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Article abstract

This article compares marshland colonization in Acadia and France during the 17th century. It begins with an analysis of why the initial attempts to colonize marshlands failed. It then compares the later, successful initiatives at Port Royal, in Acadia, and the Poitevin Marsh, in France. Although they had very different objectives and tackled very different environmental challenges, both groups effectively organized their activities and used innovation in adapting old techniques. What made Acadian marshland farming distinctive was its small scale and its dispersed, decentralized nature. Both initiatives demonstrate how successful marshland colonization was a profoundly local endeavour.

Marshland Colonization in Acadia and Poitou during the 17th Century

GREGORY KENNEDY

Cet article compare la colonisation des terres marécageuses en Acadie et en France au cours du 17e siècle. Il s'ouvre sur une analyse des raisons pour lesquelles les premières tentatives en vue de coloniser les marais échouèrent. Il compare ensuite les tentatives fructueuses effectuées plus tard à Port-Royal, en Acadie, et dans le Marais poitevin, en France. Malgré les objectifs bien différents qu'ils poursuivaient et les défis différents posés par l'environnement, les deux groupes organisèrent leurs activités avec efficacité et firent preuve d'innovation en adaptant de vieilles techniques. Ce qui fit la particularité de la culture des marais en Acadie, c'est sa petite échelle et son caractère dispersé et décentralisé. Les deux initiatives démontrent comment la colonisation des terres marécageuses était une entreprise profondément locale.

This article compares marshland colonization in Acadia and France during the 17th century. It begins with an analysis of why the initial attempts to colonize marshlands failed. It then compares the later, successful initiatives at Port Royal, in Acadia, and the Poitevin Marsh, in France. Although they had very different objectives and tackled very different environmental challenges, both groups effectively organized their activities and used innovation in adapting old techniques. What made Acadian marshland farming distinctive was its small scale and its dispersed, decentralized nature. Both initiatives demonstrate how successful marshland colonization was a profoundly local endeavour.

THE AUTHORS OF THE SUCCESSFUL 2011 SUBMISSION of Grand Pré as a world heritage site noted that the Acadians "took European practices, developed for wetlands and saltpans, and adapted them to the much different environment in Acadie."[1] Yet there was also a larger context for marshland exploitation. Recent work suggests that French, Dutch, and English colonists throughout northeastern North America relied at least in part on marshlands. They were ideal as a place to start because they were easily accessible and provided immediate food resources such as fish and waterfowl as well as pasture for livestock. No doubt the colonists

1 World Heritage Nomination Proposal for Grand Pré (January 2011), 28. The author would like to thank Jonathan Fowler, as well as the co-editors of *Acadiensis* and the anonymous reviewers chosen by that journal for their comments and suggestions on this article. The research was funded in part by a grant from the Faculté d'études supérieures et de la recherche (FESR) de l'Université de Moncton.

Gregory Kennedy, "Marshland Colonization in Acadia and Poitou during the 17th Century," *Acadiensis* XLII, no. 1 (Winter/Spring 2013): 37-66.

were inspired in part by the example of the Aboriginal peoples, who used wetlands in this way.[2] Many colonists also saw marshes as potential places for agriculture since major initiatives to drain and develop marshlands were already under way in France, the Dutch Republic, and England. From an environmental perspective, colonization of new lands in Europe was an essential dynamic of emerging capitalist societies facing significant demographic pressures. In the New World, the transformation of natural and Aboriginal landscapes by new colonial societies could be even more dramatic.[3] From a political and economic perspective, colonization was central to the processes of state formation in Europe and empire building abroad. For governments and elites looking to consolidate and expand their power and wealth, New World and metropolitan affairs were not separate but intertwined.[4]

How, then, does Acadian use of marshlands fit into this larger history of colonization in the Atlantic World?[5] To what degree was the Acadian marshland experience distinctive? This article seeks to address these questions by comparing marshland colonization in Acadia and France during the 17th century. A few experts have already made this link, setting the stage for a more thorough comparison.[6] Two exemplary models will be employed – Port Royal, the first and most important Acadian community, and la Société de Petit-Poitou, the first successful company in the Poitevin Marsh, in western France. Considered first will be the initial, failed attempts to colonize these areas and what they reveal about the role of the state as well as how these projects were connected to each other. The article will then examine in detail the organization and the methods of the enduring colonies that emerged in the 1640s and 1650s. Finally, the success of these colonies up to the beginning of the 18th century will be evaluated.

The ambitions of Henri IV

While most historians have tended to pass quickly over France's largely failed efforts at building a colonial empire before 1610, recent studies have emphasized that these projects were an integral part of the monarchy's larger strategy to improve France's position in Europe and, perhaps, in the case of Henri IV, part of a larger humanist vision that sought to create a better world after many years of brutal

2 Matthew G. Hatvany, "The Origins of the Acadian Aboiteau: An Environmental-Historical Geography of the Northeast," *Historical Geography* 30 (2002): 123, 131.

3 John F. Richards, *The Unending Frontier: An Environmental History of the Early Modern World* (Berkeley: University of California Press, 2003), 5-10.

4 The author would like to thank Helen Dewar for providing an advance copy of her forthcoming article, "Sovereignty Overseas, Sovereignty at Home: The Role of New France in the Consolidation of Maritime Authority in France, 1620-1628," *Revue d'histoire de l'Amérique française* LXIV (2012) (forthcoming).

5 In asking this question, I follow the lead of John G. Reid in his « Écrire l'Acadie en lien avec les mondes atlantique et autochtone », in Martin Pâquet et Stéphane Savard, dir., *Balises et références, Acadies, francophonies*, Québec, Presses de l'Université Laval, 2007, p. 256-260.

6 Karl Butzer, "French Wetland Agriculture in Atlantic Canada and Its European Roots: Different Avenues to Historical Diffusion," *Annals of the Association of American Geographers* 92, no. 3 (September 2002): 451-70; A.J.B. Johnston, "*Défricheurs d'eau*: An Introduction to Acadian Land Reclamation in a Comparative Context," *Material Culture Review* 66 (Fall 2007): 32-42.

religious civil war.[7] France was clearly envious of the riches generated by its chief rival – Spain – through its overseas colonies, as well as the success of the Verenigde Oostindische Compagnie (VOC) – the Dutch East India Company.[8] Nor were the French entirely unsuccessful. Although permanent colonies had not been established, the number of French cod-fishing vessels in the New World had continued to grow and by the end of the 16th century may have rivalled the size of the Spanish fleet in the Americas.[9] This achievement owed much to the lucrative fur trade with Aboriginal people that fishermen undertook while drying their catch.

Henri IV aimed to follow up on this success and focused colonization efforts on the North Atlantic. Two modest expeditions set out in 1598 and 1599, one to Sable Island and the other to Tadoussac; but by 1603 just 11 settlers remained at the former, while only a small habitation and trading post had been founded at the latter.[10] A more ambitious project was launched in 1604 to establish Acadia. The king granted a ten-year commercial monopoly to his friend and former comrade-in-arms, the Protestant Pierre du Gua, Sieur de Mons, and further gave him wide powers as his lieutenant-general to settle, trade, and enforce royal authority over all of New France.[11] De Mons was joined by Jean de Biencourt de Poutrincourt as well as Samuel de Champlain, an experienced cartographer with an apparent close connection to the king.[12] During a disastrous first winter on the isolated, barren island of Sainte-Croix, however, half of the colonists died of starvation and scurvy. De Mons moved to the more sheltered harbour of Port Royal, where his surviving men were able to construct a permanent habitation with the help and support of the local Mi'kmaw community. Champlain experimented with a small marshland garden, building a dyke, canals, and a sluice gate.[13] Yet all of this seemed for naught when, in 1607, rival merchants prevailed on the king to recall de Mons's team.

Meanwhile, the Dutch also inspired Henry IV in another way. The extensive reclaiming of low-lying areas for farms in the Netherlands had significantly increased the food production and population of the republic. Drained marshlands proved especially fertile and seemed to sustain that productivity for a long time without the need for fertilizer or crop rotation. One later study in France determined that they typically produced 10 to 30 per cent larger harvests than the best arable land elsewhere.[14] The marshes of western France had also seen some agricultural development. Since medieval times, local monasteries and communities had

7 Eric Thierry, *La France de Henri IV en Amérique du Nord : de la création de l'Acadie à la fondation de Québec*, Paris, Champion, 2008; David Hackett Fischer, *Champlain's Dream* (Toronto: Knopf Canada, 2008); N.E.S. Griffiths, *From Migrant to Acadian: A North American Border People, 1604-1755* (Montreal and Kingston: McGill-Queen's University Press, 2005), 3.

8 Niall Ferguson, *The Ascent of Money* (New York: Penguin Press, 2008), 128-39; Paul Butel, *The Atlantic*, trans. Iain Hamilton Grant (London: Routledge, 1999), 63.

9 Thierry, *La France de Henri IV*, p. 16; Richards, *The Unending Frontier*, 555.

10 Thierry, *La France de Henri IV*, p. 53, 66.

11 « Lettres patentes expediez en faveur de Monsieur de Monts », 18 décembre 1603, *Collection de manuscrits contenant lettres, mémoires, et autres documents historiques relatifs à la Nouvelle-France*, I, Québec, Imprimerie A. Côté, 1883, p. 46.

12 Fischer, *Champlain's Dream*, 42-7.

13 Fischer, *Champlain's Dream*, 201-6; Griffiths, *From Migrant to Acadian,* 12-14; Butzer, "French Wetland Agriculture," 454.

14 Jean-Paul Billaud, *Marais : rencontres de la terre et de l'eau,* Paris, L'Harmattan, 1984, p. 54-55.

constructed canals and dykes along their edges and used the reclaimed land to pasture livestock. Coastal areas were also heavily exploited for salt production. Much of this infrastructure, however, had been destroyed during the 16th-century Wars of Religion, while the vast marsh interior was largely assumed to be unproductive and disease-ridden. The few fishermen and gatherers who lived there were scornfully referred to as "hut-dwellers." The king had direct experience of the Poitevin Marsh, having spent time hiding there during the civil wars. In 1586 he wrote that they had great potential for development.[15] Rather than simply restoring salt and livestock production along the periphery, he aimed to drain the marshlands in order to create productive farmland and new roads. The resulting grain production and commerce would improve state revenue and security in the region.[16]

Here, as in New France, Henri IV launched an ambitious project. In 1599 the king appointed a Dutch Protestant, Humphrey Bradley, as "maître des digues et canaux du royaume," with a mandate to drain and develop marshlands across France. The king offered incentives such as exclusive rights to the cleared land and letters of nobility for Bradley and his eleven principal associates. Yet the resulting "Grande société de dessèchement" lacked the capital and the organization to get started. The first constructions did not begin until 1607 and were fiercely opposed by most seigneurs, who refused to give up their title to the marshlands. Meanwhile, local inhabitants, motivated by xenophobia and fear that their traditional agricultural and landholding practices would be disrupted, sabotaged the dykes at night.[17]

By the time that Henri IV was assassinated in 1610, the colonization projects in Acadia and Poitou had both ground to a halt. They had been inspired by royal ambitions to strengthen France in the image of its rivals, and led by royal favourites given offices and privileges. But the king lacked the means to finance these projects directly, nor could he force France's elites to invest the funds necessary to capitalize them. French merchants were prepared to invest in quick voyages that exploited the New World's natural resources, but seemed far less willing to risk their money either in long-term settlement projects or in drainage schemes of unproven practicality of which the immediate beneficiaries would be foreign investors like Bradley. Colonization also required sustained political support, but even this the king could not provide. Facing the unrelenting opposition to colonial schemes of his own chief finance minister, the Duc de Sully, as well as the appeals of rivals for De Mons's trading privileges, the king recalled the expedition to Acadia after just three years.[18] He also failed to counter elite opposition to Bradley's project once construction finally got under way. Henri IV could not override this opposition, or chose not to do so, preferring to appease provincial interests.[19] Political stability deteriorated

15 Yannis Suire, *Le Marais poitevin: une écohistoire du XVIe à l'aube du XXe siècle*, La Roche-sur-Yon, Centre vendéen de recherches historiques, 2006, 17.

