

The Origins of the Acadian *Aboiteau*: An Environmental-Historical Geography of the Northeast

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In the colonial age the availability of land—free or nearly so—drew settlers from Europe to North America. Immigration pamphlets, like those of Benjamin Franklin, attracted settlers to the shores of the New World with images of a continent where laboring families could easily obtain a competency, “Land being cheap in that Country, from the vast Forests still void of Inhabitants, and not likely to be occupied in an Age to come.” Writers such as Franklin celebrated the seemingly limitless expanses available to colonial settlers. A century later, this concept was solidified by Frederick Jackson Turner, who emphasized the importance of cheap land to the settlement of North America. To this day, land accessibility remains the dominant paradigm explaining the European settlement of North America (Figure 1).¹

If land was so plentiful, why then did the farmers of Acadia, among the earliest European settlers of North America, turn their backs to the earth and dike the sea? For the Acadians, the New World frontier was not the forest line separating cleared fields from trackless forest, but the high-tide line separating forested uplands from cultivated marshlands. While their cousins in Canada were known as the *coureurs de bois* (woods runners), the Acadians were known as the *défricheurs d'eau* (clearers of water). In the 120 years between the first Acadian settlements of the 1630s and the British conquest of Acadia in 1755, only 500 acres of woodland were cleared for gardens and small agricultural plots. In stark contrast, the Acadians diked and reclaimed more than 13,000 acres of salt marsh for agricultural purposes (Figure 2). Why the Acadians should prefer to dike marshes with *aboiteaux*, and avoid the uplands, has yet to be fully explained.²

A long-standing argument is that the thin acidic soils surrounding the Bay of Fundy did not justify the labor involved in clearing and preparing

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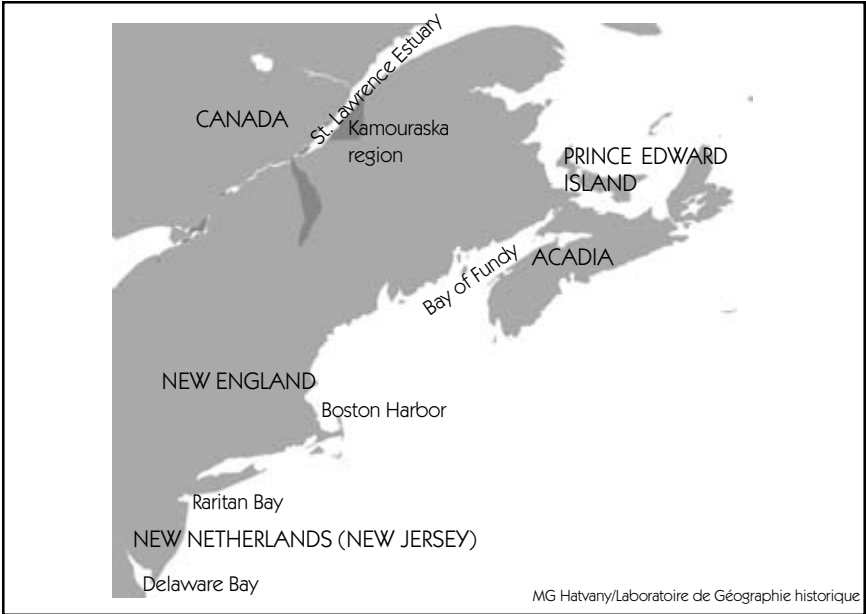


Figure 1. The Northeast region in the colonial epoch (1600-1850). Recognition and exploitation of the fertility of salt marshes was not ethnocentric, but instead part of a larger culture of wetland appreciation found across the entire Northeast.



