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Taste the Traditions: Crabs, Crab Cakes, and the Chesapeake Bay Blue Crab Fishery

ABSTRACT For centuries, people in the Chesapeake Bay watershed have harvested and consumed blue crabs (*Callinectes sapidus*). Historically, the production of the crabs was intimately connected to the work and knowledge of commercial watermen. In recent years, declining crab populations have resulted in an increased local use of pasteurized crab meat imported from Asia and South America. Also emerging is an ecological discourse that emphasizes pollution reduction to save crabs to eat. In this article, I analyze these production and consumption changes for Chesapeake Bay blue crabs within a broad-ranging framework of cultural models and environmental anthropology. Explicit textual information increasingly suggests that the cultural model of Chesapeake blue crabs as food is one of crab cakes made (with imported crab meat) in the “local tradition” and, to a lesser degree so far, is an emerging discourse presenting blue crabs as a culinary poster child for antipollution campaigns. [Keywords: blue crabs, Chesapeake Bay, cultural models, environmental anthropology]

New England has its clams, Louisiana its shrimp, Texas its beef barbecue. And in the mid-Atlantic, we have our crab. More than any single foodstuff, the Chesapeake Bay blue crab has come to define this region. [Kliman 2005]

FOR MOST OF HUMAN HISTORY, the producers and consumers of food have been closely connected: foods captured, grown, or raised were eaten by producers themselves or by proximate consumers through kinship or trade connections. In recent years, however, complex processes of modernization and globalization have extended the reach of locally produced foods to distant and diverse populations of consumers. Understandably, today's food consumers cannot be expected to have significant understandings of the actual labor, knowledge, capital, and organizational structures used in production of the foods they consume. Nonetheless, local and historically situated food production remains important to many, who seek more production information on the foods they consume as part of a sociocultural and political effort to support traditional or local cultural practices, community-based production, or a food industry that considers environmental needs.

In this article, I present a case study of recent changes in food production and consumption. My case study focuses on one type of seafood from one particular region: blue crabs from the Chesapeake Bay. For centuries, the harvest

and consumption of blue crabs (*Callinectes sapidus*) have supported coastal communities and connected people to the Chesapeake Bay. For consumers, it was the blue crab's role as a premier regional food that connected them to the bay. The Chesapeake Bay blue crab is widely considered one of the best-tasting crabs in the world. However, Chesapeake blue crabs are not just good to eat; historically, consumers, as part of their eating experience, have also valued and sought information on the craft and knowledge required of bay watermen (commercial fishermen) to capture, process, and market crabs. Eating Chesapeake crabs was a critical medium that connected locals and tourists to the Chesapeake Bay through the work and skill of the watermen who harvested the crabs. For more than a century, watermen and their families have used simple technologies with great skill and craft to catch crabs for local and distant consumers.

However, in recent years, a combination of factors has ushered in a radical change in the Chesapeake Bay blue crab fishery, which has changed the close relationship between watermen as harvesters or producers of crabs and consumers of crabs. These factors include increased marketing of crabs in the form of crab cakes, a decrease in abundance of Chesapeake blue crabs and a decline in the size of the fishery, a dramatic rise in the import of foreign crab meat, and decline in the overall ecological health of the bay itself. All of these factors are important. However, in terms of altering the close connection (real and imagined) between Chesapeake Bay

watermen, bay crabs, and the local eating of crabs, it is the importation of foreign crab meat from Asia and South America that has had the greatest impact. For local and domestic consumers to accept eating "foreign crabs" as a Chesapeake crab-eating experience, it has been necessary to resituate the production of crabs away from harvesters and the bay itself and toward food traditions for preparing crabs to eat.

Interestingly, and very recently, there are signs of an emerging movement and discourse that, for ecological reasons, seeks to reconnect consumers of crabs to the Chesapeake Bay. As concerns have grown about the ecological health of the Chesapeake Bay, and as the watershed population continues to grow and place pressures on the bay's ecosystem, environmental campaigns are emerging to connect and engage consumers with the bay. The emerging discursive message to consumers of crab is to not pollute the bay but to "save the bay" so we can eat its crabs. This rational discussion is based on scientific studies that link non-point source pollution to a decline in water quality and habitat in the bay: for example, damage to submerged aquatic vegetation (sea grass), which provides critical habitat for young crabs.

In this article, I apply a cultural model approach (cf. Quinn and Holland 1987; Strauss and Quinn 1997) to identify the cultural and environmental knowledge that is required and generated as local, regional, and global processes redefine food consumers' connection to Chesapeake Bay blue crabs. I am particularly interested in describing how and why implicit cultural understandings of food change and in exploring the significance of such changes for food producers and the ecosystems on which these producers depend. The findings I present in this article contribute to ongoing cultural model, environmental, and fishery research on the Chesapeake Bay (cf. Paolisso 2002, 2006; Paolisso and Chambers 2001; Paolisso et al. 2006; Paolisso and Maloney 2000).

The findings presented here specifically extend previous cultural model research on blue crabs as a natural resource and fishery to a focus on blue crabs as food (Paolisso 2002). Although I discuss all forms of crabs as food, I focus my attention on the crab cakes, made from meat picked from steamed hard crabs. Although crab cakes are perceived by most consumers as the traditional seafood of the Chesapeake Bay, the vast majority of crab cakes consumed today in the watershed are made with imported crab meat. In this article, I explore what implicit cultural knowledge must be present to sustain a traditional connection to the bay even when the crab cakes consumed are made with imported crab meat, and why even explicit programs to use crabs as food to connect the public to the bay do not include the fishery.

I begin with a discussion of the theoretical approach of cultural models and some background information on my use of a cultural model approach to study explicit (stated, explained) and implicit (tacitly assumed) cultural knowledge about the Chesapeake Bay and its fisheries. I follow with descriptive and ethnographic information on the blue crab, its fishery, and the different ways blue crabs are eaten.

Next, I discuss a significant development in the production and consumption of blue crabs in the Chesapeake Bay watershed: the importation of foreign crab meat. With this background information present, I then turn to a discussion of how the production of crab cakes, made with foreign crab meat, is discursively connected to local restaurant and retail operations, with the twofold result of "localizing" imported crab meat and replacing traditional producers—the watermen—with traditions of local food preparation and hospitality. I then follow with a discussion of a program and emerging discourse that attempts to reconnect people to the Chesapeake Bay blue crab as food (thus competing with the imported crab meat discourse). This discourse argues that we should not pollute the bay, with the resulting benefit being that then we will have more crabs to eat. However, again local harvesters and the fishery are excluded from this discourse. I conclude with some observations on the relevance of this focus on blue crabs as food for broader cultural model and environmental anthropology research.