16 Salvatore Ciriacono, *Building on Water: Venice, Holland, and the Construction of the European Landscape in Early Modern Times*, trans. Jeremy Scott (New York: Berghahn Books, 2006), 209.

17 Suire, *Le Marais poitevin*, p. 56-57; Le Comte de Dienne, *Histoire du dessèchement des lacs et marais en France avant 1789*, Paris, H. Champion, 1891, p. 35, 81.

18 Thierry, *La France de Henri IV*, p. 221; Fischer, *Champlain's Dream*, 119.

19 Elizabeth Mancke and John G. Reid, "Elites, States, and the Imperial Contest for Acadia," in John G. Reid et al., *The "Conquest" of Acadia, 1710: Imperial, Colonial and Aboriginal Constructions* (Toronto: University of Toronto Press, 2004), 34.

after Henri IV's assassination and during the subsequent regency of Marie de Medici. Religious and political civil war now re-emerged, while a new expedition to Port Royal was burned out by an English corsair and replaced by a group of Scots colonists calling the region New Scotland (later known as Nova Scotia).[20] In short, neither domestic nor overseas colonization projects could rely on the state for the sustained political and financial support that they required. Their future was very much in doubt.

Continued war, instability, and elite competition

Early efforts at colonization had relied upon merchant associations: traditional partnerships such as those led by De Mons and Bradley. Cardinal Richelieu, chief minister to Louis XIII, is widely credited with renewing France's efforts at colonization – creating state-sponsored, joint-stock companies modeled after the VOC that could bring together a larger investor base and manage colonies directly on the government's behalf. These organizations "allowed for the collection of large amounts of capital, spread risk among numerous associates, and lessened the burden on individuals of having funds locked up in infrastructure for several years."[21] The principle of limited liability protected investors from claims against the rest of their fortunes should the companies fail. The turning point is usually seen as 1627, when Richelieu created the New France Company with one hundred initial shares.[22] Richelieu's plan, however, should also be seen in the light of his personal campaign to defeat a formidable rival for the king's favour, Henri II de Montmorency, Grand Admiral of France. Montmorency's patronage network, his purchasing of various maritime offices, and his creation of companies such as that of Guillaume de Caen to manage overseas ventures served as both model and threat to the new chief minister.[23] Until the so-called "Day of the Dupes," in 1630, Richelieu's position with the king was far from certain. That most of the associates of the New France Company were administrative and financial office-holders largely already under the chief minister's control[24] may stem from his objective of using the company to serve his own political interests rather than reflecting any failure to convince merchants to invest. Elite rivalry and competition both at court and in the colony would continue to destabilize Acadia's development throughout the 17th century.[25]

20 Suire, *Le Marais poitevin*, p. 57-59; Billaud, *Marais Poitevin*, p. 38; Griffiths, *From Migrant to Acadian*, 23.

21 Dewar, "Sovereignty Overseas, Sovereignty at Home," 14. Marcel Trudel characterized Richelieu's administration as a period of "sweeping reform" in *The Beginnings of New France*, trans. Patricia Claxton (Toronto: McClelland and Stewart, 1973), 168.

22 « Articles accordez par le Roy à la compagnie du Canada », 29 avril 1627, et « Société de cent personnes dont la dite compagnie est composée », 7 mai 1627, *Collection de manuscrits*, I, p. 64-74; Gervais Carpin, *Le Réseau du Canada: étude du mode migratoire de la France vers la Nouvelle-France (1628-1662)*, Québec-Paris, Septentrion-Presses de l'Université Paris-Sorbonne, 2001, p. 133-139.

23 Dewar, "Sovereignty Overseas, Sovereignty at Home," 18.

24 Lucien Campeau, *Les finances publiques de la Nouvelle-France sous les Cent-Associés, 1632-1665*, Montréal, Éditions Bellarmin, 1975, p. 12-13. Trudel notes that only 26 of 107 of the original associates were merchants or businessmen; see Trudel, *Beginnings of New France*, 171.

25 Mancke and Reid, "Elites, States, and the Imperial Contest for Acadia," 43.

France was also at war with England, while internal religious strife culminated in the siege of the Huguenot stronghold of La Rochelle. Meanwhile, the first expedition launched by the New France Company was captured by English privateers. Only with the return of foreign and domestic peace in 1629, and the return of Québec and Acadia in 1632, did a new French colonial expedition become possible. Richelieu selected his cousin and naval war hero Isaac de Rasilly to lead a group of 300 artisans, fishermen, and soldiers to re-establish Acadia.[26] After overseeing the departure of the remaining Scots at Port Royal, Rasilly chose to settle at La Hève (a sheltered harbour on the east coast of Acadia). Did he plan to later return to Port Royal and develop the marshlands there? The terms of a contract made by his brother with salt-makers from France showed an intention to use the marshlands to make salt, a key commodity for preserving fish. But it must soon have become obvious that the limited sunshine and heat of Acadia's climate would not support salt production. Rasilly died suddenly in 1635, so it is difficult to differentiate between his plans and those of his successor.[27]

Charles de Menou had served with Rasilly in the navy. After Rasilly's death, Menou moved most of the colonists to Port Royal and married one of the recent arrivals – Jeanne Motin. He proceeded to direct all of his energies towards establishing a feudal seigneury, complete with estates, a mill, and a church as well as peasants from France. It seems most likely that the majority of the families brought over by Menou came from the seigneurial lands of his family in Poitou and Touraine; Rasilly had employed a similar strategy in his family's holdings near Bourgeuil and Chinon.[28] Although few documents have survived from this period, the clues we have indicate that the initial settlement at Port Royal was based on the drainage of marshlands; the colonists, as tenant farmers, paid seigneurial dues and a proportion of their produce in exchange for the land and tools to get started. One eyewitness, the missionary priest Ignace, relates observing Menou out in the marshes: surveying the land, planning dykes, and directing the work. Menou's

26 While the *Dictionary of Canadian Biography* and most historians of New France and Acadia privilege the spelling "Razilly," I prefer "Rasilly" because I found that spelling to occur most frequently in references to that family in the parish registers and other documents of Poitou and Touraine. See, for example, the baptismal register of the parish of La Chaussée Registres paroissiaux, série 9E, 82/2, Archives départementales de la Vienne, Poitiers.

27 Engagements de Jehan Cendre et de Pierre Gaborit, 1 mars 1636 et liste de passagères du *Saint-Jehan*, 1 avril 1636, série E, MG A2, Archives Départementales de la Charente-Maritime, La Rochelle, at LAC; Griffiths, *From Migrant to Acadian*, 68. I am also indebted to Marc Lavoie and Ronnie-Gilles LeBlanc for sharing their ideas on this issue.

28 Geneviève Massignon, « La seigneurie de Charles de Menou d'Aulnay, gouverneur de l'Acadie, 1635-50 », *Revue d'histoire de l'Amérique française* XVI, no 4 (mars 1963), p. 469-501; Nicole T. Bujold et Maurice Caillebeau, *Les origines françaises des premières familles acadiennes, le sud loudunais*, Poitiers, Imprimerie l'Union, 1979. Griffiths argues that the Acadians were more broadly representative of various regions of France; see Griffiths, *From Migrant to Acadian*, 65. Carpin, in contrast, argues that Massignon's theory remains the most likely; see Carpin, *Le Réseau du Canada*, p. 260. Ronnie-Gilles LeBlanc provides a synopsis of the debate in « Les origines françaises du peuple acadien avant 1714 » dans André Magord, (dir.), *Le fait acadien en France : histoire et temps présent*, Poitiers/Moncton, Geste éditions/l'Institut d'études acadiennes, Université de Moncton, 2010, p. 25-49.

critics claimed that he treated his peasants like serfs.[29] Still, the European population of Acadia more than doubled from about 150 colonists and soldiers in 1640 to perhaps 400 settlers 10 years later.

Menou also brought civil war to Acadia. He seized the assets of rival colonizers Charles de la Tour and Nicolas Denys on the basis of his supposed claim to Rasilly's offices, provoking a conflict that lasted until 1647 – when Louis XIII recognized him as sole seigneur and governor of all Acadia. Menou's sudden death by drowning in 1650 launched a new wave of fighting among old rivals and new claimants. Matters were further complicated when an English naval attack on Port Royal in 1654 led to the re-establishment of Nova Scotia and to New Englanders pushing French elites to the margins of Nova Scotia.[30] From then until the arrival of a new French government in 1670, the colonists were largely neglected by colonial authorities of any kind.

In France, Louis XIII and Richelieu did not share Henri IV's ambition to colonize marshlands. The king had had to fight his way through the Poitevin Marsh to lay siege to La Rochelle in 1627, and with the war finally over probably wished to have done with the place. Richelieu had first-hand knowledge from his time as Bishop of Luçon, but seems to have had a low opinion of the region. Nevertheless, a few seigneurs saw the potential for marshland development. One of the largest projects was in the Bas-Médoc, south of Poitou, where the Duc d'Épernon reached an agreement with Tisman Gorris and his Flemish partners in 1633. In return for granting a perpetual lease to his marshland in the Gironde, Épernon would receive a larger than usual seigneurial rent and keep his right to collect dues on the sale or exchange of the land (the lods et ventes). But again the project languished; at his death in 1642, just one-quarter of the marshland had been drained.[31] As with Bradley's group, the scale of the project was simply too large, the investment base too small, and local opposition too great. Without greater resources and sustained interest, even local drainage projects could not be achieved.

During this period, colonization was dependent on the energy and resources of a few individuals, whether acting on their own or through royal patronage as well as on how closely these projects were intertwined with their personal interests. The emphasis was on short-term gain, prestige, and power rather than long-term development. War and rivalry could derail the entire enterprise. Thus, it is hardly surprising that colonization in Acadia and Poitou failed to thrive under Louis XIII.

Turning points

The turning point for colonization in both Acadia and Poitou came not from government direction but private, local initiative. After the death of Menou in 1650 and the English "conquest" of Acadia in 1654, the few hundred colonists faced an

29 Griffiths, *From Migrant to Acadian,* 54, 70, 97; « Concession accordée par Aulnay à Martin de Chevery » , 20 mars 1649, in Jacques Vanderlinden, *Le lieutenant civil et criminel : Mathieu de Goutin, en Acadie française, 1688-1710*, Moncton, Chaire d'études acadiennes, 2004, p. 266; Butzer, "French Wetland Agriculture," 455, 464-5.