Figure 2. Acadians repairing a dike (*aboiteau*), c. 1720. Re-creation by Azor Vienneau. Source: Nova Scotia Museum, N-12,212.

upland fields, especially when nearly 50,000 acres of fertile marshland was so near at hand.³ This is an important argument, for at its heart lies the inadequacy of the colonial “abundant land” thesis that dominates early North American history. While the “abundant land” thesis is certainly relevant to colonial America, it masks the many real problems encountered by French, British, German, Swedish, and Dutch colonists in the Northeast. Too often, colonial history texts oversimplify the fact that clearing and bounding the land was a lengthy (often one or more generations in time to clear a family farm) and expensive process (more than many first-generation settlers could afford). And, once the land was cleared, stumped, and fenced, that same soil was too often relatively low fertility podzols. The result was that many north-eastern colonists instinctively turned to the sea for economic subsistence.⁴

In the upper Bay of Fundy, where there was a lack of easily arable land, the Acadians quickly turned to exploiting the salt marshes for fish, waterfowl, pasturage, and hay. And, by the 1640s, they began diking the intertidal zones for agricultural purposes. Visiting Acadia at the turn of the 18th century, the Sieur de Dièreville provides one of the earliest descriptions of one of these dikes, or *aboiteau*. He writes:

The ebb & flow of the sea cannot easily be stopped, but the Acadians succeed in doing so by means of great Dykes, called Aboiteaux [Old World spelling]....In the center of this construction, a Sluice is contrived in such a manner that the water on the Marshes flows out of its own accord, while that of the Sea is prevented from coming in (Figure 3).

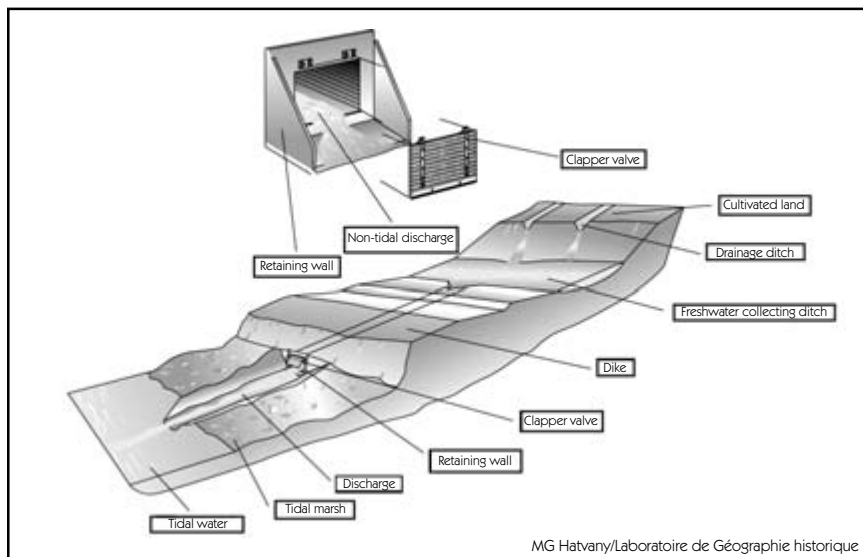


Figure 3. Diagram of a modern *aboiteau*, Kamouraska, Quebec.

Source: Adapted from Alexandre Paradis, *Kamouraska (1674-1948)* (Kamouraska 1984): 254.

Once the land was diked, rain and snow freshened it until it was sufficiently desalinated in 5 to 10 years to make it suitable for upland crops.⁵

While the lack of easily arable land surrounding the Bay of Fundy is an important element in understanding the Acadian reliance on intertidal lands, most historiography instead emphasizes the origins of the *aboiteau* as a unique cultural phenomenon. As Sally Ross and Alphonse Deveau write:

No other group which colonized North America developed settlements based on the reclamation of salt marshes. No other group perfected the techniques of dike building. No other group preferred to settle on lowlands rather than clear forests on higher ground ... the term *aboiteau* ... has no equivalent in English or modern French. Like the word *igloo*, the word *aboiteau* is inextricably linked to a specific cultural context.⁶

This emphasis on ethnocentrism, to the neglect of other socioenvironmental factors, has long been problematic in understanding the origins of the *aboiteau*. As Naomi Griffiths notes, ethnocentrism has played a significant role in interpreting the Acadian past.⁷ As early as the turn of the 20th century, scholars such as William G. Ganong struggled against the inadequacies of an ethnocentric approach to the origins of the Acadian *aboiteau*. In response to the question of the origins of the *aboiteau*, Ganong wrote in *The New Brunswick Magazine* of 1898 that as far as he was able to discern, the earliest use of the word in Acadia was that of Dièreville; but he could say little more.⁸ In response, W.P. Dole replied that “The discussion of the derivation and the radical signification of this word in the pages of *The New Brunswick Magazine* has revived in this community recollections of previous efforts to settle the question now raised afresh.” Dole continued, arguing that *aboiteau* must be “considered and treated as an Acadian word, which came into existence under peculiar circumstances among the early European inhabitants of the alluvial lands that lie around the Bay of Fundy.”⁹ Ganong was skeptical of this explanation. Through collaboration with French correspondents, he ascertained that in France use of the word *aboteau* pre-dated the colonization of Acadia. He surmised that, “The supposed indigenous origin of the word in Acadia must be given up, for it has long been and still is used in France” (Figure 4).¹⁰