CULTURAL MODELS, FISHERIES, AND BLUE CRABS

Since about 2000, I have been working with students and colleagues of the Department of Anthropology, University of Maryland at College Park, to apply anthropology to the study of Chesapeake blue crab and oyster fisheries (cf. Greer 2003; Paolisso 2006; Paolisso et al. 2006). Our fishery anthropology research on the Chesapeake attempts to build on and contribute to previous studies of commercial fishing communities, a rich and productive area of anthropological scholarship and practice since at least the 1920s (McCay 2001). Ethnographies of the traditional knowledge and practices fishers use to harvest, process, and market marine resources have been central to this scholarship (for reviews, see Acheson 1981 and McCay 2001). In response to a declining marine resource base worldwide, this focus on fisher knowledge and practices has evolved in recent years to include an interest in how fisher knowledge complements (or does not) science-based assessments of fish stocks (cf. Dobbs 2000; Jentoft and McCay 1995; McCay 1988; Pomeroy and Beck 1999).

However, we are also bringing to this fishery research a very strong interest in cognitive anthropology applied to environmental issues. In particular, I use a cultural model approach to understand not only explicit cultural knowledge and values about Chesapeake fisheries but also the tacit and implicit knowledge applied to the blue crab and oyster fisheries. Much of commercial fisher knowledge is experience based and tacit, which creates challenges in translating this knowledge to fishery scientists, managers, policymakers, and the public. A fundamental goal of our Chesapeake Bay fishery work is to elicit and compare this fisher knowledge with implicit and explicit knowledge of other fishery stakeholder groups, seafood processors, scientists, resource managers, recreational fishers, environmentalists, and the public. More generally, our use of cultural models for fishery research is embedded within a broader cognitive focus

on environment in anthropology (cf. Kempton 2001; Ross 2004).

Generally speaking, cultural models are shared implicit and tacit understandings about how the world works. They are cognitive frameworks used by individuals to process and organize information, make decisions, and guide behavior. In an oft-quoted definition, Naomi Quinn and Dorothy Holland describe cultural models as "presupposed, taken-for-granted models of the world that are widely shared by members of a society and that play an enormous role in their understanding of that world and their behavior in it" (Quinn and Holland 1987:4). Cultural models are thus representations of "that knowledge individuals need to know to behave in appropriate ways," vis-à-vis the norms and practices of their group (Goodenough 1957).

Why use this cognitive approach of cultural models to conduct cultural analysis of a fishery or, in the present case study, the seafood consumed? First, a fundamental assumption of cultural modeling is that when individuals engage with the world, they cannot possibly attend to it in all of its complexity. Consequently, individuals must use simplified cognitive models to reason with or calculate by mentally manipulating the parts of the model to solve problems or interpret situations or events (D'Andrade 1995). Second, time is often of the essence, with an individual needing to make a decision, understand a situation, or provide verbal or behavioral responses with little or no delay. Thus, the cultural model used should contain essential or primary cultural knowledge that forms or reinforces core cultural beliefs and values among a group who shares that cultural model. Third, the cultural model identified helps explain behavior and cultural knowledge and values in related domains, both among group members and in the views and behaviors of group members toward other groups.

Cognitively, cultural models exist in nested hierarchies in the mind. The models are composed of interconnected building blocks called *schemas*. Schemas are cognitive frames with default values or open slots that can be variously filled with appropriate specifics (D'Andrade 1995). Schemas may consist of images (e.g., blue crabs and crab cakes) or propositions (e.g., commercial fishing needs to be regulated [or not], or eating seafood locally is connected to and supports local fishermen). Cultural models can be visualized as storylike chains of events that unfold in simplified words. Examples of lower-level schemas are leaving the dock, sailing toward a row of crab pots, retrieving crab pots, culling crabs, or returning crab pot to water. These are the building blocks of a simple cultural model of commercial crab potting. This simple model is nested within a more complex model of commercial crabbing, which is nested within a higher order cultural model of being a waterman.

An effective approach to identifying underlying cultural models of knowledge is to focus on explanations offered as part of natural discourse or text on the topic or domain at hand (D'Andrade 1995; Quinn and Holland 1987). In offering explanations for why something is the way it is, individuals often present their understanding of a situation in terms of propositions and theories. A *proposition*

is a statement asserting or proposing a state of affairs (Shore 1996). Following Roy D'Andrade, "a proposition is the sense of something said about something (typically a sentence) and involves the integration of a relatively small number of separate schemas into a more complex schema" (1995:190). Propositions are culturally codified as slogans, clichés, wise words, maxims, and other formulaic statements. A *theory* is an interrelated set of propositions that describes the nature of some phenomena. Analyzing propositions and theories is an effective approach used by cognitive anthropologists to identify underlying cultural models.

We also look for patterns in metaphors, speech, texts, contexts in which keywords and phrases are used, how ideas are linked together, and unstated assumptions and inferences of what the listener should know as indicators of underlying cultural models (Bernard and Ryan 1998; D'Andrade 1995; Quinn 2005). Individually and combined, these linguistic and paralinguistic pursuits produce rich and textured insights into the implicit knowledge that stakeholders "just know" about, for example, a fishery or its seafood (Quinn 2005).

CHESAPEAKE BAY BLUE CRABS

For centuries, blue crabs (*Callinectes sapidus*) have been one of the most abundant species in the Chesapeake Bay (see Figure 1). Habitats of blue crabs, however, range far and beyond the Chesapeake Bay to include estuaries, lagoons, and coastal habitats of the Western Atlantic, Gulf of Mexico, and the Caribbean (Williams 1984). The blue crab is one of 14 swimming crab species in the genus *Callinectes* (Miller et al. 2005).

All crabs harvested from the Chesapeake are *C. sapidus*. The Chesapeake Bay has been a particularly good habitat for blue crabs: favorable water quality (e.g., salinity,

The Chesapeake Bay Watershed

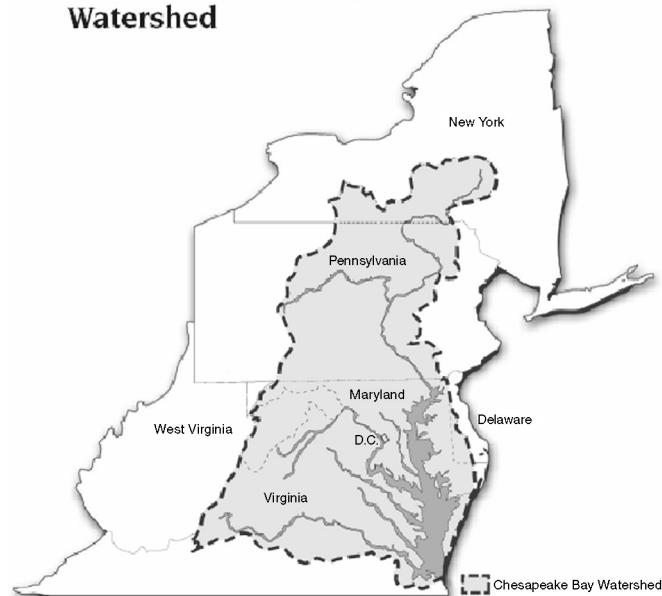


FIGURE 1. The Chesapeake Bay watershed.

temperature, and dissolved oxygen levels); varied bottom structure (e.g., oyster reefs, deep troughs, and shallows of sand or mud); sufficient nutrients and submerged aquatic vegetation; and strong tides and water circulation (Miller et al. 2005).

