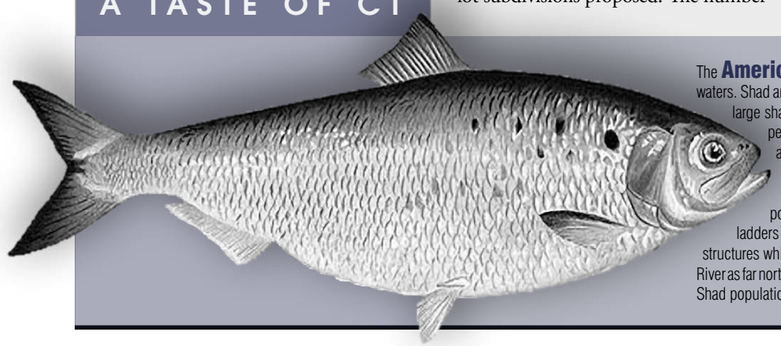
As a result of the development reviews, we are usually ahead of the curve in foreseeing upcoming economic trends. That is, the number and extent of development projects that we see is an indicator of the overall state of the economy. Annually, we see fewer development requests during the summer months. However, beginning in the early fall, applications for development projects typically increase. The review and approval process can take the entire winter season for all the various requirements to be fulfilled, allowing construction activities to begin in the spring and summer.

This annual cycle of development reviews was greatly reduced this autumn. We are still seeing projects, but instead of subdivisions with 30-40 lots proposed, we are only seeing 2-3 lot subdivisions proposed. The number of reviews has decreased dramatically, demonstrating the latest slump in this challenging economic market place.

The reduction in development requests has resulted in a slow down in employment and work for archaeologists. The economic slowdown will affect all aspects of our daily lives, including the historic preservation of archaeological sites. Archaeology and the preservation of cultural and historic properties will continue, but we will need to adjust and modify our approaches. Some communities are looking at this recession as a time to amend their Town Plan of Development to ensure their regulations are up-to-date for when the market returns and applications increase. Additionally, land trusts and open space associations are approaching developers that have projects stalled by the economic slump, to consider appropriations to maintain the land as open space for the community. Perhaps this downturn in the economy will offer some opportunity to positively address land use concerns and the preservation of historic and archaeological sites. As in most things archaeological and historic, only time will tell.

Nick Bellantoni, State Archaeologist

A TASTE OF CT



The **American Shad** is one of the most important food fish in Connecticut's waters. Shad are anadromous (ocean fish that spawn in freshwater) and in the past, large shad runs nearly clogged Connecticut rivers each spring. Indigenous peoples harvested them for food. During colonial times, shad was so abundant that it was considered a poor man's food. With the industrial revolution came the damming of many rivers and streams to harness water power. The shad were seldom able to scale these dams and the population plummeted. By the late 1890's, people began devising fish ladders to allow the shad to reach the spawning grounds. Currently, there are structures which allow the fish to breach the dams and swim up the Connecticut River as far north as Bellows Falls, Vermont. Unlike the Atlantic Salmon, the American Shad populations have rebounded and are abundant once again.

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VOLUNTEERS

Volunteers are a vital part of the Museum's effort to provide innovative programming and enrich the museum experience. We wish to thank the following individuals for joining the new volunteer program:

Steven Antonelli, Mary Brescia, Al Ciccarelli, Jeffrey Egan, Michael Kennerty, Emily Lanza, Frank Pearson, Cynthia Redman, Rita Rehn, and Paul Scannell.

LOOK UP!

Venus, Ceres, & the Milky Way

In late February Ceres will be at its closest approach since 1857, and nearer than it will be for the next several thousand years. On Saturday, February 27, we invite you to join UConn's Dr. Cynthia Peterson for her popular astronomy program at UConn's Planetarium and (weather permitting) Observatory, and discover the constellations, planets, and special celestial objects that we can see in the winter night sky using binoculars.

For more information on this program, and all our others, visit www.mnh.uconn.edu/currentcalendar.html.

MEMBERSHIP

Standard membership benefits:

- •Free admission to special events
- •Reduced rates for workshops
- •15% discount at the UConn Co-op
- •Early notification of programs
- •Museum Newsletter

Regular Memberships	1 Year	2 Year
___ Family	$45	$80
___ Couple	$40	$70
___ Senior Couple	$35	$60
___ Individual	$35	$60
___ Student Invididual	$25	$45
___ Senior Individual	$25	$45

Consider upgrading to an Owl Membership. These memberships provide special support for Museum programs. In addition to standard membership benefits, Owl Members receive guest passes, gifts, and more.

Owl Memberships	
___ Saw-whet Owl	$75
___ Snowy Owl	$150
___ Screech Owl	$300
___ Barn Owl	$600

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The Connecticut State Museum of Natural History and Connecticut Archaeology Center are part of the **College of Liberal Arts and Sciences.**

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