During the next 50 years, inquiries into the origins of Acadian marsh culture advanced little beyond the observations of Ganong. Scholars focused on the etymology of the word *aboiteau*, tenuously linking its origins to the salt makers (*sauniers*) of western France who constructed intricate dikes and tidal gates used in the production of sea salt in the early modern period. Not until the late-20th century, in tandem with the post-1960s Acadian cultural and economic renaissance, did significant attention again turn to the origins of the *aboiteau*. In the last decades of the century, the *aboiteau* became a centerpiece in the reassertion of Acadian cultural unity and distinctiveness. This interpretation was especially evident in the works of Jean Daigle, Yves Cormier, and

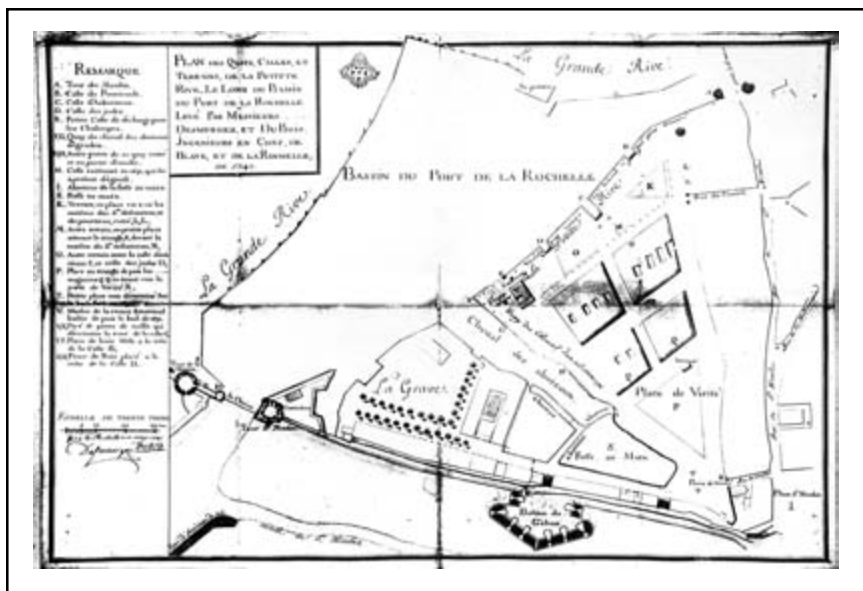


Figure 4. Plan of La Rochelle, France, 1741. Note the frequent use of the word “*aboteaux*” to identify gates used to manually control water levels in the basin of La Rochelle. Many Acadian settlers left this port for New France in the 17th century.

Source: Cartes et plans, Archives départementales Charente-Maritime, France.

Kevin Leonard. All three place heavy emphasis on ethnocentrism, viewing the *aboiteau* as a unique cultural adaptation of the Acadians.¹¹

One major problem that these scholars faced in interpreting the origins of the *aboiteau* was the dearth of primary source material available. Daigle, Cormier, and Leonard all argued that the *aboiteau* originated with the water-management systems brought from Holland in the early 1500s and adapted for use in the production of salt in the tidal marshes of western France—from whence the majority of Acadians emigrated. Cormier stated that at the debut of the colonization of Acadia, two *sauniers* (salt makers) were engaged to construct salt-making lagoons on the Bay of Fundy for use in the cod fishery. Yet attempts at salt production were quickly abandoned, apparently due to the damp climate of the region.¹² However, because the presence of two *sauniers* is documented in the primary evidence, most Acadian scholars have, *ipso facto*, assumed that when salt making failed, the Acadians adapted the technology to marsh diking for agricultural purposes. In the process of that adaptation, all of the authors imply, the *aboiteau* became a unique Acadian innovation. As Daigle comments, “The Acadians ... organized their territory in an original manner unique in North America.” Likewise, Leonard implies that no other European settlers in North America diked or otherwise exploited marshes. He writes, “While the Acadians were settling Acadia, the Dutch were colonizing southern New England [sic, the Middle Atlantic], but interestingly, they did not

employ dyke technology on the Hudson River or along coastal New York [sic, New Jersey].”¹³