Blue crabs are benthic (bottom-dwelling), opportunistic predators and scavengers (Eggleson et al. 1992). Their diets may include a wide range of taxa including bivalves, crustacea, and fish (Hines et al. 1990; Mansour and Lipcius 1991). Blue crabs may be keystone predators in the Chesapeake because they play a dominant role in structuring benthic communities.

Blue crabs are successful predators because of, in large part, their excellent sideways swimming capabilities. Blue crabs can propel themselves rapidly through the water using a pair of powerful rear appendages that progressively flatten to form paddles at the end. Also, the crab's shallow, compressed body with tapered ends is designed for speed. The blue crab can scamper across the sea floor, using the remaining four pairs of leg appendages. Furthermore, the crab's excellent eyesight allows it to quickly locate both prey and predators. Combined, whether swimming sideways or scurrying across the bottom, the blue crab is a formidable hunter whose arsenal of two powerful front claws is used for both defense and offense.

Crabs are by nature solitary animals for most of the time. When they do encounter others of their own kind, they will either flee or fight aggressively. In the Chesapeake, male blue crabs occupy regions of the upper bay and upper reaches of the tributaries, where salinity levels are lower. Females, however, prefer the lower bay and lower reaches of the tributaries, which are higher salinity regions (Hines et al. 1987).

It is the mating that brings males and females together. Blue crabs mature at around 12–18 months of age and typically live up to three years. They grow by molting, or shedding their shells. In the Chesapeake, mating occurs from May to October in lower and midbay habitats where salinity preferences for males and females overlap. The male fertilizes the female while she is in the soft shell phase during her last molt preceding maturity. The fertilized females develop an orange, external egg mass beneath their domed aprons. The egg mass may contain 750,000–8,000,000 eggs, depending on the size of the crab (Prager et al. 1990). Mature females release larvae in high-salinity water near the mouth of the Chesapeake Bay (Van Engel 1958). The larvae are transported by current to the continental shelf, where they develop through seven or eight stages over a period of about 30–45 days. Postlarvae migrate back into the bay where they undergo physiological changes in preparation for their first molt (Lipcius et al. 1990). Late premolt postlarvae use beds of submerged aquatic vegetation in the lower bay as nursery areas (Orth and van Montfrans 1987).

BLUE CRAB FISHERY

For more than a century, the blue crab has supported a commercial fishery in the Chesapeake Bay. In the 1950s, for example, blue crabs harvested from the Chesapeake Bay

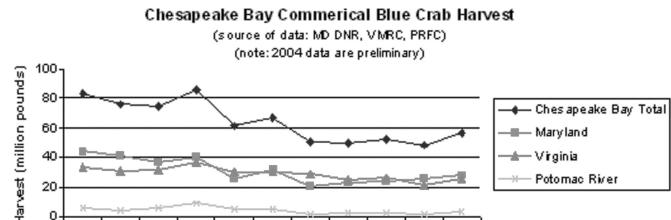


FIGURE 2. Chesapeake Bay commercial blue crab harvest.

and its tributaries represented almost 80 percent of national landings (Miller et al. 2005). However, blue crab commercial harvests from the Chesapeake have been in long-term decline, particularly over the last decade (see Figure 2). A combination of factors is responsible for this decline: natural cycles in crab fecundity and mortality, fishing pressure, loss of habitat, and predation by other species. Still, even at these reduced harvest levels, the Chesapeake Bay remains the largest single source of blue crabs in the nation. In 2003, the Chesapeake Bay provided approximately 30 percent of national landings (Miller et al. 2005).¹

As the harvest and abundance levels have decreased, the economic importance of the blue crab harvest to Chesapeake watermen and local seafood processors has increased, in part because of the absence today of alternative bay fisheries such as the oyster. During the 1990s, the dockside value of crab harvests for the entire bay averaged more than \$50 million a year. In 1999, blue crab harvests accounted, for example, for over 60 percent (or \$38.9 million) of Maryland commercial watermen's fishing income (Maryland Sea Grant 2001). Economically, there is no other species harvested from the Chesapeake Bay that today provides more income or jobs for watermen, seafood processors, and other service and food workers. In addition to this commercial value, recreational crabbing (e.g., string lines baited with chicken, collapsible traps, and trotlines) is a widespread summertime tradition throughout the region.

BLUE CRABS AS FOOD

It [the blue crab] is very well named. *Callinectes* is Greek for beautiful swimmer. *Sapidus*, of course, means tasty or savory in Latin. [Warner 1994]

For centuries, the harvest and consumption of blue crabs have connected local peoples to the Chesapeake Bay. Although the English word *Chesapeake* is derived from *Chesiopec*, an Algonquian word often translated as the "great shellfish bay," today the principal food associated with the Chesapeake Bay is the blue crab and not the Eastern oyster (*Crassostrea virginica*), which has dwindled in abundance as a result of disease, declining habitat, and harvesting (National Research Council 2004). Although the current abundance and harvests of blue crabs from the Chesapeake Bay are also much lower than in previous decades, the consumption of "bay crabs" remains an important component of the region's economy and a tradition with strong cultural significance.

Blue crabs can be eaten as hard crabs, soft crabs, or crab cakes. Each "food form" has its passionate supporters, many of whom do not readily switch between forms. Some (like me) prefer to eat steamed hard crabs covered with spicy Old Bay seasoning, accompanied by summer corn, cold beer, and good friends. Others enjoy eating whole a soft-shelled crab, either as a sandwich (on white bread, of course) or on a platter with fries and coleslaw. Still others order crab cakes: fried or broiled patties of seasoned crab meat picked from steamed hard crabs.

Any understanding of blue crabs' value as food must begin with a fundamental distinction: hard crabs versus soft crabs. Many first-time or infrequent consumers of crabs are surprised to learn that the blue crabs they encounter as hard-shelled crabs and those as soft-shelled crabs are, in fact, the same crab. This is because blue crabs are one of the few animals harvested and eaten in two stages of their life cycle: when the exoskeleton, or shell, is hard and also when it is soft. Blue crabs molt or "shed" their exoskeleton to grow, and over the average three–four year lifespan, blue crabs will molt between 15 and 22 times. Just after molting, the blue crab's entire body is soft. It is at this time that the blue crab is very vulnerable to predation from fish. Commercial watermen try to catch soft crabs just before they molt. These "peeler" crabs are either captured in dredges pulled through shallow, grassy areas or the crabs enter watermen's crab pots in search of shelter from predation. The captured peeler crabs are then transported to a crab shanty where they are placed in large, rectangular trays called floats, which have water running through them. The crabs are monitored closely by watermen and their families. As soon as the crab sheds, it is very soft and motionless. It is then removed to a separate tray for its own protection from other crabs and allowed to harden up a little, a process that takes a few hours. Once the crab has "refilled" itself, it is removed and sold either live or cleaned. Although all crabs shed their shells to grow, only a few species of crab can actually be eaten in this form.