30 Griffiths, *From Migrant to Acadian*, 57-63.

31 P. Massé, « Le dessèchement des marais du Bas-Médoc », *Revue historique de Bordeaux et du département de la Gironde* 6, n°1 (1957), p. 31.

uncertain future. The English proved uninterested in colonizing the region; they simply wanted to control the fishing banks and the fur trade.[32] With the return of French officials and the taking of censuses during the 1670s and 1680s, we get our first look at how the colonists had persevered. They had dispersed from Port Royal along the nearby river, draining marshlands and establishing small hameaux – groups of three to five families.

While colonists left to their own devices carried out the drainage of marshlands in Acadia, a group of local elites established their own company to lead colonization in the Poitevin marsh. La Société de Petit-Poitou began in 1640 with an agreement between Pierre Robert, élu of the élection of Fontenay-le-Comte, and the Bishop of Maillezais.[33] In exchange for a commitment to cultivate two-thirds of the drained land, one-twelfth of the resulting produce, and a derisory 12 deniers of seigneurial rent per journal (about 0.4 hectares), Robert gained "en toute propriété" the bishop's marshlands. The associates were also to ensure that the bishop's tenant farmers were not blocked from reaching their common pasture, which presumably alleviated some local concerns.[34] Next, Robert needed to seek out royal approval and for this task he enlisted Pierre Siette, king's engineer and geographer at La Rochelle. Siette must have been known to Louis XIII, because he had been entrusted with the task of dismantling the fortifications of La Rochelle in 1629. It seems that Siette was convincing because in 1641 the king declared that he and his group would have exclusive rights for developing marshland in Poitou, Aunis, and Saintonge, and that they would enjoy 20-year tax exemptions on any land they drained.[35]

At first glance, it is hard to see how these developments were turning points toward effective colonization. War and instability continued in Acadia, while the tax exemptions and privileges awarded to the Petit-Poitou Company appear little different from those provided to Bradley's grande société. France remained mired in European wars and internal conflicts, particularly during the Fronde. The difference proved to be the strong organization of the new projects, with local groups learning from the past to create something more durable and less dependent on direct state support.

Organization

The Acadian colonists virtually abandoned Port Royal, except as a trading centre. When Governor François-Marie Perrot arrived in 1685, he noted that only ten Acadian families lived in the town, and a census two years later found just 60 to 70 Acadians there as opposed to 450 in the wider area. By this time, some families had moved even further away, to new marshland areas at Beaubassin and Grand Pré.[36] In

32 Richard R. Johnson, *John Nelson, Merchant Adventurer: A Life Between Empires* (Oxford: Oxford University Press, 1991), 11.

33 An élection was the basic tax district in most parts of early modern France, notably for the taille or poll-tax. The élu was the lead civic official responsible for tax collection and other fiscal matters in the district.

34 Dienne, *Histoire du dessèchement*, p. 83.

35 Déclaration du Roy contenant les privileges accordez pour le desseichement des marais des Provinces de Poictou, Xaintonge & Aulnix, 4 mai 1641, F-21045 (23), Bibliothèque nationale de France (BNF), Paris.

36 Brenda Dunn, *A History of Port Royal/Annapolis Royal, 1605-1800* (Halifax: Nimbus 2004), 31-4. For more on Grand Pré and Beaubassin, see Edith Tapie, « Les structures socio-

general, this dispersion seems a logical decision by the colonists that enabled them to take advantage of the best and most easily accessible lands along the rivers first and also provided a measure of protection from the fighting and tensions that were centred on the fort at Port Royal.[37]

Organization into small family clusters was the key to both immediate subsistence and long-term development because of the particular pattern of life course in the colony, which we can discern from a study of the 1671 census.[38] When Menou died in 1650, most of the colonists were in their thirties and forties – married couples with young children. This meant that the children required care and were not yet old enough to significantly help on the family farm. A single family would have had difficulty building dykes and digging canals at the same time as gathering food, building shelter, and care-giving. A group of families, however, could combine their labour, completing the initial constructions required for the land to drain and begin desalination while also helping each other hunt, fish and gather, plant gardens, look after livestock, and build homes. They could focus on what they needed, and gradually drain additional land with the help of adolescent labour. The dispersion ensured that there was room to establish future generations in the immediate vicinity and avoided competition with neighbours over local food sources and how to divide up the lands. As early as in the 1671 census, over half of the households were led by the children of the first colonists – they had married, begun having children, and had livestock herds of their own.

Focusing on livestock was another important decision of the colonists. The census enumerated 66 households with about 400 people as well as 425 sheep and 620 cattle – an average of six sheep and nine cattle per household. Although we can assume that some livestock had been brought from France, most of the animals must have been purchased from New England. Investing in livestock made sense. They could be put out to pasture on drained marshland (or along the edges of marshland) long before the soil had desalinated enough to support crops. Livestock could be moved if flooding, storms, or raiders threatened the farm. They provided meat, milk, wool, and leather. If necessary, they could also be traded for other goods. Visiting in 1685, the vicar-general of New France, Saint-Vallier, noted that the secret to the colonists' relative comfort was their "bons et vastes pâturages."[39]

économiques de Grand Pré, communauté acadienne », thèse de M.A., Université de Poitiers, 2000, and Samantha Rompillon, « Entre mythe et réalité : Beaubassin, miroir d'une communauté acadienne avant 1755 », dans Pâquet et Savard (dir.), *Balises et références*, p. 271-298.

37 Butzer points out that they were simply following the geography of the Annapolis River; see Butzer, "French Wetland Agriculture," 457.

38 For a discussion of life cycle and life course concepts, see Gregory Kennedy, "Pushing Family Reconstitution Further: Life Course, Socio-Economic Hierarchy and Migration in the Loudunais, 1705-1765," *Journal of Family History* 37, no. 3 (2012): 303-18; Tamara K. Hareven, "The History of the Family and the Complexity of Social Change," *American Historical Review* 96, no. 1 (February 1991): 95-124; Angela M. O'Rand and Margaret L. Krecker, "Concepts of the Life Cycle: Their History, Meanings, and Uses in the Social Sciences," *Annual Review of Sociology* 16, no. 1 (1990): 241-62; and Glen H. Elder, Jr., "Family History and the Life Course," *Journal of Family History* 2, no. 4 (1977): 279-304.

39 Jean-Baptiste de Saint-Vallier, *Estat Present de l'Eglise et de la Colonie Françoise dans la Nouvelle France*, Paris, 1688, 95. Matthew G. Hatvany discusses the importance of marshes as pasture in "'Wedded to the Marshes': Salt Marshes and Socio-Economic Differentiation in Early Prince Edward Island," *Acadiensis* XXX, no. 2 (Spring 2001): 41.

Not that these ideas were unique to the Acadians. In Concord, the first inland settlement of the Massachusetts Bay Colony, the settlers arriving in the 1630s also settled along salt marshes and river meadows. Emulating local Aboriginal people, they built fish weirs, hunted waterfowl, and planted initial crops of corn, beans, and squash on higher ground. In the meantime, they created a large meadow commons by digging ditches and canals and connecting natural plains. This was a collective effort: officials were appointed as early as 1644 to supervise the draining of the "Great Meadow." This commons supported vast livestock herds, which were the main source of wealth for the colonists until they could clear uplands for the plough. With each generation, new lands were drained and cleared so that Concord "filled out and filled in" – creating diversified farms with pasture, cultivated fields, gardens, and orchards. Brian Donahue's conclusion could apply equally to colonists in Concord or Acadia: "Maybe these people knew what they were doing."[40]

The main difference in the early colonization of Acadia and Concord was that the Port Royal region did not have large, centralized marshlands or meadows that could support as many people. The Acadians later proved quite willing to work together in larger groups where the terrain permitted, such as at Grand Pré. Indeed, another important feature of the colonists' organization was that even if their settlement pattern was dispersed, they maintained community practices and institutions. The church, the seigneury, and the market remained fundamental to rural life, while the warehouses of English and, later, French goods at Port Royal provided manufactured items the colonists could not make themselves in exchange for surplus produce. After the French return in 1670, the Acadian heads of household, led by their churchwarden Abraham Dugas, agreed to pool their resources to build a new church.[41] Although the seigneurial system had been disrupted by the English takeover, it still functioned in the person of Alexandre LeBorgne de Belleisle for Port Royal and Grand Pré and later in that of Michel LeNeuf de la Vallière for Beaubassin. Documents reveal that LeBorgne continued to issue land grants and collect rents, as did his widow Marie-Étienne de la Tour after his death.[42]

Perhaps most intriguing is Acadian adaptation of the parish assembly and delegate (syndic), a longstanding rural institution.[43] Heads of household in France, and particularly in Poitou and Touraine, met to discuss important matters and elected

40 Brian Donahue, *The Great Meadow: Farmers and the Land in Colonial Concord* (New Haven: Yale University Press, 2004).

41 Dunn, *History of Port Royal*, 29. There is no current consensus on how to translate the French term "marguillier," meaning a lay person elected by the parish heads of household to manage the accounts of the vestry (especially donations and contributions of the inhabitants to the upkeep of the church). I follow John McManners in using "churchwarden"; see his *French Ecclesiastical Society Under the Ancien Régime: A Study of Angers in the Eighteenth Century* (Manchester: Manchester University Press, 1960), 151-2.

42 Although most of the notary documents of this period were lost in a fire, the remainder contain several indications that seigneurial rights and concessions continued. See Notaires d'Acadie (Étude Loppinot), Archives Nationales de France, Section Outre-Mer, G3, 2 040 (notaires d'Acadie), at LAC; "Concession of seigneurie of Beaubassin to La Vallière," 24 Oct 1676, in *Mémoires des commissaires*, II, 575; and Vanderlinden, *Le lieutenant civil et criminel*, 97.

43 Gregory Kennedy, "The Parish Assembly and Its Delegates in the Loudunais and Acadia, 1650-1755," *Proceedings of the Western Society for French History: Selected Papers* 36 (2008): 21-35.

a delegate to represent their interests in court or with state officials. The Acadians did not lack for potential leaders. Menou had brought over several trusted men to work with him, including the blacksmith Guillaume Trahan, the captain Germain Doucet, and the surgeon Jacques Bourgeois. Trahan and Bourgeois signed the capitulation to the English in 1654 on behalf of the colonists; Doucet had negotiated the terms.[44] Prominent artisans and merchants included Abraham Dugas and, later, the brothers Charles and Pierre Melanson, while a number of patriarchs wielded considerable authority. In France, the parish assembly supervised tax collection. In Acadia, although there were no state taxes, there were plenty of other demands on the population for supplies, troop billets, guides, and letter carriers.[45] The delegates could also serve as mediators for civil disputes among the habitants, and represented their communities in official and legal matters. This was most famously done during the 18th century with the negotiations over the oath of allegiance.