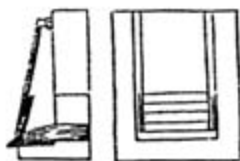
Building on that thesis, Daigle, Cormier, and Leonard move on to elevate the *aboiteau* to the status of a cultural icon. Cormier comments, “The *aboiteau* system has become a symbol of our Acadian heritage.” In the same vein, Daigle writes, “Acadians and *aboiteaux* have become nearly synonymous....In actuality, they assume a symbolic character representing the roots, stubbornness or resistance of the Acadian people in the face of assimilation or disappearance.”¹⁴ Only recently has Cormier modified that interpretation, recognizing the possible influence of early medieval marsh diking for agricultural purposes on the *aboiteau*. This new insight, however, receives only cursory attention, and has done little change to the current iconic status of the *aboiteau* in Acadia.¹⁵

Despite the tremendous value of that research, the ethnocentric emphasis given to the origins of the *aboiteau* has resulted in the virtual neglect of the Amerindian and other European presence on the salt marshes of the Northeast. Nor is any significant treatment given to the role of ecological factors in explaining why the Acadians exploited salt marshes and radically transformed their natural environment through diking.¹⁶ In effect, there have been no humanistic studies of the long-term physical relationship with the Bay of Fundy environment itself. Yet, an environmental approach to this problem suggests that the origins of the *aboiteau* and Acadian marsh culture are far older, complex, and culturally diverse than has been recognized. It may profitably be asked, what natural resources did the salt-marsh environment possess that made it more attractive than uplands? How did the Acadians perceive the links between the salt-marsh landscape and the rich stocks of fish, waterfowl, and salt hay found in that environment? And, why were the Acadians compelled to transform that environment into something radically different?

Many of these questions find answers in recent historical geography research on the salt marshes of the Kamouraska region of the St. Lawrence Estuary of Quebec. There, during the 1970s and 80s, a series of *aboiteaux* more than 26 kilometers in length were constructed to increase agricultural productivity. Until recently, it was intimated that the first *aboiteau* of Kamouraska, built in 1859, was the consequence of a cultural technology transfer following the Acadian diaspora of 1755.¹⁷ However, in reconstructing the historical geography of Kamouraska, it quickly became apparent that while the nomenclature “*aboiteau*” is Acadian, the model itself came from France. In Kamouraska, *aboiteaux* construction was initiated in the mid-19th century by the local elite to stem outmigration and alleviate demographic pressure by expanding the amount of arable land available. In this particular case, the idea of constructing *aboiteaux* was borrowed directly from the Imperial agricultural schools of France, where tidally operated sluice gates (*écluses*) were being implemented along the entire Atlantic coast to expand arable land (Figure 5). However, even before that time, it is clear that the inhabitants of the Kamouraska region had had a close ecological relationship with the salt marshes of the St. Lawrence Estuary.¹⁸

Les moères, polders ou terrains conquis sur la mer, ont besoin d'être *déliorés des eaux intérieures* par un système combiné de canaux de dessèchement et d'écluses. Dans les cas ordinaires, l'écluse est placée dans un conduit de décharge pratiqué à travers la digue, dans l'endroit le plus convenable en raison de la pente du terrain et de l'afflux des eaux. Elle est protégée par des piliers de défense ou une jetée, et sa porte est construite de façon qu'elle ne permet pas l'entrée des eaux extérieures, mais seulement la sortie de celles de l'intérieur. Plusieurs écluses remplissent cet objet: nous représenterons seulement ici celle *fig. 82*, qui agit d'elle-même, et est employée à l'embanquement de Bar Loch en Angleterre.

Fig. 82.



Les canaux et fossés nécessaires pour recueillir les eaux surabondantes du terrain endigué et les conduire aux écluses, ainsi que celles venant de loin qui pourraient le traverser, sont le résultat d'opérations entièrement analogues à celles qu'on aura à exécuter pour les dessèchemens, auxquels nous renvoyons.