Soft-shell crabs are a favorite seafood delicacy among those living in the United States. Soft crabs are eaten in their shells—legs, claws, and all—with only the eyes, mouth-parts, and gills removed. They are a delicacy, usually served broiled, sautéed, or fried. Soft-shell crab is shipped live but typically marketed as fresh. Soft-shell crab can also be cleaned (dressed) and then frozen for consumption later.²

Hard Crabs

For many, eating hot, steamed hard crabs is the epitome of the crab-eating experience. For most of its life, the blue crab's outer shell is hard. Commercial watermen catch these hard crabs by luring them into a baited crab pot or by scooping them off a baited line called a trotline. For the Chesapeake Bay region, male hard crabs are called *jimmies* and mature female crabs are called *sooks*. Jimmies are generally larger and meatier and are therefore more desirable for eating whole, either steamed or boiled. Sooks, which are also eaten whole, are more frequently sold to

commercial processing plants to be picked and packaged as fresh crabmeat. Hard crabs are always sold alive for eventual steaming at restaurants, festivals, family gatherings, and processing plants.

It is generally accepted that the Chesapeake Bay produces an expensive, high-quality blue crab. The bay's colder water temperature produces a blue crab high in flavorful fat. Carolina blue crabs are considered second to those from Maryland, whereas Louisiana provides options for price-sensitive customers who like a larger crab.

Because no machine matches the dexterity of the human hand, most crab meat continues to be extracted by manual labor. Once dominated by African American women, the ranks of pickers are increasingly filled by Mexican immigrants. Picking houses tend to come online near the end of the summer season when crabs are plentiful, fat, and cheaper. An experienced crab picker can produce about 2.25 ounces of meat from each pound of live blue crabs. This is approximately a 14 percent yield. The actual yield depends on the size of the individual crab and the experience of the crab picker.

Commonly, crabmeat is graded into lump, backfin, special, or claw. In descending order of quality, the meat of the blue crab is graded as "jumbo lump" or "backfin lump," comprising whole pieces of white meat from the body muscles that power the crab's swimming legs; "regular," which consists of smaller pieces of whole meat from the body; "special," a mixture of backfin and regular; and "claw," which has a brownish-beige color. The higher the grade, the sweeter is the meat and the higher the cost.

There is a cultural lore around eating Chesapeake Bay steamed hard crabs that has many elements connecting the consumer to the watermen and ultimately to the bay. First, a certain amount of skill is required to "dissect" the hard crab to pick out the meat. Generally speaking, the picking of crab meat is dictated by certain anatomical features of the crab itself. However, a valued and meaningful part of the crab-eating process is the recognition of small variations in approaches and differences in skill levels exhibited when a group of friends sit down to a table piled high with hot, steamed crabs. The conversation will almost certainly include reference to the source of the crabs: at a restaurant, even those not from the region will often inquire as to whether the crabs are local, and the response is often very specific, noting which subregion of the bay the crabs come from. For local consumers more familiar with eating steamed hard crabs, the questions about the source can become quite detailed, including information on the sex, size, method of capture, and the watermen who caught the crabs.

This cultural lore and practice around eating steamed hard crabs becomes particularly rich and localized if the crabs are purchased for steaming and consumption at home. Many of the consumers for home-steamed crabs have particular crab shanties from which they purchase their crabs. These crab shanties can be retail outlets, where crabs are brought in and sold steamed or alive to customers. Or these crab shanties can be large sheds where watermen store gear, process soft crabs, and refrigerate their catch. It is this

latter case that the connection between producer-harvester of crabs and the consumer is most pronounced, and this was the traditional producer-consumer relationship. The consumer has some "insider knowledge" that connects him or her to a particular waterman, who inevitably (real or imagined) "has the best crabs and good prices." Embedded in this relationship is the skill and experience of the waterman crabber, who cannot always guarantee he will have crabs. So, there is always some uncertainty for consumer about whether she or he will have crabs to eat, which can cause anxiety if guests are invited to a backyard crab feast. Thus, the consumer must also demonstrate skills in contacting, negotiating, and maintaining a relationship with the producer to increase his or her chances that she or he will be able to get live crabs in a timely manner for hungry guests. In a subtle way, the successful consumer of steamed crabs outside the restaurant and retail avenues receives recognition from others who partake of the crab feast for his or her skills and connections in "finding crabs." Historically, this closer relationship between watermen as crabbers and local consumers was the principal avenue for crab consumption in the region. Granted the distance of this relationship varied, as crabs were transported throughout the region, but what was consistent was close association of crabs with a particular subregion of the bay or a specific waterman or regional group of watermen (e.g., Smith Island or Deal Island watermen).

Finally, some of these regions and groups of watermen became known for their ability to hard crab, and this increased the cultural and culinary value of their crabs. Chesapeake Bay watermen do not believe that they will ever know all there is to know about catching blue crabs. For watermen, the movement and abundance of the blue crab is to a significant degree not knowable, something they feel is an important consideration in fishery management (Paolisso 2002). Still, some watermen are, for a combination of reasons that are difficult for watermen to explain, better hard crabbers. Although all watermen will catch hard crabs, some watermen will catch more and "prettier" crabs, meaning larger, fatter, and ultimately tastier crabs. Consumers of hard crabs are aware of these subtle production differences and work to find or create relationships with watermen or hard crab retailers that "have the best crabs."

Crab Cakes

At its most basic level, a crab cake is a sautéed, fried, or broiled patty of crabmeat. Until recently, most crab cakes were either sautéed in small amounts of butter or oil or deep fried. Broiling of crab cakes has become more popular recently, particularly among more health-conscious diners. Not surprisingly, some long-time consumers of crab cakes argue that sautéed or fried crab cakes taste better, because the caramelized crusts create a taste contrast with the crab's sweet meat and also help seal in moisture. All agree, however, that the crab cake should not be cooked for too long, because this is basically a rewarming of crab meat already steamed or boiled at the time of picking.

The practice of making minced meat cakes or patties with seafood has a long history. Mincing mixed with bread, spices, and other fillers came about for two reasons: taste and economy. Through family recipes in *Maryland's Way* (1963), a regional cookbook published by the Hammond-Harwood House Association in Annapolis, one can trace the making of crab cakes back to the early part of the 19th century. The phrase *crab cake* appears to be a 20th-century appellation. The term dates in print to 1930s in Crosby Gaige's *New York World's Fair Cook Book* (1939), where they are called "Baltimore crab cakes" (Mariani 1999:103).