In Poitou, Robert and Siette were undertaking a vast, collective project that far exceeded the ambitions of the colonists of either Acadia or Concord. They did not have to worry about simple subsistence; they were planning a colonization project that would add to their existing wealth and influence. In order to succeed, they knew that they needed more than just land and royal assent; they required a team of committed associates with the means and the patience to take on a long-term project. They convinced both Jean Houefft, a wealthy Dutch financier and former associate of Humphrey Bradley, and a group of local officials and seigneurs to join.[46] One of the latter was François Brisson, the seneschal of Fontenay-le-Comte, who proved instrumental in arranging another and much larger property transaction, this time with the abbot of Moreilles in 1642. The terms were virtually the same as those of the original deal with the bishop of Maillezais (who happened to be the abbot's religious superior). In addition, the abbey received an annual fee of 1,000 livres and a 50-hectare reserve of drained marshland for its own use. The associates agreed to complete the work within four years.[47] As a result of these two land deals, the company gained a centralized, contiguous marshland territory of almost 6,400 hectares situated in four parishes: Chaillé-les-Marais, Saint-Radegonde-de-Noyers, Puyravault and Champagné-les-Marais.[48]

Unlike the Acadians, who gradually drained marshland to meet their families' needs, the associates of the Petit-Poitou Company set out to drain all of their new marshland territory right away. Four years later, they had largely succeeded. In October 1646, the associates met at Fontenay-le-Comte to distribute this land and to establish the formal statutes of their company. The allotment was carried out by lottery, with each associate receiving a portion equivalent to their investment share (see Table 1).

44 Griffiths, *From Migrant to Acadian*, 78; Terms of Capitulation to Sedgwick, 1654, *Collection de manuscrits*, I:145-9.

45 Gregory Kennedy, "French Peasants in Two Worlds: A Comparative Study of Rural Experience in Seventeenth and Eighteenth Century Acadia and the Loudunais" (PhD thesis, York University, 2008), 168-9.

46 In addition to his work with Bradley, Hoeufft had also been involved in a smaller marshland project north of Paris in 1627; see Ciriacono, *Building on* Water, 215.

47 « Baillette avec l'Abbé de Moreilles, » 10 janvier 1642, série 135 J, Archives de la Société de Petit-Poitou, Archives Départementales de la Vendée, La Roche-sur-Yon.

48 Éric Rousseaux, *Petite Histoire le Marais poitevin*, La Crèche, Geste éditions, 2009, p. 48.

Table 1:
The associates or intéressés of the Petit-Poitou Company
in 1646 in order of their share

Name	**Title**	**Office**	**Principal Residence**	**Share**
David de la Croix, Jean Hoeufft père et fils	—	Conseiller du Roi (de la Croix)	La Rochelle (except Hoeufft, père, Bergen-Op-Zoom)	20.6%
Octavius de Strada	Baron d'Aubert		Auvergne	20.6%
Pierre Siette	Noble homme	Ingénieur, géographe ordinaire du Roi	La Rochelle	11.0%
Charles de Flacourt, Julien de Loynes et Julien Du Bois	Noble homme	Trésorier provincial de l'extraordinaire des guerres; conseiller, secrétaire du Roi; élu de Fontenay	Fontenay-le-Comte (Du Bois)	9.6%
Michel de Broc	Chevalier, Baron de Chemiré		Anjou	7.2%
Jacques Morienne	Écuyer	Receveur des tailles, élection de Fontenay	Fontenay-le-Comte	5.6%
François et Barnabé Brisson	Écuyers, Sieurs	Sénéchal de Fontenay	Fontenay-le-Comte	4.6%
Pierre Robert	—	Élu, élection de Fontenay	Fontenay-le-Comte	3.7%
Pierre Charrier	Écuyer, Sieur	Commissaire des saisies réelles à Fontenay	Fontenay-le-Comte	3.5%
Louise de Bessay de la Chevrotière, veuve Cailhaut, seigneur de Montreuil	Dame haute et puissante			3.2%
François Arrivé	Sieur de Sableau	Maître des Eaux-et-Forêts, Fontenay	Chaillé-les-Marais	3.1%
Pierre Turpault	—	Lieutenant ancien, élection de Niort	Boulié (élection de Niort)	2.5%
Jean et François de Mirande	Écuyers, Sieurs			2.5%
Marie Rouillaud, veuve Robert	Dmlle		Fontenay-le-Comte	1.0%

Name	Title	Office	Principal Residence	Share
Anne Braud, veuve Picard, seigneur de Marans	Dame		Fontenay-le-Comte	0.8%
Louis Robert	—		Fontenay-le-Comte	0.6%

Source: « Contrat de partage » , 22 mai 1646, série 135 J, Archives de la Société de Petit-Poitou, Archives Départementales de la Vendée; Dienne, *Histoire du dessèchement*, p. 91.

A slim majority stake in the Petit-Poitou Company was held by three investors: Siette, Houefft's group, and Octavius de Strada. The latter came from a prominent noble family of the Holy Roman Empire and had moved to the Auvergne where he acquired French nationality and the title of baron.[49] The international character of this emerging business is apparent in the bringing together of a Dutch financier, a German noble, and a French engineer. Many failed or abortive companies, such as that of Bradley, had been led by Dutch investors and other foreign interests, but what made the Petit-Poitou Company unique was that it also had a strong base of local elites who had a direct and long-term interest in the development of their lands and fortunes. Robert had brought together a powerful group of the most prominent officials in Fontenay-le-Comte, including himself and the alternate administrator of the élection, their chief tax collector, the most important magistrate (the seneschal), and the head of the local department of Waters and Forests. To this group of office-holders we can add several smaller local landholders, including three widows. The local nature of the company is shown by the fact that other than Hoeufft and Strada, only one other investor lived outside the region.[50] This was Michel de Broc, a baron from Anjou, whose connection with the group formed by Siette and Robert may have involved business ties to one or more of the investors. Together, the investors of the Petit-Poitou company constituted a formidable base of regional power led by a prestigious "Big Three" known in Paris and Versailles.

The company's plan was to lease out large farms of drained marshlands called cabanes (ironically, the same term used to describe Aboriginal shelters in New France) to reliable tenants. This would become a consistent annual source of income for the investors, especially since the terms of the lease made the tenants liable for all taxes, seigneurial dues, and contributions to the company for upkeep and repair. Despite these obligations, it seems that the company had good success in attracting potential cabaniers. By the 1650s, local priests were reporting that 250 new families had moved into their parishes, as much as doubling the population. They complained about their increased workload and the refusal of the company's tenants to pay the tithe. In response, the company suggested that the bishop create two new parishes.[51]

49 Ciriacono, *Building on Water*, 215.

50 Roger Martineau emphasizes the local character of investment in the Poitevin marshlands in his *Villages de France aux Marais poitevin : de la préhistoire au XXème siècle*,Vix, R. Martineau, 1988, p. 159.

51 Registre de délibérations, 23 sep 1653, série 135 J, Archives de la Société de Petit-Poitou, Archives Départementales de la Vendée; Billaud, *Marais poitevin*, p. 48-52; Dienne, *Histoire du dessèchement*, p. 97-100.

No doubt the 20-year tax relief awarded by Louis XIII was a powerful motivation for migration. The company's registers include many discussions about local communities attempting to include company associates or their tenants on the parish tax rolls and the associates' legal procedures to prevent it.[52]

The local focus of the company is also apparent in the choice of Fontenay-le-Comte, as opposed to Paris or La Rochelle, as the site of the first general assembly. The first article of the statutes was that the assembly would be convoked every August to review the books and discuss any business in detail.[53] Only the assembly could set the annual rate of contributions and approve the major works to be undertaken during the year. The assembly also elected the company's two most important officials: the director and the master of dykes. The director served on an annual basis and was responsible for the company's finances and official books and papers, such as the register of assembly minutes and records of agreements with local seigneurs. The director also represented the company at any legal proceedings, and arbitrated disputes between associates and/or tenants. He supervised the master of dykes and approved any minor or urgent repairs needed during the year. It was a lot of work, which explains why the company sometimes had difficulty finding a candidate for the position. Proving that he was not merely a large investor but also an active member, Octavius de Strada was chosen as the first director. The master of dykes was responsible for the weekly inspection of the works, estimating the cost of any required repairs, and reporting these estimates and other matters to the director. He also supervised any hired labour and ensured that they carried out their duties. The master of dykes lived in the communal house of the company and enjoyed an annual salary of 500 livres and a small pasture for his personal use. For this position, which required technical knowledge and considerable energy, the associates did not choose one of their own but hired a local estate manager, le Sieur de la Maisonneuve, who served the company for many years.

The statutes also laid out expectations for the tenant farmers who would be doing the cultivation. The associates were to ensure that their leases covered the seigneurial dues and annual contributions required for the company. The tenants could be called upon for emergency repairs, and had to maintain tools and stockpiles of dirt for common tasks such as shoring up dykes. They were not to cut the dykes or to obstruct the water system with overlarge fishing nets. They had to keep their livestock under strict control; the beasts could not be allowed to drink from the canals or to harm the dykes or the roads. The company's deliberations indicate that such damages were a recurring and sometimes serious problem, and tenants were encouraged to denounce any of their number who violated the statutes. In 1651, widespread and accumulated damages were reported as a result of tenants throwing refuse and dirt in the canals, planting trees on the dykes, and letting their livestock roam freely. Two years later, the general assembly declared that all tenants would be responsible for any damages they caused – either having to carry out repairs themselves or paying for the work.[54]

52 Registre de délibérations : 21 mai 1648 (taille), 19 août 1654 (quartier d'hiver), 6 oct 1654 (all), série 135 J, Archives de la Société de Petit-Poitou, Archives Départementales de la Vendée.

53 "Les statuts du Petit-Poitou", 19 oct. 1646, F-21045 (43), BNF.

54 Registre de délibérations : 16 août 1649, 26 sep 1651, 23 sep 1653, série 135 J, Archives de la Société de Petit-Poitou, Archives Départementales de la Vendée.

In general, the organizational model of the Petit-Poitou Company combined a traditional vision of rural socioeconomic hierarchy, featuring landowners and tenant farmers, with a new commercial approach centred on associates investing, deliberating, and working together. It was a collective project that sought to create a new colony of leaseholders in the middle of old France. The particular success of Petit-Poitou can be attributed to its strong investor base as well as its systematic approach: securing land and royal approval, carrying out the major works, distributing the resulting arable land, and establishing simple and clear statutes.

Comparing the organizational models for marshland development in Acadia and Poitou, both projects featured a general assembly that united the principal stakeholders and elected a chief representative. In Acadia this was a community institution that technically included all heads of household, although it was likely dominated by wealthier and more established members.[55] The assembly tended to be limited to political matters, since each member was his own proprietor. In the Petit-Poitou Company the general assembly was composed only of the landlords and did not include the tenant farmers, who rented the cabanes. Nevertheless, the assembly maintained considerable control over agricultural production. It designed the dyke system, it contracted and paid the workers who implemented it as well as the officials who ran it, and it imposed limitations and rules for the use of the land once drained. In short, the general assembly of Petit-Poitou exercised a much wider direct jurisdiction over the community. No doubt the interests of the state would have been well served by having for Acadia a colonization company like that of Petit-Poitou, with its strong investment base, management capability, and its ability to generate profits. The arrival of 250 families in less than ten years far exceeded the settlement results at Port Royal; even Charles de Menou had managed to entice, at most, 50 families. The less-contiguous marshlands, however, and the ongoing political instability made such a project difficult to realize or even conceptualize in practice. As for the colonists themselves, there was little incentive for them to embark on larger draining or clearing projects.

Methods

Colonization projects in Acadia and Poitou had very different scopes, but in their basic techniques they were similar.[56] There were dykes to keep exterior waters out, canals to move interior waters seawards and a mechanism to make sure that water did not surge back into the drained area during high tides or flooding. But particular adaptations were developed in response to the very different environmental conditions in the two areas.