Figure 5. An *écluse*, or tidally operated sluice gate (France 1863). The idea to construct *aboiteaux* in Kamouraska came directly from French models like this that were being employed across the Atlantic coast of France in the 19th century.

Source: Bailly, Bixioi, and Malpeyre, *Maison rustique 19^e siècle* (Paris: Librairie de la Maison Rustique, 1863): 125.

Before the coming of Europeans, the salt marshes of Kamouraska (which means, “where the rushes grow in the water” in Algonquin) played an integral role in the Amerindian economy of the region. In the pre-historic era, archaeological evidence illustrates that the Amerindians of the lower St. Lawrence Estuary used weirs and other instruments to seasonally harvest eels, herring, shellfish, and waterfowl in the marshes and tidal flats of the region. In the 17th century, Jesuit missionaries relate the seasonal Amerindian exploitation of the salt and brackish-water marshes of the Kamouraska region for ducks and geese numbering in untold thousands.¹⁹ In fact, it may be possible to go even one step further back into the human ecology of the region, many scholars argue, because wetlands (especially tidal-marsh ecotones like those of Kamouraska, the Bay of Fundy, and the Delaware Bay) were an important

focus of prehistoric human settlement precisely because they were “an important ecological component of the North American landscape.”²⁰

Like the Acadians, the first French-Canadian colonists of Kamouraska quickly turned to the salt marshes, developing modes of utilization similar to those of the Amerindians. By the early 18th century, seigneurial papers from Kamouraska indicate that the salt marshes were being heavily exploited to supply fish (especially eels), waterfowl, pasturage, and salt grass for overwintering animals. In 1725, marshlands used for agricultural purposes (pasturage and salt hay) represented more than 25 percent of all land in agricultural production (Table 1). This pattern would continue until the mid-19th century, when diking of the salt marshes began as part of the modernization of the agricultural economy of the region.²¹

Table 1: Amount of Farmland Held by Families in the Seigneurie of Kamouraska, 1723-1726

# Landholdings	Acres of Upland	Acres of Marshland
39	264	127

Source: Alexandre Paradis, *Kamouraska (1674-1948)* (Kamouraska 1984): 31-40.

Clearly, the long-term Amerindian and French-colonial relationship with the salt marshes of Kamouraska challenges the “uniqueness” of the Acadian marshland experience. Yet, are these findings so astonishing? As George Nichols critically comments, one reason scholars express surprise that many peoples found “wetlands attractive is that *they* do not. In other words, we tend to impose our own cultural geography upon past landscapes.”²² Only in the last 40 years have scientists recognized that wetlands are some of the most fecund environments in the world, supplying vital habitat for fish, shellfish, and waterfowl. Nevertheless, while this scholarly recognition may be new, deep historical evidence illustrates that an organic understanding of the productivity of wetlands existed among marsh-dwelling Amerindians and Europeans far back into Medieval, Roman, and prehistoric times. Such peoples, living in daily contact with wetland environments, intuitively recognized, exploited, and altered such environments for their abundant natural resources.²³

Examining the ecology of the salt marshes situated between the St. Lawrence and Delaware River estuaries, it quickly becomes apparent why salt marshes were attractive to human settlement. First, the natural processes of the salt marsh create ideal conditions for a highly nutritive ecosystem. Ecologists indicate that tidal salt marshes have one of the highest productivity rates of any ecosystem in the world. On average, southern and northern salt marshes illustrate production rates of up to 10 tons of organic matter annually per

acre, in contrast to the best hay lands in North America, which produce about 4 tons per acre. As a result of this fecundity, salt marshes serve as vital feeding habitat, mating grounds, and “nurseries” for a significant number of marine species that live at least part of their lives in the salt marshes. Since time immemorial, these ecological conditions have also attracted humans to the salt marsh in hopes of gaining the rich bounty of fish, shellfish, and waterfowl therein.²⁴