Traditionally, crab cakes were mainly a home meal. Interviews with watermen and their families on Maryland's Eastern Shore of the Chesapeake include accounts of crab seasons (April–December) when it was not uncommon for families to get together for a social evening of picking steamed crabs and making crab cakes to freeze. The goal was to freeze enough crab cakes to last through the winter. This same manner of local crab cake preparation is still used today for church and community social events, including fundraisers and festivals. Travelers throughout the Chesapeake region will encounter crab cakes made according to a particular local recipe, whether it belongs to a particular person (Joe's or Judy's crab cakes) or to a subregion (Baltimore or Thomas Point or James River crab cakes).

Today, crab cakes can be found in most supermarkets and seafood restaurants through the Chesapeake region and beyond. In supermarkets and seafood retailers, the crab cakes sold are most often made from either fresh or pasteurized crab meat. Often, labeling will also inform the consumer of the grade of crabmeat used in the cakes (lump, regular, special, or claws). Increasingly, frozen crab cakes can be found in the large retail stores (e.g., Costco), supermarkets (e.g., Safeway), and of course via the Internet.

A NEW CRAB IN THE REGION

If you order a crab cake at a local restaurant, you might assume you're getting a product from the Eastern Shore [of the Chesapeake Bay]. Chances are, it's from the Far Eastern Shore. [Kliman 2005]

There is nothing better than fresh Maryland crabmeat. It's the premier crabmeat in the world—it's a great product. The problem is, there's just not enough of it anymore. [Steve Phillips, CEO, Phillips Foods; see Kliman 2005]

In the mid-1990s, a new crab arrived to the Chesapeake Bay in the form of pasteurized crabmeat from Asia and Latin America (see Figure 3).³ Although there had been imports of crabs (e.g., Dungeness, King, and Snow crabs) prior to the mid-1990s, this crabmeat was fresh, frozen, or shelf-stable. In the latter case, additives and high heat are applied to picked crabmeat to kill any pathogens that could cause spoiling. The cooked crab meat is then canned, allowing it to be stored without refrigeration. Although this process greatly reduces the risk of food contamination and extends shelf life, it also significantly decreases the quality of the taste (think of canned tuna). These three

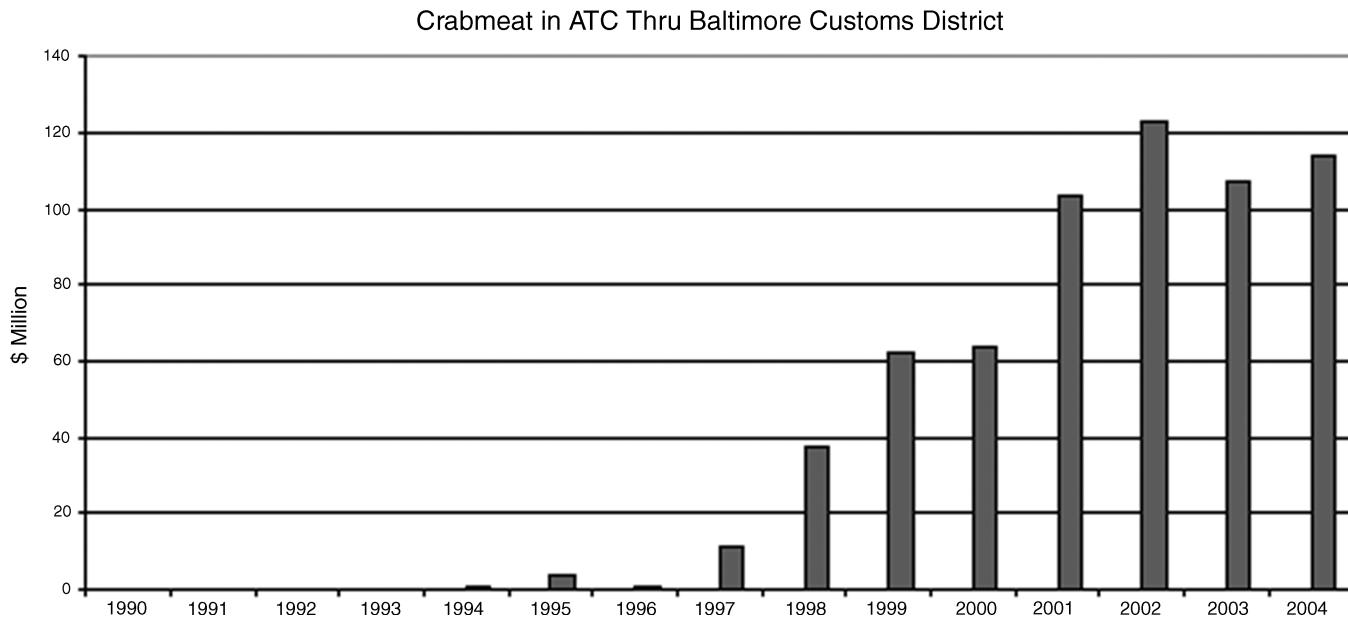


FIGURE 3. Crabmeat in airtight containers (ATCs) through Baltimore Customs District.

forms of imported crab meat did not seriously compete with the market for fresh crabmeat from steamed Chesapeake Bay hard crabs.

Three characteristics of this new imported pasteurized crabmeat are significant in terms of its ability to compete with domestic fresh crabmeat. First, there is widespread agreement that pasteurized crabmeat does not taste as good as fresh crab meat. However, the process of slower heating and slower cooling involved in the pasteurization process, compared to the shelf-stable preparation process, helps the meat retain its sweetness and close-to-fresh texture and taste qualities. According to one executive of Phillips Foods, the largest pasteurized crab importer in the region, the pasteurized crab "has about 92 percent of the sensory characteristics of fresh crab" (Kliman 2005). Phillips, a regional name in seafood, is seen as the principal driver behind the push to import high-quality, pasteurized crab meat. As described more below, this local connection to the region and traditional crab cakes has been an essential component of their marketing of imported crab meat.

A second characteristic is the practical and economic benefits of pasteurization itself. If refrigerated and unopened, pasteurized crab meat can last for up to 18 months (compared to three to five days for fresh crab meat). Restaurants throughout the region have stopped using fresh crab meat for their crab cakes. The business thinking is straightforward: although the pasteurized crab meat may not taste as good as fresh Chesapeake crab meat, when mixed with crab cake fillers most customers will not notice a difference. Also, pasteurized crab meat's longer shelf-life helps restaurants keep a steady supply of crab meat, without having to worry about spoilage. Imported crabmeat is also less expensive, which is no small consideration to restaurant management.