The Poitevin Marsh was a vast, humid zone of some 75,000 hectares between the Loire and the Gironde rivers, centred on another major river and its tributaries, the Sèvre Niortaise.[57] Composed of three principal basins, the Lay, the Vendée, and the Autize, the region was on average one to three metres below sea level, although limestone outcroppings and the accumulation of sedimentation created many

55 On the development of an Acadian elite, see Maurice Basque, "The Third Acadia: Political Adaptation and Societal Change," in Reid, et al., *The "Conquest" of Acadia*, 155-80.

56 Butzer, "French Wetland Agriculture," 463.

57 Suire, *Le Marais poitevin*, p. 12-13.

"islands" of higher ground which had been densely occupied since the medieval period.[58] Most of the marshland was considerably inland from the ocean, meaning that the principal challenge was draining the existing water out and protecting the resultant arable land from winter and spring flooding. Coastal areas faced an average high tide of four metres. The Acadian marshlands, by contrast, were only about one-quarter the size of those of Poitou, some 20,000 hectares, and they were widely dispersed around the coast of the Bay of Fundy.[59] One exception was at Grand Pré, where the Acadians worked collectively to drain a relatively large area (although this was broken up into several sub-projects over 70 years).[60] While some Acadians expanded further inland along the rivers that fed into the bay, the majority of their hameaux remained close to the coast and thus were directly exposed to the Bay of Fundy's tides – the highest in the world. The challenge was therefore how to protect the dyked land from the tides. In the Minas Basin, for example, some four cubic miles of water, weighing 14 billion tons, entered and exited the area every 12.5 hours. At Port Royal, the tides were not as strong but still could reach heights of over eight metres and thus posed a considerable threat to dykes.[61] The marshlands themselves were composed of deep marine soils; experts estimate that the Acadians would have needed to wait as long as five years to begin cultivation due to the concentration of salt.[62]

Although some of the Acadian colonists may have been familiar with marshlands in Poitou, it is likely that most had to be taught how to drain and maintain marshland farms at first. By 1650, however, they were no longer dependent on outside expertise or leadership. They no doubt refined their skills with practice and through discussions with neighbours. They also would have had to work with their neighbours to ensure that their dykes and canals eventually connected. As the population grew, the amount of marshland reclaimed grew as well; it was a project in constant evolution, moving at a speed defined by life course.[63] This gradual approach partially explains why, as late as 1707, the vast majority of Acadian households still cultivated less than five hectares, less than ten per cent of the land cultivated by a typical cabanier of Petit-Poitou. Attacks from raiders and the lack of available markets to sell surpluses contributed to these modest results. Using the 1707 census and estimating crop returns and consumption rates, we can determine that at least a third of Acadian households in 1707 did not grow enough food to meet their family's needs and instead seemed to rely on trade or artisanal activity.[64]

58 Limestone outcroppings were particularly common. See Billaud, *Marais poitevin*, p. 21.

59 Andrew Hill Clark, *Acadia: The Geography of Early Nova Scotia to 1760* (Madison, WI: University of Wisconsin Press, 1968), 24.

60 World Heritage Nomination Proposal for Grand Pré, January 2011, 38; J. Sherman Bleakney, *The Acadians at Grand Pré and their Dykeland Legacy* (Montreal and Kingston: McGill-Queen's Press, 2004), 76; Johnston, "Défricheurs d'eau," 34.

61 Bleakney, *The Acadians at Grand* Pré, 5-6; Ronnie-Gilles LeBlanc, "Acadian Aboiteaux," www.amériquefrançaise.org.

62 Matthew G. Hatvany, *Marshlands: Four Centuries of Environmental Change on the Shores of the St. Lawrence* (Québec: Presses de l'Université Laval, 2003), 46; Yves Cormier, *Les Aboiteaux en Acadie: Hier et aujourd'hui*, Moncton, Chaire d'études acadiennes, 1990, p. 65.

63 Buzter, "French Wetland Agriculture," 464.

64 Kennedy, "Peasants in Two Worlds," 378-83; Clark, *Acadia: The Geography of Early Nova Scotia*, 170-5.

Several recent studies bear on how Acadians drained and maintained their lands. The process began with the perimeter dyke or levée, which was two metres wide at the top and ten to fifteen metres wide at its base, and as much as ten feet high depending on how exposed it was to the tides. These dykes had a strong centre of compacted dirt and marsh grass, often including a series of wooden posts, and were covered by cut sods with root systems that gradually grew together for further reinforcement.[65] A series of canals and ditches were also dug in order to move water out. Given that the dyke's principal role was to protect against the tides, the Acadians needed to find a way for water to pass through the dyke without giving the tides the opportunity to send the water rushing back in and also without sapping the strength of the dyke. The answer was the aboiteau. The Acadians identified where the natural stream flowed and built a large sluice box of wood, usually from a hollowed out tree trunk. In the centre of this box, they placed a clapet or valve which opened to let water out during low tide and closed to block water from going back into the marshland during high tide. In places of particularly high water flow, such as a major creek or stream, the box might be made with two or three lanes, each with its own clapet. The dykes were then built on top of the box. Having exited the cleared area through the aboiteau, the water then flowed through the exterior canal towards the sea.[66]

In Poitou, the first attempts to use the marshlands for agriculture dated from early medieval times, although they were interrupted by the Hundred Years' War and especially the Wars of Religion. For example, several abbeys worked together during the 13th century to build an 11-kilometre long canal (appropriately dubbed the Canal of the Five Abbots) that carried away excess water and created livestock pasture.[67] The existing structures gave the Petit-Poitou Company an advantage; this was especially true of the Achenal du Roi, which was incorporated into the new "Dutch belt" – a large perimeter dyke that enclosed about one-half of the marshland to be cleared along its northern frontier – protecting it from water flowing toward the ocean, particularly via the Vendée.[68] This dyke was roughly the same width as those built in Acadia, as much as twelve meters at its base, but at a little over two meters at its summit it was not nearly as high. It began just south of Luçon and moved in an arc to a point southwest of Fontenay-le-Comte, a distance of nearly 25 kilometres. Next the company dug two large canals, called the Clain and the Vienne, in order to evacuate the excess water from the now-enclosed area toward the confluence of the Vendée and the Sèvre, from which it flowed out to sea.[69] Construction of a series of smaller canals and dykes followed, in order to move water and protect from flooding throughout the area. The typical construct was a dyke (called a "bot"), with a canal on the interior side (a "contrebot") and a wide ditch on the exterior side (called an "achenal") and which guided external water away from the dyke towards the river and also served to protect the dyke from wandering livestock. The main construction was completed during the first four years and

65 Bleakney, *The Acadians at Grand Pré*, 45-9.
66 LeBlanc, "Acadian Aboiteaux"; Cormier, *Les aboiteaux en Acadie*, p. 55-62; Bleakney, *The Acadians at Grand Pré*, 50-6.
67 Billaud, *Marais poitevin*, p. 31-33.
68 Butzer, "French Wetland Agriculture," 461.
69 Suire, *Le Marais poitevin*, p. 63-64; Dienne, *Histoire du dessèchement*, p. 87-88.

followed strict mathematical parameters. For example, each square league (about 16 square kilometres) had its own perimeter dyke and its own grid of canals and ditches creating 32 farms (cabanes) of about 50 hectares each.[70]

Of course, water levels and movement were not consistent throughout the year, so the company employed a series of "doors" (or "portes") to control the flow. The first models had again been developed during the 13th century, but Dutch ingenuity led to improvements and adaptations. Many canals ended with portereaux; these were essentially clapets that responded to water pressure, opening to release excess water, but closing should flooding or tides try to push water back in, much like Acadian aboiteaux. The rivers themselves were increasingly controlled with installed sluice gates called écluses, because the effort to evacuate the water from the marshlands could cause flooding over their natural banks. The doors consisted of a large gate that could be raised by a winch mechanism to block the water from flowing downstream, or lowered to allow it to continue. This engineering culminated in the large doors built where the water met the sea. Suspended between two tall stone columns were two doors several metres tall. The doors were hinged on the sides and were opened to allow the water to flow out during low tide, and closed during high tide to prevent salt water from pushing back upriver.[71] The écluses and the final doors at the sea had to be manually opened and closed, and for this the Petit-Poitou Company hired portiers who were responsible to maintain them in good working order and operate them under the direction of the master of dykes.[72]

In fact, the company was so successful in evacuating water from the marshlands that it inadvertently could cause drought if the summer was dry; this would force it to reverse the drainage process in order to draw water in, retaining it in the rivers and canals with the écluses. Not surprisingly, these transformations could lead to disputes between neighbours. Nearby parishes protested the flooding and droughts caused to their arable land and pasture.[73] In 1655 the Abbot of Moreilles complained of flooding caused by a poorly placed clapet, while the head cleric of the commanderie at Puyravault disputed the company's right to dig canals and obstruct the natural passage of local streams. In 1658 a rival company's dykes threatened to re-direct water back onto the marshlands of Petit-Poitou. In 1679 an ongoing dispute with the inhabitants of Chaillé-les-Marais culminated in the sabotage of the company's perimeter dyke.[74]

In Acadian cultural memory, the aboiteau has attained a prominent position. For Yves Cormier it was a unique invention, a key foundation of Acadian identity and a "continual source of inspiration." Ronnie-Gilles LeBlanc emphasizes that the term came to represent the entire dyke and sluice system used by the Acadians and was symbolic of the cultural heritage of the Acadian community.[75] Yet the principle of

70 Suire, *Le Marais poitevin*, p. 90-97.
71 Billaud, *Marais poitevin*, p. 23-30.
72 Registre de deliberations, 16 août 1647, série 135 J, Archives de la Société de Petit-Poitou, Archives Départementales de la Vendée..
73 Suire, *Le Marais poitevin*, p. 97, 121.
74 Registre de délibérations : 6 décembre 1655, 30 septembre 1658, 17 août 1679, série 135 J, Archives de la Société de Petit-Poitou, Archives Départementales de la Vendée.
75 Cormier, *Les aboiteaux en Acadie*, p. 86; LeBlanc, "Acadian Aboiteaux."

using mechanisms and water pressure to control water flow was also widespread in Poitou, and dated back to the medieval period. We know that experts were hired to help set up marshland development at Port Royal in the 1630s. We can further speculate that some of the original colonists, many of whom came from the larger region of Poitou, Aunis, and Saintonge, would have had a prior knowledge of these techniques.[76] There is an apparent similarity between French salt-making spades and the typical Acadian dyking spade. Even the term "aboteau" was well known in the Poitevin Marsh, although it seems to have had a different meaning.[77] Closely associated with the "bot" or dyke, aboteaux were small obstacles and barrages constructed in the canals to divert or slow down water flow and thereby assist the dykes. Sometimes, these works of wood, dirt, and other materials became impromptu fishing platforms and traps, a source of frustration for the general assembly of the Petit-Poitou Company.[78] However, by the end of the 17th century, it seems that the company was using the word in the Acadian sense of a water-flow control mechanism. For example, the master of dykes was working on the building of an "abotteau" at the point where the Canal de la Vienne met the river specifically in order to better protect the drained marshland from water returning during high tide.[79] This suggests that not only was there an adaptation of proven techniques between Poitou and Acadia at the beginning of the 17th century, but that there was also an ongoing transmission of knowledge – both from the Old World to New World and vice versa – that influenced the evolution of those techniques.