Second, humans have been attracted to the marsh ecosystems not only for their faunal riches, but also for their floral wealth. Many of the most common plants found in the salt marshes of the Northeast (Figure 6), especially *Spartina alterniflora*, *Spartina patens*, *Spartina pectinata*, *Juncus* sp., and *Elymus* sp., have a high utilitarian value to humans. This organic material was used to supply much-needed forage and fodder for livestock, thatch for roofing, peat for burning, and fertilizer for field dressing. All of these floral materials were highly esteemed by humans in the pre-industrial period, especially in the colonial epoch before significant amounts of uplands could be cleared of thick forest growth (Table 2). Third, because of the high rate of organic growth, coupled with the anaerobic conditions underlying most salt marshes, plant decomposition rates are slow. The result is the creation of a thick humus of organically rich silt that was alluring to farmers capable of shutting out the tides and desalinating the emergent land.²⁵

These combined ecological factors were the basis of an extremely long history of human exploitation and alteration that, in Europe, pre-dates Roman times. In fact, as French geographers Nacima Baron-Yellès and Lydie Goeldner-Gianella illustrate, salt marsh zones from the Neolithic Age to the present have been continuously peopled with, at certain moments, popula-

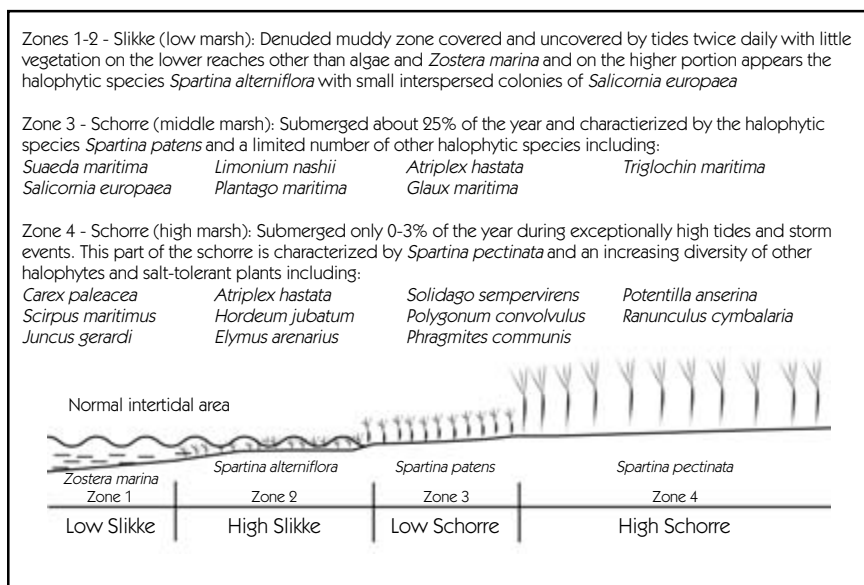


Figure 6. Typical plant-zone patterns of a northern salt marsh in Kamouraska, Quebec.

Table 2: Common Salt-Marsh Plants of the Northeast and their Usages

Species	Common names	Human usages	Ecological values
<i>Spartina alterniflora</i>	Salt hay	Thatch, hay, forage	Waterfowl, fish, detritus
<i>Spartina patens</i>	Salt meadow grass	Hay, forage, bedding	Waterfowl, fish, detritus
<i>Spartina pectinata</i>	Cord grass	Thatch, forage	Waterfowl, rodents
<i>Juncus gerardii</i>	Black grass	Hay, forage	Waterfowl, rodents
<i>Elymus arenarius</i>	Sea rye	Flour, forage	—
<i>Ammophila</i> sp.	Beach grass	Forage	Waterfowl
<i>Scirpus</i> sp.	Marsh hay	Hay, forage	Waterfowl
<i>Carex paleacea</i>	Sedge	Hay, forage	Waterfowl, rodents
<i>Plantago maritima</i>	Seaside plantain	Forage	—
<i>Phragmites communis</i>	Reed grass	Thatch	—
<i>Salicornia europaea</i>	Glasswort	Salads	Waterfowl
<i>Zostera marina</i>	Eel grass	Fertilizer	Waterfowl, fish

Source: Fleurbec, *Plantes sauvages du bord de la mer* (St-Augustin, 1985); Marie-Victorin, *Flore laurentienne* (Montreal: Les Presses de l'Université de Montréal, 1995); Gene M. Silberhorn, *Common Plants of the Mid-Atlantic Coast* (Baltimore: Johns Hopkins University Press, 1982).