Finally, the upsurge in imported, pasteurized crabmeat was made possible by an expansion of the range and types of crab used. The increase in imported crabmeat includes meat from both blue crabs and the blue swimming crabs. Biologically, the Atlantic blue crab and the Asian swimming crab (*Portunus pelagicus*), are both swimming crabs, and they belong to the same crab family, *Portunidae*. The blue swimming crab looks similar to the blue crab, but it is usually a little larger, and its shell is covered with spots. The lumps of meat from swimming crab are larger and easier to pick, thus reducing the amount of shell in the crab meat.

For wholesalers, retailers, and restaurants, the business advantages of using imported pasteurized crabmeat are hard to deny: steady supply, good product, and a growing market for crab cakes, which in 2000, according to a trade industry survey, moved onto the list of top ten appetizers for the first time (U.S. International Trade Commission 2000). According to *Restaurants and Institutions*, crab cakes are the seventh most popular appetizer on restaurant menus across the country this year (see Kliman 2005).

CHESAPEAKE CRAB PRODUCTION AS PREPARATION IN THE MARYLAND STYLE

Maryland-style [crab cake]! The only thing Maryland about it is the company [Phillips] that's selling it. [Maryland crab processor and restaurant owner; see Kliman 2005]

How do you sell imported crab meat to consumers with a strong allegiance to regional seafood connected to a local fishery and productive estuary? It certainly helps that local supply has decreased, and that local crabs are readily available only from May to October. Nevertheless, this lack of supply is a necessary condition but not a sufficient

explanation for the increase in consumption of crab cakes, locally and beyond.

What also must happen is that the imported needs to be localized, given regional flavor and heritage, something that makes it distinct to the region for both long-term residents and tourists. Discursively, the “regionalizing of the foreign” is accomplished by de-emphasizing the actual harvester of crabs (commercial watermen) and the harvesting and shifting to the next step in the production process: the preparation of crab cakes. This discursive shift removes information on harvesters and harvesting from the consumer, and the added value of that information for the consumer, and replaces it with a new discursive baseline for situating the crab food locally. Thus, the fact that the most important component of the product is imported does not conflict with the consumer’s desire to have a Chesapeake experience, because the product they are consuming is made in, for example, the “Maryland style” or in the “authentic Chesapeake Bay way.” For all but the most knowledgeable seafood consumers in the region, there will be an assumption that the crab cakes consumed are from the Chesapeake Bay. Of course, it is helpful that today most consumers of crab cakes, both locally and beyond, have very little direct contact with Chesapeake Bay itself, let alone the bay’s watermen.

Today, the vast majority of restaurants serving crab cakes in the Chesapeake Bay watershed use imported crab meat.⁴ Most of the crab meat sold in supermarkets is imported crab, packaged in a way that the average consumer would assume that the meat is from the Chesapeake, Maryland, or Virginia, in part because of the traditional recipe or the logo on the container. In the Chesapeake Bay watershed and throughout the Mid-Atlantic states, one seafood importer and restaurant chain best exemplifies the use of imported crabs and the regionalization of this crab through links to a historical and local processing and retail base: Phillips Sea Food.

Phillips Sea Food: A Taste of Tradition

Phillips Sea Food has been serving seafood in the region since 1956. The story of Phillips is the stuff of self-proclaimed legend, according to the company’s website. It began with A. E. Phillips, who established a crab-processing plant on the Chesapeake Bay’s Hooper Island in 1916. His son Brice and Brice’s wife Shirley opened Phillips Crab House in Ocean City, Maryland, in 1956, in a small shack from which they sold surplus crabs and crabmeat from the Hooper Island plant. The legend begins with accounts of Brice and Shirley’s sons recounting their memories of this time, when they would sit “proudly on the front steps calling in to Mom in the kitchen that another guest was coming for dinner.” They also remembered tasting “mom’s new recipes or [helping] Dad steam the crabs” (Phillips Sea Food n.d.).

Between 1956 and 2003, Phillips witnessed a truly impressive expansion of their restaurant business. During this

period, Phillips Seafood Restaurants expanded to own and operate eight full-service restaurants in the Mid-Atlantic region, including three in Ocean City, one in Baltimore at the Inner Harbor, one in Washington, D.C., one in Annapolis, one in Myrtle Beach, South Carolina, and most recently one in Atlantic City, New Jersey. In addition, under the name of “Phillips Famous Seafood Express,” the company now has five “fast casual” food locations, with two in Maryland and three in airport locations. In terms of seafood restaurant name recognition, “Phillips has become as emblematic and trusted in the region as Brennan’s is in New Orleans” (Kliman 2005). Phillips is “A Taste of Tradition—serving authentic Maryland-style seafood since 1956” (Phillips Sea Food n.d.).

There is an important discursive theme in the legendary account of the rise of Phillips. In the telling of this story on the company’s website, a subtle transformation occurs in how crabs and food are discussed. In the early Ocean City days, the restaurant was preparing surplus crabs from the Chesapeake Bay, using Shirley Phillips’s “traditional” (and implied home?) recipe. In the 1970s, when larger and more elegant dining restaurants were opened in Ocean City, the description of the food served does not directly reference crabs: Phillips-by-the Sea Restaurant (opened in 1973) “serves traditional Phillips dishes in an elegant and relaxed dining room overlooking the sea”; the Phillips Seafood House, opened in 1977, has a menu that “is truly Phillips with the same seafood and crab delicacies served at our original restaurant and carryout” (Phillips Sea Food n.d.).

Already by the late 1970s, Phillips—the seafood restaurant—had begun to replace crabs as the connection to the Chesapeake for consumers of crabs and crab cakes. The process has continued, but the discourse suggests that the name recognition of Phillips has become increasingly important, so much so that even specific reference to the manner in which Phillips prepares its seafood appears to be no longer essential. In explaining the decision to open Phillips Seafood in Myrtle Beach, South Carolina, CEO Steve Phillips stated: “The relaxing, family atmosphere in Myrtle Beach is so similar to Phillips’ native town, Ocean City, Maryland, that the new location is a natural move for us. It feels like home in a sense” (Phillips Sea Food n.d.). Discursively, Phillips is a long way from selling surplus crabs on Hooper Island.

The Phillips story or legend, manifested in the evolution of their restaurant business, is a critical element that required and allowed Phillips to expand its operations to include the harvesting, processing, and importation of crabmeat. The strategy that linked restaurant-goers to Phillips, and through Phillips to the Chesapeake, is also being used by Phillips to expand their wholesale marketing of imported crabmeat. In 1990, Phillips reorganized crabmeat production into a year-round, offshore operation by relocating production to Southeast Asia. This reorganization was led by Steve Phillips, whose efforts and initiative in this expansion are well described on the company’s website:

While on a trip to the Philippines, Steve encountered a potential solution to the crab supply shortage that was troubling his restaurants. He found a crab almost identical to the domestic Chesapeake Bay crab, and discovered that locals considered it simply a by-product. Steve envisioned supplementing domestic crab meat with this species of blue swimming crab to ensure his restaurants' supply....