Many artists and historians have idealized the collective spirit of the Acadians:

> Thus dwelt together in love these simple Acadian farmers –
> Dwelt in the love of God and of man. Alike were they free from
> Fear that reigns with the tyrant, and envy the vice of republics
> Neither locks had they to their doors, nor bars to their windows;
> But their dwellings were open as day and the hearts of the owners;
> There the richest was poor, and the poorest lived in abundance.[80]

While community support was important, we should not exaggerate the degree to which everyone worked together to build aboiteaux, construct dykes, and dig ditches.[81] There is no doubt that often people pitched in to help get a newly married couple started or to carry out needed maintenance on a key stretch of dyke that impacted multiple fields. We can imagine a robust community response when storms or enemy

76 World Heritage Nomination Proposal for Grand Pré, 34.

77 Kevin Leonard, "The Origin and Dispersal of Dykeland Technology," *La Société historique acadienne : les cahiers* 22, nº 1 (janvier-mars 1991), p. 40-41; Hatvany, "The Origins of the Acadian Aboiteau," 124.

78 Registre de délibérations, 16 août 1649, 17 août 1677, série 135 J, Archives de la Société de Petit-Poitou, Archives Départementales de la Vendée; Buzter, "French Wetland Agriculture," 459.

79 Registre de délibérations, 18 août 1693, série 135 J, Archives de la Société de Petit-Poitou, Archives Départementales de la Vendée.

80 Henry Wadsworth Longfellow, *Evangeline: A Tale of Acadia* (1847), 3. Contemporary observers also made this argument – see Sieur de Dièreville, *Relation of the Voyage to Port Royal in Acadia or New France*, trans. Alice Lusk Webster (1708; Toronto, 1933), 95. Historians who have followed this idea include Cormier, *Les Aboiteaux en Acadie*, p. 65-73.

81 Griffiths, *From Migrant to Acadian*, 177; Johnston, "*Défricheurs d'eau*," 35.

raids breached the levées. But, in general, it is far more likely that the routine work was conducted by family groups – neighbours and relatives who lived closely together and depended on each other. Sherman Bleakney, writing about Grand Pré, has effectively de-mystified Acadian dyking, arguing that small teams of six to eight young men working under the supervision of a single expert could have effectively carried out the initial work and that such teams would have been hired out by families as needed.[82] Simply put, the dispersion of the Acadians along the rivers and the modest size of their farms made a large-scale, collective approach unnecessary.

The centralization and close proximity of Petit-Poitou's farms meant that there was a collective will and effort to inspect, maintain, and repair all of the constructions. For example, just two years after its completion, the general assembly noted that extensive work was needed on the Canal du Clain. A similar reconstruction project was required for the Canal de la Vienne in 1655.[83] In the winter of 1657, the perimeter dykes were breached by unusually severe flooding. The situation was so bad that many tenant farmers lost their livestock and abandoned their farms, obliging the associates to come up with 4,000 livres tournois (lt) for emergency repairs. And in 1659 the house of the portier for the Canal du Clain collapsed and had to be replaced.[84] In fact, the register is full of references to specific work needed to repair or replace dykes, canals, écluses, and other portes. It was carried out by watchmen appointed by the master of dykes, who were paid from 10 to 40 lt each year.[85] It was not easy work, especially as many tenants simply ignored the statute prohibiting livestock from being allowed near the dykes and threatened the watchmen if they tried to intervene. In 1676 the general assembly ruled that their officials would be armed and authorized to shoot the offending livestock. This was softened by 1678 to simply confiscating the beasts, with the associates vowing to prosecute those causing violence. In 1687 a lawsuit was launched against a perennial offender, Simon Bennoteau.[86] Such measures do not seem to have ended the problem, as one lax watchman was replaced and an additional one hired to deal with the workload in 1692. In addition, the director offered a bounty of one écu for each head of livestock seized for trespassing on the dykes.[87]

Surveillance, maintenance, and repair were constant and expensive tasks. Every year, the general assembly identified a rate of "contributions" for upkeep. Company records reveal that, not surprisingly, the first years were the most costly: 15 sous(s)/arpent in 1647, 10 in 1648, and the highest level, 20, in 1649. Over the first 50 years of the company (1647-1696), however, the rate of contributions averaged

82 Bleakney, *The Acadians at Grand Pré*, 45-61.

83 Registre de délibérations, août 1648 et 30 avril 1655, série 135 J, Archives de la Société de Petit-Poitou, Archives Départementales de la Vendée.

84 Registre de délibérations : 23 novembre, 16 décembre 1657, 5 novembre 1659, série 135 J, Archives de la Société de Petit-Poitou, Archives Départementales de la Vendée.

85 Registre de délibérations, 16 août 1666, 13 octobre 1673, série 135 J, Archives de la Société de Petit-Poitou, Archives Départementales de la Vendée.

86 Registre de délibérations : 16 août 1676, 17 août 1678, 17 août 1687, série 135 J, Archives de la Société de Petit-Poitou, Archives Départementales de la Vendée.

87 Registre de délibérations, 17 août 1692, série 135 J, Archives de la Société de Petit-Poitou, Archives Départementales de la Vendée.

just 7.5 s per arpent (.375 lt), while the land was evaluated in 1658 as being worth 75 lt per arpent.[88] Thus, the contribution rate was a mere fraction of the land's value (0.05 per cent); the contribution rate for a typical cabane of 50 hectares in an average year, for instance, would have been only 56 lt. Of course, the leaseholders who actually paid the contributions did not own the land, so the proportional burden on them was higher. Notary records from the beginning of the 18th century suggest that a typical cabane leased for about 500 lt, making the average annual levy a little more than ten per cent of this sum.[89] There is also great diversity among the leases and sub-leases in the records. One set of five leases from July 1701 demonstrates that choice pieces of land could cost much more, even twice the standard rate.[90] The company's minutes occasionally mention difficulties in collecting the annual contributions on time. In 1655 some associates at the general assembly complained that this was damaging to those who did pay on time and threatened the future of the whole project. The general assembly moved that the director had no discretion to make alternate arrangements or permit delays in payments, suggesting that a number of side deals and dispensations had been going on. Notwithstanding, the next year the director reported a shortage of money because many had still not paid up. Again, in 1677, the general assembly called for diligence in collecting outstanding contributions.[91] A 1717 budget suggests that the situation had improved, as just eight per cent of the company's tenants appear significantly behind on their contributions.[92]

While Acadian colonists built dykes and dug ditches themselves, the landlords of the Petit-Poitou Company hired engineers, artisans, and lots of local labour to carry out the initial constructions. With regard to maintenance and repairs, a typical lease included a provision that tenants must leave the farm in the same state in which they found it; the general assembly also declared that tenants were responsible to fix any damage caused by their livestock.[93] Landlords arranged periodic inspections to ensure that tenants were living up to their part of the bargain. The tenant farmers, however, were not trusted to maintain and repair the company's water management system. In Acadia, a breach might affect a small group of families, but in Petit-Poitou, a single breach could devastate a large area. Thus, the landlords sought to protect their investment by organizing all of the work under the master of dykes. In 1659, for example, 2,000 lt was due to the company's hired workforce. Often the director paid up front, either with his own or borrowed money. The budget of 1677

88 Dienne, *Histoire du dessèchement*, p. 100.

89 Jean Morisset, bail de 28 oct 1699, étude de Chaillé-les-Marais, 1699-1700, série 3 E 51 / 44, Archives Départementales de la Vendée; Jean Sernin, baux de 28 mars 1704, 3 mai 1704, 18 mars 1705, 4 juin 1705, 13 juin 1707, étude de Chaillé-les-Marais, 1700-1712, série 3 E 51 / 28, Archives Départementales de la Vendée.

90 Julien Bordeau, cinq baux de Marie Le Roy, juillet 1701, étude de Chaillé-les-Marais, 1700-1712, série 3 E 51 / 29, Archives Départementales de la Vendée.

91 Registre de délibérations : 6 décembre 1655, 26 mai 1656, 17 août 1677, série 135 J, Archives de la Société de Petit-Poitou, Archives Départementales de la Vendée.

92 Budget, 17 août 1717, série 135 J, Archives de la Société de Petit-Poitou, Archives Départementales de la Vendée.

93 Jean Sernin, baux de 10 septembre 1701, 13 août 1703, étude de Chaillé-les-Marais, 1700-1712, série 3 E 51 / 28, Archives Départementales de la Vendée; Registre de délibérations, 23 septembre 1653, série 135 J, Archives de la Société de Petit-Poitou, Archives Départementales de la Vendée.

shows that the director and the master of dykes had put up about 2,250 lt between them, and an additional 950 lt was now required to pay for the work and construction materials needed to repair several canals, a large dyke, and a bridge.[94] All of this was no doubt a significant benefit to the local economy. Some workers formed "brigades" that specialized in marshland work and negotiated contract prices with the various spin-off and new companies directly. In 1704, for example, the director of the Petit-Poitou Company signed a contract with a team of three workers to repair and enlarge part of the Canal du Clain. The pay was 20 sous for each toise (about 2 metres) completed.[95] The work would be inspected before the workers would be paid, but it is likely that they did their best so that they would be re-hired in the future. The establishment of one hundred large farms in Poitou, of course, also created a need for permanent and seasonal farm labourers.

This review of the techniques employed to colonize marshlands in Acadia and Poitou reveals many similarities and common principles. The chief differences lay in available capital, how the work was organized, and in the specific configuration of the dykes and water flow mechanisms. While Acadian families took care of their own work for their own needs, the Petit-Poitou Company undertook a huge development project – draining virtually its entire marshland territory in four short years and centrally managing ongoing repairs and maintenance through hired labour. Aboiteaux functioned automatically (although they no doubt had to be inspected regularly) in conjunction with the tides to drain and protect marshland in Acadia, while a combination of automatic mechanisms and manually operated doors controlled water levels in Poitou in relation to seasonal precipitation and river flow.

Results

Neither the Acadians nor the Petit-Poitou Company created marshland farms on a blank slate; others already lived there. Colonization brought displacement of these original occupants. At first, the relationship between the Acadians and local Aboriginal peoples, most notably the Mi'kmaq, was quite positive. It is clear that the friendship of sagamos such as Membertou was instrumental to the success of the first years of Port Royal, and there were a number of marriages and less formal relationships between early colonists and Aboriginal women.[96] In general, the Mi'kmaq were not overly disrupted by the presence of small groups of farmers in the marshlands and some apparently valued the opportunity to trade. In fact, most Acadian communities were started near Mi'kmaw villages and several Aboriginal families were still living near Port Royal as late as 1708.[97] As the Acadian population expanded, though, so did

94 Registre de délibérations, 5 novembre 1659, 3 juin 1677, série 135 J, Archives de la Société de Petit-Poitou, Archives Départementales de la Vendée.

95 Billaud, *Marais poitevin*, p. 59; Jean Sernin, contrat, 17 août 1704, étude de Chaillé-les-Marais, 1700-1712, série 3 E 51 / 28, Archives Départementales de la Vendée.

96 Fischer, *Champlain's Dream*, 217-21; Naomi Griffiths, "Mating and Marriage in Early Acadia," *Renaissance and Modern Studies* 35 (1992): 109-27.