tion concentrations far greater than that of corresponding inland communities. This is true not only for the salt marshes of western Europe, but for much of the coastline of North America.²⁶

Since pre-historic times, Amerindian tribes from Delaware Bay to the St. Lawrence Estuary have seasonally frequented salt-marsh areas for shellfish,

fish, and waterfowl. In fact, for many of the coastal tribes of the Northeast, the faunal and floral resources of the tidal-marsh environments were the staples of their subsistence economy.²⁷ Similarly, James Robert Enterline argues that when the first Europeans (Vikings) reached North America around the year 1000, it was not the grapes of Vineland that they found so alluring, but a “wheat-like” marsh grass (*Elymus* sp.) growing in abundance along the coves and shores of Newfoundland. Such an argument is highly plausible, given that high marsh-grass species were the nutritive base for much of the Viking livestock of Greenland, Iceland, and Scandinavia.²⁸ In the early 1600s, the writings of Champlain and Jesuit missionaries document that the first settlers of New France pastured their animals on the tidal marshes of the St. Lawrence Estuary and harvested hundreds of tons of marsh hay to overwinter livestock.²⁹ In New England, as Kim Sebold illustrates, one of the first acts of the Puritans settling around Boston Harbor was to survey, divide, and sell the salt marshes. By 1650, virtually every coastal New England town was adjoined by salt marshes exploited for livestock pasturage and salt-hay harvesting.³⁰ And in New Netherlands (New Jersey), Sebold once again illustrates that the socioeconomic base of many of the 17th-century Swedish, Dutch, and English communities was the marsh pasturage and marsh hay harvested along the Atlantic and Delaware coasts of the colony.³¹

Just how significant was the salt-marsh environment to these early colonial peoples? A precise answer is currently unavailable for lack of reliable census data for the region as a whole. However, anecdotal evidence attesting to its importance is plentiful. In New Netherlands, the Dutch officer Adriaen van der Donck wrote in 1655 that the salt marshes of Raritan Bay are “so extensive that the eye cannot oversee same. Those are good for pasture and hay.... These meadows resemble the low and outlands of the Netherlands. Most of them could be diked and cultivated.” In Prince Edward Island, Lord Selkirk wrote in 1803, “Marsh is extremely run upon by all the inhabitants ... 1 acre is as much value as 5 or perhaps 10 of woodland.... Indeed it is spoken of as an extraordinary circumstance that an Englishman has settled on a lot ... without any marsh hay.” This was no idle jest, for the census data for 1810 indicates that two-thirds of all hay harvested in that colony was salt-marsh produced.³²

Such anecdotes, demonstrating a profound human appreciation for the salt-marsh environment, can be found throughout the entire colonial Northeast. However, recollections of this kind were not confined solely to easily accessible marsh resources such as pasturage, salt hay, fish, and waterfowl. As demographic pressure on good land mounted in the coastal communities of the Northeast, so too did outmigration before the turn of the 18th century.³³ Those who remained behind often turned to the marsh for additional arable land. As Van der Donck suggested, the salt marshes of New Netherlands could also easily be “diked and cultivated” for agricultural purposes. Why was Van der Donck compelled to make that comment, unless he foresaw the eventual need for additional arable land? Not long afterwards, as tax returns from late-17th-century West Jersey (southern New Jersey) confirm, his suggestion was

acted upon. There, good arable land was limited to a small coastal strip between the Delaware Bay and the relatively infertile pine barrens of the interior, effectively hemming in the Swedish and English settlers of the area between saltwater and sand. Not long after the initial settlement of the area, colonists began building earthen banks with tidally operated sluice gates to expand the amount of arable land available. In the next 100 years, some 55,000 acres of tidal marsh (over 3 times the amount of marshland transformed in Acadia in 1755) were diked along the shores of Delaware Bay.³⁴