In 1990, he purchased land on a remote island in the Philippines where he built his first processing plant, hired fisherman, supplied their equipment, taught them to crab, and eventually hired others to pick the crab meat in his plants. He set up a watermen's association and taught sound ecological practices to ensure the crab's population. Steve fulfilled his vision with the support of the entire community while becoming an important economic force in the region.

Crab production in Asia was literally a venture into uncharted waters for Steve. Since his first plant in the Philippines and his second in Indonesia, Steve has opened numerous other facilities across Southeast Asia and Central and South America in his search for the best quality seafood available in the world. Today, Steve owns and operates seafood processing plants in India, Indonesia, Malaysia, Philippines, Vietnam, Ecuador, Mexico and China and also sources seafood from Thailand and Sri Lanka for his thousands of customers across the globe....Steve's approach is unique in the crab industry. Where crab was traditionally sold as a commodity item, Steve branded his product and encouraged customers to ask for it by name. [Phillips Sea Food n.d.]

According to A. C. Nielsen, Phillips is now ranked first in selling crabmeat in the country, providing an estimated 70 percent of the crabmeat sold in the United States to wholesale restaurant suppliers and grocery stores. Phillips Foods, a company that eight years ago recorded sales of \$10 million a year, is expected to reach \$500 million a year by the end of the decade.

Phillips has come to stand for an experience of the Chesapeake Bay and its foods. This is accomplished by labeling that associates the crab with a seafood company that is clearly from the region, and through language that links the imported crab to Chesapeake Bay traditions. Nowhere is this language more apparent than on the back of a can of Phillips pasteurized crabmeat, with Shirley Phillips's own "Maryland-style" crab recipe, "an authenticating stamp intended to convey to consumers a sense of continuity and tradition" (Kliman 2005).

Crab Food for All the Ecological Reasons

Although it is increasingly difficult to find crab cakes in the watershed made from Chesapeake crabs, there is a movement underway that promotes the eating of Chesapeake crabs. The "Chesapeake Club" is

a partnership of people in the Washington, D.C., metropolitan area working together to keep the Chesapeake Bay fun and full of the seafood we love. We're helping to restore and protect the Bay through simple, practical steps that touch our everyday lives, from how we care for our lawns to how we clean up after our pets

to what we plant in our gardens and more. [Chesapeake Club n.d.]

The Chesapeake Club is made possible through an initiative of the Chesapeake Bay Program, a multijurisdictional program committed to restoring the bay's living resources: the fish, crabs, oysters, and other aquatic life and wildlife.

The mission of the Chesapeake Club appears to be twofold. The first is to provide information to urban residents (Washington, D.C., is targeted) on how to enjoy the Chesapeake Bay at home, through food and lifestyle. The website offers guidance on entertaining ("how to throw the perfect crab feast, Chesapeake-style"); recipes ("taste the Chesapeake with the region's best recipes and cookbooks"); day trips ("from Washington and its suburbs"); homepage ("create the Chesapeake homestead—a place in touch with the neighborhood and the watershed"); restaurants ("find restaurants and bars that have joined the Chesapeake Club to protect the food they serve"); romantic spots ("romantic getaways not too far from home, where you and a special someone can connect to your inner Chesapeake"); and yard care ("develop and maintain a healthy Chesapeake yard without becoming a fertilizer dump").

A second goal is to help protect the bay's ecosystem and natural resources by alerting residents in urban areas about the effects of their lifestyle on the Chesapeake. The only focus of this goal to date has been on ways urban residents can reduce excess fertilizer runoff from their lawns. The website provides information on yard care and lawn services where one can "find lawn care professionals who offer the Chesapeake Club standard—a standard of lawn care designed specifically for the grasses, soils and growing seasons of our watershed." To alert Washington, D.C., residents of the need to better manage their lawn fertilizer application, the Chesapeake Club launched a media campaign in the spring of 2005. In catchy language, the website offers this description of the campaign:

Yeah, we know there's a lot stuff we're supposed to do. Like be more polite. Like exercise. Okay, we're on that. But then we thought about what we really care about. We thought about the Chesapeake. We thought let's do something that really matters: Let's protect our favorite seafood. So that's why we have this campaign about putting off fertilizer until the fall. Take a look at what's airing in the DC area right now. [Chesapeake Club n.d.]

The campaign also placed print ads on billboards and posters in public areas, such as Metrorail. Commuters viewed large posters with either a glossy photo of a crab cake sandwich, accompanied by text stating "Protect the Crab Cake Population," or of grass growing out of oysters on a half-shell, complete with crushed ice, fork, and lemon slice, with text warning that "The Lunch You Save May Be Your Own." Billboards targeted lawn care more directly: "No appetizers were injured in the making of the lawn" and "Is the grass really greener if all the blue crabs are gone?"

The central message of the Chesapeake Club's ecological message is to delay fertilizing your lawns until fall. There is little or no technical explanation about why fall fertilizing is better than spring, although there are statements that suggest there might be more runoff in spring. The message is kept simple, avoiding any complex ecological discussion about the spatial or temporal issues of non-point source pollution.

What is also noteworthy about the Chesapeake Club website is what it does not say. Two relevant topics are not covered. First, there is absolutely no mention of the imported crab that comes into the region. The text and tone of the discourse leaves little scope for this issue. Rather, eating, playing, and yard care promoted are linked only to the Chesapeake Bay blue crab. The most egregious example of this "oversight" is the list of restaurants linked to the website that "have joined the Chesapeake Club to protect the food they serve." Over 50 restaurants in the Washington, D.C., Virginia, and Maryland urban areas are listed. These restaurants are introduced with the following text:

One of the best things about the Chesapeake life is that you're never too far from a great restaurant offering great seafood. More and more of these restaurants are joining the Chesapeake Club as part of their commitment to serving great seafood—and saving the seafood in the Bay. So whether it's fried oysters or crab soufflé you're craving, visit these Chesapeake Club restaurants and savor the Chesapeake life. [Chesapeake Club n.d.]

However, many of the restaurants listed are most likely using some or even all imported crab meat in their crab dishes. Again, although this may be understandable from a restaurant business perspective, it is inconsistent with the explicit message of the Chesapeake Club: do not pollute the bay and kill crabs, instead eat them by supporting the listed restaurants. Without more information, the public would assume that these restaurants are committed to protecting the Chesapeake's seafood in a manner consistent with the Chesapeake Club's mission. Although certainly some of the restaurants are concerned and may in fact buy some local seafood, the number of restaurants listed and the large size of some suggest that imported pasteurized crabmeat is used extensively.