97 Dunn discusses their presence in the 1680s in *A History of Port Royal*, 32, while a census of Aboriginal persons in Acadie taken in 1708, as well as an accompanying map showing a nearby Aboriginal settlement, indicates that some continued to live near Port Royal at that date. See

its impact on the environment and its draw on natural resources. Marshland drainage made the land good for agriculture, but less attractive for hunting, fishing, and gathering – introducing tensions with local Mi'kmaq for whom the marshlands were part of a traditional economy.[98] Further, as beaver populations dwindled due to overhunting, trade between Aboriginal and Acadian inhabitants diminished while the expansion of the colonial population reduced the number of cases of métissage.

The process of Mi'kmaw displacement was very gradual and caused by many other factors than just marshland colonization. Given the small size of both the Acadian and the Mi'kmaw population in the area around Port Royal, it is hard to believe that competition for resources became intense. Instead, disease and war probably played the greatest role in motivating many Aboriginal inhabitants to move away. While it is hard to determine precise figures, even conservative estimates suggest that the Mi'kmaw population diminished by three-quarters between 1500 and 1700.[99] After the British Conquest it is not surprising that Aboriginal families would have avoided the area around Annapolis Royal, which increasingly became a British garrison town. The displacement was not direct nor imposed militarily, since neither the Acadians nor the British possessed the power to force the Mi'kmaq to do anything.[100] What we can say is that – especially after 1710 – the Mi'kmaw presence in the Port Royal area was greatly reduced, partly through demographic decline and partly through migration, as evidenced in the gradual disappearance of Aboriginal people from the Annapolis Royal parish register.[101]

In Poitou, large areas of the marshland remained undeveloped during the medieval period and were inhabited by "Maraîchins" or, more pejoratively, hut-dwellers ("huttiers"). These families made their living by fishing, hunting, gathering wood, and maintaining small gardens and troops of livestock. Some served as boatmen and guides for people travelling through the marsh. By contemporary standards, they were quite poor.[102] The average taille assessment on marshland parishes in 1631 was just 3.4 lt per household, whereas in 1698 the developed marshland areas averaged 15 to 20 lt per household. The environmental transformation carried out by the associates pushed the maraîchin way of life to the periphery. Some were also "co-opted" by the company, hired as watchmen and portiers for key installations. For example, the spin-off company of Vix, Maillezais, and Maillé created three such posts: one for its aqueduct, one for its principal bridge,

Recensement de 1708, *Collections recensements acadiens*, LAC; Thomas Peace, "Two Conquests: Aboriginal Experiences of the Fall of New France and Acadia," (PhD thesis, York University, 2011), 88.

98 William C. Wicken, "Re-examining Mi'kmaq-Acadian Relations," in Sylvie Dépatie, et al., *Habitants et Marchands, Twenty Years Later: Reading the History of Seventeenth- and Eighteenth-Century Canada* (Montreal: McGill-Queen's University Press, 1998), 100.

99 Wicken, "Re-examining Mi'kmaq-Acadian Relations," 98.

100 John G. Reid, *Acadia, Maine, and New Scotland: Marginal Colonies in the Seventeenth Century* (Toronto: University of Toronto Press, 1981), 185.

101 Kennedy, "Peasants in Two Worlds," 254; Wicken, "Encounters with Tall Sails and Tall Tales: Mi'kmaq Society, 1500-1760" (PhD thesis, McGill University, 1994), 113, 346; Thomas Peace, "Two Conquests," 85-97; Geoffrey Plank, *An Unsettled Conquest: The British Campaign Against the Peoples of Acadia* (Philadelphia: University of Pennsylvania Press, 2001), 84.

102 Ciriacono, *Building on Water*, 219.

and one for the main doors at the sea.[103] These huttiers simply moved their rude shelters to the nearest dyke to live and work there, receiving in return a small stipend and the right to fish in nearby canals. This story of displacement is eerily similar to that of American Aboriginal peoples. In fact, Éric Rousseaux deliberately chooses the term "autochtone" to describe the circumstances of the Maraîchins.[104] There are limits, of course, to this comparison; Poitevin "Aboriginals" shared the same religion and worldview as the colonizers and did not suffer the devastating consequences of new epidemic diseases. In addition, their displacement occurred quickly whereas that of the Mi'kmaq was more gradual – not least because their traditional economy was not entirely based on fishing and gathering in marshlands and because they retained significant military power at least until the mid-18th century.

The human and ecological costs of colonization are important, but the results of these projects must also be evaluated against their objectives. The landlords of the Petit-Poitou Company aimed to create and maintain landed income through the rental of marshland farms. The families of Port Royal needed to meet the immediate needs of their families but also wished to establish themselves and their children over the long-term, improving their standard of living. Were they successful?

In Acadia, the high rate of population growth in the colony has been well known to historians for some time.[105] This general trend, however, hides some important nuances for the second half of the 17th century. In 1671 the Acadian population was still almost entirely based in the area of Port Royal and comprised 66 families and about 400 people. By 1686, Port Royal had grown to 95 families and about 600 people. At the turn of the century, however, the number of inhabitants had diminished to around 500 people. We know that some, especially young married couples, were moving away to Grand Pré and Beaubassin during this time, continuing the migration trend that their parents had begun during the 1650s.[106] Furthermore, the period between 1690 and 1710 was particularly difficult in Acadia. Cold winters, drought, storms, and even a hurricane struck the region. Dykes were breached and famine ensued. In addition, English attacks on Port Royal in 1690, 1707, and 1710 caused further damage and misery. And those who had moved away did not escape the violence, for Beaubassin was attacked in 1696 and both Beaubassin and Grand Pré suffered in 1704. All of this slowed the rate of Acadian population growth considerably.[107]

English raiders in the 1690s and 1700s deliberately targeted the dykes. We can see the impact in the amount of land cultivated by the Acadians: from 377 arpents (129 hectares) in 1686 to only 393 arpents (134 hectares) 20 years later. If the colonists had lived in more centralized villages, it is likely that such raids would have been even more devastating. Dispersed as they were, a breach caused by a storm or a raid would not destroy the entire harvest and the community could come to the aid of the hardest-hit. In addition, the Acadians continued to focus on

103 Suire, *Le Marais poitevin*, p. 28, 215, 107.
104 Éric Rousseaux, *Petite Histoire le Marais poitevin*, p. 48.
105 Gisa I. Hynes, "Some Aspects of the Demogaphy of Port Royal, 1650-1755," *Acadiensis* III, no. 1 (Autumn 1973): 3-17.
106 Griffiths, *From Migrant to Acadia*, 126.
107 Kennedy, "Peasants in Two Worlds," 32-3; Léopold Lanctôt, *L'Acadie des Origines*, Montréal, Éditions du Fleuve, 1988. p. 92.

livestock. By 1707, there was an average of nine cattle, twelve sheep, and nine pigs for each family.[108] More easily protected from raids and storms, livestock was also increasingly in demand in places such as Boston and, later, Louisbourg.

To measure the true potential of this colonization project, we need to look forward to the 18th century – when peace enabled the Acadians to flourish in what Naomi Griffiths has dubbed their "Golden Age."[109] The archaeological record demonstrates that the Acadians profited greatly from this period of peace, building larger and better houses on stone foundations, cultivating more land, and expanding their herds. We can assume the relative health of the population from the low rate of child mortality. In the region of now-renamed Annapolis Royal, the population grew to about 900 by 1730 and to 2,000 by 1755.[110] New communities sprang up around the Bay of Fundy. But the peace was of short duration, as imperial wars resumed in the 1740s and culminated in the Deportation.

A detailed budget in 1717 enables us to consider the financial success and viability of the Petit-Poitou Company after its initial period of investment and consolidation (see Figure 1). It posted a small deficit of 430 lt for that year, with total revenue of 10,847 lt and total expenses of 11,277 lt. With 101 cabanes, 93 of which were on active leases, the company was cultivating most of its territory. Annual contributions, which generated just short of 7,400 lt in revenue, covered the work receipts and the salaries of the officials. A particularly large contract of 1,215 lt for the repair of the perimeter dykes was arranged with a team of workers at the rate of 12 s/toise (about 6 s/metre).[111]

The company's other expenses included seigneurial dues, the salaries of its employees (the director, the master of dykes, watchmen, and portiers), and diverse costs such as stationery and courier fees. Legal fees – to pay lawyers, courts, and "advisors" (which we might assume means patrons) – represented a substantial set of expenses as the company continued to defend its property rights against rival companies, local communities, and seigneurs. At more than 1,000 lt, these expenses made up 11 per cent of the annual outlay. The budget mentions a receipt from a previous year's payment of 1,800 lt to a single lawyer for his "services." These ongoing procedures clearly cost time and money, raising the contribution rate for the company's tenants. That said, the balance sheet is almost even, including taking into account outstanding contributions and debts from previous years. This suggests that the company was quite adept at financial planning, setting the rate of annual contributions at just the right level. It also demonstrates that the intent was not for the company itself to make money; its goal was to break even so that its individual members could profit from selling leases on their properties.

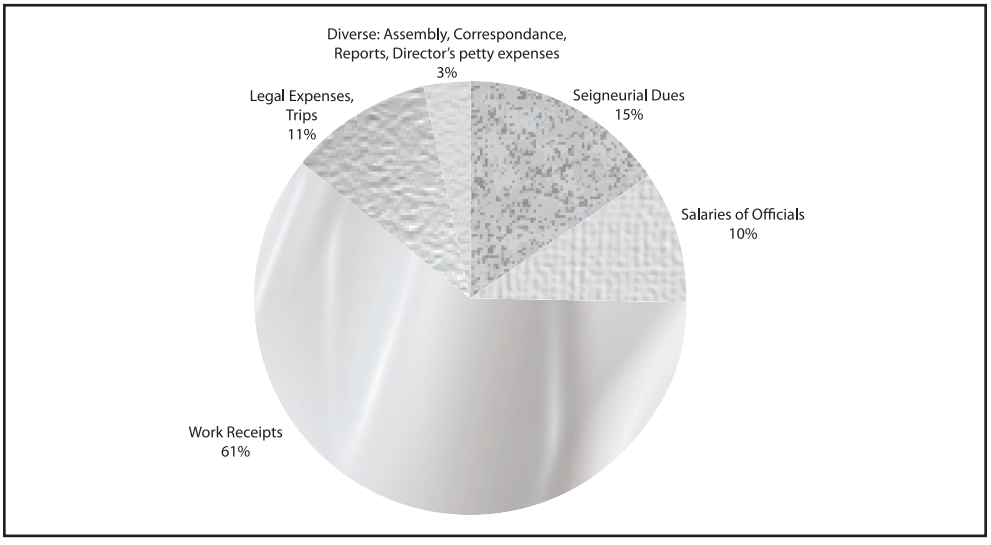
108 Recensement de 1707," Collections recensements acadiens, LAC; Clark, *Acadia: The Geography of Early Nova Scotia*, 170-5.

109 Naomi Griffiths, "The Golden Age: Acadian Life, 1713-1748," *Histoire sociale / Social History* 17, no. 33 (May 1984): 21-34.

110 Marc Lavoie, "Belleisle Nova Scotia, 1680-1755: Acadian Material Life and Economy" (MA thesis, McMaster University, 1987); Clark, *Acadia: The Geography of Early Nova Scotia*, 236; Hynes, "Some Aspects of the Demography of Port Royal," 4, 11.