In the early 18th century, land-hungry New Englanders also began diking the salt marshes for more intensive agricultural purposes. And, in Kamouraska, marsh diking to expand arable land began in the mid-19th century as a solution to the massive outmigration of the landless sons and daughters of the St. Lawrence Valley.³⁵ While the timing of these marsh-diking activities differs substantially, in each case it was increasing demographic pressure and a lack of good arable land that frequently led coastal farmers from New Jersey to Quebec to turn to transforming the marsh environment, just as the Acadians had done in the early 17th century. Any lingering doubt as to how these non-Acadian marsh dikes and tidal sluice gates operated can be assuaged, since a clear description is given by the naturalist Peter Kalm. In the mid-18th century, Kalm visited the former Swedish colony of Raccoon in southern New Jersey. There he observed the dikes and tidally operated sluice gates built along the shores of the Delaware River. Not only did Kalm write extensively of the exploitation of salt-marsh pasturage and marsh hay in this region, but he also observed that:

The country here was very low.... The plains on the banks of the [Delaware] river were flooded at every ... flowing of the tide, and at the ebbing they were left dry again. However the inhabitants of the country hereabouts met this situation, for they had in several places thrown up walls or dykes of earth near the river to prevent its overflowing the land.... In the dykes were gates ... they were sometimes placed on the outside of the wall, in such a way that the water in the meadows would force them open while the river water would shut them.³⁶

Though Kalm's and Dièreville's descriptions of marsh exploitation and diking are separated by nearly 50 years and half a continent, there is little substantial difference in their observations. This revelation begs the question of how such seemingly disparate colonies developed similar technological approaches to managing the salt-marsh environment. A plausible answer lies in a related environmental heritage in Europe. While it is not widely known, William TeBrake argues that small-scale marsh diking for agricultural purposes dates far back into western European antiquity, especially in the area bordering on the North Sea. Over time, such techniques were advanced, especially with the coming of the Romans. However, it was in the 13th century that marsh diking became widely employed along virtually all of the Atlantic coastline of western Europe. During that epoch (c. 1050-1250), mounting

of the conquered marshes,” writes Louis Papy of diking north of La Rochelle, “but when the fresh or salt water on the outside falls, the gates permit the drainage of the water from the diked interior.”³⁹

From the 13th to the 16th centuries, much of the conquered marshlands were retaken by the sea as a result of wartime destruction of the dikes and neglect because of falling demographic pressure caused by religious wars, disease, and plague. In the 16th century, with the return of peace, mounting demographic pressure, and the debut of modernization in the countryside, attention again turned to diking the marshlands. Especially in western France, considerable marsh diking to create salt-producing lagoons (salt-works or *marais salants*) took place. Salt, the product of these efforts, brought tremendous profits on the international market. Because this industry was so important to the national economy of France, it has frequently eclipsed the fact that considerably more marsh diking was undertaken at the same time for agricultural purposes.⁴⁰

At the end of the 16th century, as numerous authors point out, it was Dutch hydrological engineers who were widely employed throughout western Europe to direct huge works of marsh conquest for agricultural purposes.⁴¹ Of tremendous import in the timing of this event is the fact that many of the earliest colonists immigrating to the New World came precisely from coastal localities where intensive marsh diking for agricultural purposes was taking place. This is especially true of the Dutch who settled around the Delaware and Raritan bays of New Jersey, but no less so for the Acadians coming from the region of La Rochelle in western France. Nor should one lose sight that for the English colonists of Lincolnshire, Cambridgeshire, Norfolk, and Suffolk, virtually all of them had at least some rudimentary knowledge of the massive diking of the Fenlands before settling the coastlines of New Jersey, New England, and Acadia after its conquest.⁴²

In hindsight, the origins of the Acadian *aboiteau* seem less important than accounting for the commonalities in environmental perception held by the Amerindian and European peoples that colonized the Northeast, and why they were sometimes compelled to transform that environment into something radically different. Such recognition argues the necessity of enlarging the geographical scale of analysis of salt-marsh utilization from culturally specific ethnic enclaves to a larger “environmental scale” of analysis based on coastal wetland societies. Such a shift in geographical scale and subject of analysis illustrates that almost every group of European immigrants coming to the shores of colonial North America turned to the salt marshes as one of the first places of colonization and radical environmental transformation. Because of the historiographic importance placed on land availability in the interpretation of North American development, and the general oversight by most historians and geographers of the fecundity of wetland environments, we have too often neglected the venerated place held by wetlands in the pre-industrial societies and economies of North America and Europe. Ultimately, the origins of the Acadian *aboiteau* may not lie, as previously understood, solely in

one specific technology or ethnic group, but in an older and more syncretic relationship between wetland societies and their environments.

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Notes

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