The Chesapeake Club's website is also missing any reference to commercial watermen as harvesters of the Chesapeake Bay seafood that purportedly supplies the listed restaurants. It is clear from the focus and language of the Chesapeake Club that the goal is to enjoy and play on the Chesapeake. Thus, it is perhaps not surprising that there is no reference to "working the Chesapeake" to harvest natural resources to support livelihoods and communities. This omission, coupled with the absence of any mention of imported crab meat, is a powerful indicator of how Chesapeake Bay food traditions are being redefined in ways that exclude the primary producers and harvesters of the Bay's actual food. Watermen are increasingly less of that Chesapeake tradition. Even the food they harvest, on which there is agreement that it is some of the best in the world, is not

sufficient to sustain the connection. Efforts to connect urban residents to the bay, such as those undertaken by the Chesapeake Club, provide no avenue to connect to watermen and their communities. In fact, such efforts only further distance consumers of Chesapeake foods from the local sources of those foods. The production process incorporated by the Chesapeake Bay Club's campaign to "save crabs so as to eat them" is an ecological one: we want to save the crabs as a proxy for "saving the bay." Ultimately, the concern is to have an ecologically productive bay for recreation and food. How that food is harvested and the implications for the coastal communities that have relied on a commercial crab fishery are excluded from this discourse.

CONCLUSIONS

Eating steamed hard crabs, sautéed soft crabs, or crab cakes is a rich and pleasurable food experience, and one that has not changed for centuries for people in the Chesapeake Bay watershed. What has changed is the production process of the crabs consumed in the watershed. Historically, the crabs consumed, regardless of their preparation, were caught in the Chesapeake Bay by local watermen who depended on them for their livelihood. Although watermen continue to depend on crabs for their livelihood, their market for hard crabs is constrained by the presence in the region of imported crab meat, which is principally used to make crab cakes. Many watermen recognize that recent declines in harvest of blue crabs from the Chesapeake have contributed to the need for seafood businesses to look for other crabs that can substitute as food for the Chesapeake Bay blue crab.

Nonetheless, the recent and rapid increase in imported, pasteurized crab meat would not have been possible without the inclusion of some form of traditional production associated with the Chesapeake. The use of imported crab meat to make crab cakes emphasizes the final preparation stage of the production process and creates space for a tradition's discourse of the type deployed by Phillips Seafood and others. Discursively, the work, knowledge, and practices of watermen in harvesting and marketing crabs no longer play a significant role in much of the crab consumption in the region. Although it may be there, it is more background, like the images of fishing boats, harbors, and catch on the walls of the region's seafood restaurants or on the top of seafood containers of imported crab meat sold retail in markets. These long-time food processing connections create a situation where the vast majority of consumers of crabmeat and crab cakes in the region do not question whether they are eating crab from the Chesapeake Bay. It is tacitly assumed that the crabmeat is from the blue crab of the Chesapeake or perhaps a nearby state. This is an implicit and strongly held assumption, and one that is reasonable given the historical connection of crabs to the Chesapeake. However, this historical connection has been reconstituted with a focus on processors of crabs and their links to the bay, rather than the primary producers-harvesters: the watermen. It is no longer the labor, knowledge, and practices

of commercial watermen but, rather, the preparation and processing of crabs that now constitutes the Chesapeake's value.

From a cultural model perspective, the replacement of explicit references to the working fishery with discourse on traditions of food preparation of crabs suggests those consumers' schemas for Chesapeake crab cakes need not include any reference to the fishery. If the crab cake is consumed in the region or branded with a reference to Maryland or a qualifier such "made in the Maryland tradition," most consumers will implicitly view the food as coming from the Chesapeake Bay. The marketing of seafood retailers and restaurants, such as Phillips Sea Food, supplies the consumer with explicit information that is sufficient to "connect" them to the Chesapeake Bay, even if this relationship is indirect. What is most significant here is the lack of need for most consumers to be connected to the fishery to have a "Chesapeake Bay" crab cake experience, which is a larger commentary on the growing cultural and economic disconnect between coastal fishing communities and the consumption of their seafood.

Still, there is a new production discourse that focuses directly on linking the consumer to blue crabs in the Chesapeake. This discourse, exemplified by the language and focus of the Chesapeake Bay Club, privileges an ecological rationale for eating Chesapeake Bay crabs and seeks environmental change from local consumers. However, once again, the fishery that provides these Chesapeake Bay crabs is excluded from the ecological and lifestyle discourse around crabs. The discussion also raises questions about how the Chesapeake Bay is being redefined as a place for recreation and play, which requires a healthy ecosystem but not necessarily local watermen if our seafood is still prepared (not produced) using Chesapeake or Maryland-style traditions (Paolisso 2006).

Nonetheless, future food production and consumption pathways for Chesapeake Bay crabs are not inevitable. It is possible that the strong regional connections to Chesapeake foods, crabs in particular, can be used to reconnect local consumption to local production, with benefits to consumers, watermen, and processors. Clearly, production and marketing arrangements would need to evolve to match local and regional needs, and the seasonality and ecology of the natural resource base would become critical components of the food system. We already have some evidence that this is possible, as witnessed by the recent appearance of a new quarterly publication *Edible Chesapeake*, which seeks to promote and celebrate the abundance of local foods in the Chesapeake watershed (Edible Chesapeake n.d.).

The discussion of these shifting meanings of the production process around Chesapeake Bay blue crabs fits within a broad-ranging environmental anthropology concern about discourses and implicit cultural meanings, and how such knowledge and values are deployed to create connections to nature and the environment (cf. Cronon 1996; Crumley 2001; Kempton et al. 1995; Milton 1993, 1996). The Chesapeake Bay provides an excellent study site for how explicit information and knowledge about environ-

mental issues—including the production and consumption of natural resources—evolve and change, and how, in that process, they create and modify implicit cultural models of the environment (Paolisso 2006). Given the vast number and complexity of environmental issues facing communities at local, regional, and global scales, and because cultural models necessarily simplify reality and allow individuals to understand and act, continued research into their construction and use is an important applied and policy-relevant contribution of environmental anthropology.

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NOTES

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1. The top four states reporting crab landings in 2003 were North Carolina (22,252 MT), Louisiana (20,022 MT), Maryland (16,757 MT), and Virginia (14,974 MT). See Miller and colleagues 2005.
2. I do not discuss soft crabs further in this article, because the largest amount of imported crab arrives as crabmeat picked from steamed hard crabs. However, soft crabs are being imported into the United States and are increasingly competing with domestic soft crab harvesting and marketing, which is a topic for exploration in another article.
3. It has been assumed that the majority of this increase of crabmeat imports in airtight containers (ATCs) is pasteurized crabmeat, and not lower-quality shelf-stable meat, given that the increased demand for such imports would be in crab cakes, which generally require the pasteurized crabmeat (personal communication, Doug Lipton, October 20, 2005).
4. There are a few restaurants that advertise that they serve only seafood from the Chesapeake Bay. These restaurants are comparatively small and tend to be located in small coastal communities.

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