111 Budget, 17 août 1717, série 135 J, Archives de la Société de Petit-Poitou, Archives Départementales de la Vendée.

Figure 1:
Expenses of the Petit-Poitou Company, 1717



Source: Budget, 17 août 1717, série 135 J, Archives de la Société de Petit-Poitou, Archives Départementales de la Vendée.

We already know that the ideal cabane was about 50 hectares (150 arpents), though in fact they could vary in size from just a few hectares to more than 270. Many cabaniers were local, established ploughmen who resided in nearby parishes. These were the better-off peasants who could raise the money or credit to take on a lease, and who could be trusted to take proper care of the land. The overall impression is one of considerable work and obligation, but also of comfortable living. Perhaps the greatest advantage to these properties was that they were large, concentrated parcels of fertile land at a time when most peasants cultivated numerous small strips across several parishes and seigneuries. Taking up residence in a new marshland farm would have been a significant step up the socioeconomic ladder. Typically, two-thirds of the arable land was planted in wheat, barley, and rye while the remaining third was pasture. Only in the mid-18th century did crop rotation and fallowing become common, as the fertility of the soils gradually waned from constant exploitation.[112] The probate inventory of a typical cabanier, Jean Morriset, demonstrates that livestock were also important to marshland farming in Poitou – the beasts were often leased from the landlord for a split in the profits. Morriset's harvested crops had an estimated value of 440 lt, but the livestock of the farm was worth almost four times as much at 1,710 lt.[113] Given the large numbers of animals maintained in the pasture – in this case, 24 oxen, cows, and bulls as well as

112 Suire, *Le Marais poitevin*, p. 236-240; Billaud, *Marais poitevin*, p. 56.

113 Jean Morriset, 23 avril 1700, 18 octobre 1700, étude de Chaillé-les-Marais, 1699-1700, série 3 E 51 / 44, Archives Départementales de la Vendée.

37 sheep – it is not surprising that the depredations of livestock were frequently discussed at the company's general assembly. Animals were at once the farms' greatest asset and greatest menace. As in Acadia, cleared marshlands proved ideal for pasturing livestock and the beasts were an excellent investment and safeguard against crop failures.

In general, the Petit-Poitou Company did not have to contend with the same kind of political instability and warfare that had such serious consequences in Acadia. There was, however, one case of heavy-handed state intervention. In 1685, Louis XIV ordered the confiscation of all Dutch property in his kingdom. This included virtually all of the succession of Jean Hoeufft and also that of Octavius de Strada, who had married into the Hoeufft family and left no heirs of his own. Together, these farms constituted about 30 per cent of the total – less than Houefft's and Strada's original stake of 40 per cent – but still by far the largest portions. The king gifted these properties to the Duc de Guiche, who continued to sell leases to tenant farmers through local tax-collectors. It was a rich prize for a royal favourite.[114] The documents also indicate that developed marshland property value remained high, keeping pace with and surpassing inflation. Some large farms of 200 arpents were leased for as much as 1,000 lt each year.[115] Of course, this intervention did not disrupt the company greatly; the duke simply became one of the principal investors and some of the property was eventually returned in 1713.[116]

In general, the company had succeeded in creating a stable and lucrative landed income for its associates. Its success may best be measured by the imitations of others. Spin-off companies and emulators soon appeared throughout the marshlands of western France, explicitly starting with the organizational model and statutes of Petit-Poitou and then adapting them to their own situations.[117] Unlike Acadia, Petit-Poitou benefited from peace and stability. If the area had been subject to repeated raids and extensive damages, would the company have folded (as every New World company seemed to do)? Would investors have searched elsewhere for less risky opportunities? There were a few examples of associates who invested in colonization projects both in the Poitevin Marsh and in the New World.[118] But these men were exceptional; it is likely that such hardships in Poitou would have significantly limited marshland development, just as they had during the Wars of Religion.

114 « Mémoire pour servir d'éclaircissement aux biens appartenant aux descendants et représentants Jean Hoeufft hollandais situé dans les marais de Petit Poitou et de Champagné », 1702, Intendance de Poitiers, série C 17, AD Vienne, Poitiers; « Compte par bref, 1706-1707 », Nicolas-Étienne Roujault (intendant de Poitiers) et Charles Renault (procureur au siège royal de Fontenay), 14 octobre 1706, Intendance de Poiters, série C 17, AD Vienne, Poitiers.

115 Charles Moriceau (sénéchal de Fontenay-le-Comte), « État dressé par Charles Moriceau, sénéchal de Fontenay-le-Comte des biens, rentes effets ou immeubles appartenant aux hollandais », 10 juin 1702, Intendance de Poitiers, série C 17, AD Vienne, Poitiers.

116 Ciriacono, *Building on Water*, 216.

117 For example, the Company of Vix, Maillezais, and Maillé and the Company of Taugon-La Ronde were formed to clear other parts of the Sèvre Niortaise in Poitou and Aunis; see Suire, *Le Marais poitevin*, p. 66-68.

118 Suire, *Le Marais poitevin*, p. 50. There were around 20 such companies for the 17th century alone, although most people are only familiar with the large enterprises like the Cent-Associés and la Compagnie des Indes Occidentales.

At first glance, it may seem difficult to compare the results of these projects because their scales and ambitions were so different. In four short years, a group of investors in France drained an area equivalent to that drained by the entire Acadian population over the course of a century. Yet both the settler families of Acadia and the landlords of the Petit-Poitou Company were successful in achieving their particular goals, and this success can be attributed to a number of common themes. Their farms were productive and diversified, with livestock occupying a central role. Commerce flourished. The relatively high standard of living on marshland farms supported a significant rate of population increase. Solidarity among the principal stakeholders ensured that the projects could persevere, despite war and political instability in the case of Port Royal or legal and fiscal challenges in the case of Petit-Poitou.

Conclusion

Colonizing marshlands was not a new idea in the mid-17th century, but the French state had proved incapable of sustaining projects at home or in the New World. Where kings and ministers had failed, local groups in Acadia and Poitou adapted old methods and developed new organizational models. In the vicinity of Port Royal, Acadians drained enough marshland to survive at first in small groups of families connected by kinship as well as common origins and interests. Once established, they expanded in order to ensure they had enough to sustain their growing families and to develop an enhanced standard of living through trade. They learned and adapted basic methods of water management that had long been in use in France to fit the particular geography and settlement pattern of the colony.[119] Meanwhile, the Petit-Poitou Company launched a bold initiative to utterly transform a large, centralized area of marshland. Its founders secured rights to the land and royal privileges, and enticed wealthy financiers and local officials to join. Together, they planned the necessary constructions rigorously, and carried them out in just four years. They then divided the reclaimed land in accordance with their shares and proceeded to lease out large farms to trustworthy ploughmen. Year after year, these leases provided a lucrative income to the landowners and a solid living for the tenants and seasonal labourers under the watchful eye of the general assembly and its leaders.

Moreover, a wider comparison is revealing. As we have seen, many communities in northeastern North America relied at least in part on marshlands – emulating Aboriginal people in their hunting, fishing, and gathering while adding their own practice of pasturing livestock. In the St. Lawrence Valley, New Netherlands, and New England, salt marshes were used for pasture, forage, thatch, peat, and fertilizer. Nor were the Acadians the only colonists to transform marshes into arable land. From 17th-century Concord to 19th-century Kamouraska, drainage schemes created new farms.[120] Similarly, the associates of the Petit-Poitou Company were certainly not the only proprietors who had the notion of getting rich through investing in marshland development. From the 17th century fens of East Anglia to the 19th

119 Butzer, "French Wetland Agriculture," 464-5.

120 Donahue, *The Great Meadow*, 57-62; Hatvany, "Origins of the Acadian Aboiteaux," 127-32.

century Grande Prairie of East-Central Illinois, landlords leased out newly drained marshland farms to tenants for considerable sums.[121]

How distinctive, then, was Acadian marshland colonization? First, most settler groups in the Northeast hunted, fished, and foraged in salt marshes and also used them for pasture, but preferred clearing uplands for their arable lands. While new research has suggested that the Acadians may have cleared more upland than previously thought, especially during the 18th century, their long-term focus on marshland cultivation was unusual.[122] Second, this was one of the few significant drainage projects that was not centrally managed or funded by substantial capital investment. The settlers of Concord also drained marshland on their own initiative, but they did it collectively, ultimately parcelling out pieces of the resulting "Great Meadow" just as the associates of the Petit-Poitou Company divided up the territory they had reclaimed. The Acadians proved that draining marshland was possible on a small scale and under local control.[123] They lacked the resources and the motivation to clear a large area all at once. Their approach also helped maintain longer positive relations with local Aboriginal people, who outnumbered them greatly during the 17th century. Other marshland colonization projects, because of the speed and size of their initiative, involved the rapid displacement of the indigenous population. Finally, the use of the aboiteau – an automatic mechanism that worked with the tides to control water levels – was essential. It must be stressed that this was not a unique Acadian invention, although the colonists adapted a Poitevin word for a simple barrage. In fact, the Petit-Poitou Company constructed in many canals portereaux that also performed automatically with a clapet responding to water pressure. Elsewhere, however, they used manually operated doors because the threat of flooding was seasonal and a few key installations along the major rivers could protect most of the reclaimed land. This was also about control, as the company hired its own agents to manage and protect its territory and could shut the doors to keep water in if necessary. What was distinctive in Acadia was how each farm had to have its own "portes" in order to make dispersed marshland farming possible, and how the particular nature of the tides and the lack of available labour made automatic mechanisms embedded in the dykes the most practical solution.

The study of these projects also contributes to the larger history of colonization in the Atlantic World. By employing comparative approaches we can avoid ethnocentrism and identify trends, distinctions, and the transmission of ideas and knowledge from one group to another. Both projects also buttress the general conclusion of environmental historians that colonization was in large part motivated by demographic pressures. In Acadia this connection is obvious, as families drained marshlands gradually in conjunction with their needs and those of their offspring. In Poitou, the willingness of 250 peasant families to buy the leases to new marshland

121 Richards, *Unending Frontier*, 216; Samuel J. Imlay and Eric D. Carter, "Drainage on the Grand Prairie: The Birth of a Hydraulic Society on the Midwestern Frontier," *Journal of Historical Geography* 38 (2012): 109-22.

122 Thanks to Thomas Peace for pointing me to a 1762 British surveyor's report that records 1,200 acres of cleared upland in the Annapolis Region – "Description & State of the New Settlements in Nova Scotia," 9 January 1762, CO 217-18, f. 252v, LAC.

123 Johnston, "*Défricheurs d'eau*," 39.

farms, as well as the steadily rising value of those farms by the early 18th century, demonstrate the high demand for productive farmland in western France. Finally, this study supports the important distinction that "colonization and empire-building were not the same process, and at times they could come in conflict."[124] The French state was incapable of leading colonization efforts at home and abroad for most of the 17th century. Colonization was just one of many methods for kings, ministers, and great nobles to gain influence and prestige. For these individuals, mired in constant rivalry and competition, what counted was less the actual development of a colony and more the rights and privileges that possession of a colony entailed. As one historian has observed, the Acadia that "existed in the minds of diplomats and governors" was not the same as the Acadia "created by the colonists."[125] The examples of both Acadia and the Petit-Poitou Company suggest that successful, sustainable colonization was a profoundly local endeavour.

124 Mancke and Reid, "The Imperial Contest for Acadia," 47.
125 Basque, "Political Adaptation and Social Change," 159.