

BIVALVES AND BIFURCATION: PUBLIC AND PRIVATE PROPERTY IN THE CONNECTICUT OYSTER INDUSTRY

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I. Introduction

At the turn of the twentieth century, Connecticut was known for its oysters, and the men who harvested them came in two basic types. Henry Rowe was a prominent example of the first. Rowe was a prosperous business owner and the leader of Connecticut's major oyster cultivators. His firm raised oysters on thousands of acres of seabed, to which Rowe possessed legal title. He used the latest cultivation techniques,

and his employees piloted several handsome steamers on the grounds he owned – each capable of taking up hundreds of bushels of oysters a day.

Captain Bob was a typical example of the second sort of oysterman.¹ Unlike Rowe, Captain Bob went to sea in a sail-powered sloop, the *Broadbill*, with only a few hired hands to help him haul in the dredges. Nor was Captain Bob an owner of the seabed. Instead, he worked the vast natural bed off Bridgeport, where hundreds of small boats like his competed to gather wild oysters. At the end of the day, if conditions were favorable, he might have forty bushels to show for his labor.

Henry Rowe and Captain Bob were both important players in the same remarkable industry. Over the second half of the nineteenth century, Connecticut pioneered efficient oystering technologies, developed novel policies to nurture its fishery, and in turn, massively expanded oyster production in the space of a few years. During this period, Connecticut became one of the nation's major oyster producers, and New Haven, though lacking New York's scale or Baltimore's favorable location, ranked among those cities as a major center of the trade.² Diners from California to the British Isles enjoyed Connecticut oysters on the half shell, and business and government leaders across America looked to the state as a model for their own oyster industries.³

¹ Captain Bob's last name has been lost to the ages. He was the subject of a 1904 profile in the *New York Tribune*, from which I have taken this description. See *Oyster Dredging: Long Island Sound Is Yielding Well This Year*, N.Y. TRIBUNE, Nov. 6, 1904, at B6 (available via ProQuest Historical Newspapers) [hereinafter *Oyster Dredging*].

² See ERNEST INGERSOLL, A REPORT ON THE OYSTER-INDUSTRY OF THE UNITED STATES 251 (1881); P. de Broca, *On the Oyster-Industries of the United States, in 1873-1875* U.S. COMM'N OF FISH & FISHERIES, REP. OF THE COMM'R 271, 282; see also J.W. Collins, *Notes on the Oyster Fishery of Connecticut*, 9 BULL. U.S. FISH COMM'N 461, 461 ("No fishery on the Atlantic Coast has attained greater success in recent years than the Connecticut oyster industry.").

³ Collins, *supra* note 2, at 461.

Despite this, modern scholars have yet to advance a comprehensive account of Connecticut's late nineteenth century oyster industry.⁴ In this paper, I seek to provide the first in-depth history of Connecticut oystering in its heyday. In turn, I hope to provide insight into the unique bifurcated property system at the heart of the industry.

Connecticut's oyster industry encompassed a regulated commons for natural oyster grounds (that is, Captain Bob's turf), and a private property regime for other areas of the seabed (where Rowe reigned). Surprisingly, Captain Bob and Henry Rowe, and the radically different legal regimes under which they toiled, coexisted more or less peacefully through profound technological and economic change, ferocious public controversy, and repeated attempts at simplification.⁵ In this paper, I argue that Connecticut's stable bifurcated property system can be generally explained through a social cost-benefit framework, as articulated in the property context by Demsetz.

However, a full explanation must consider the unique biological, social, historical, and economic attributes of Connecticut's oysters and the industry that harvested them –

⁴ The richest modern source on Connecticut oystering is JOHN M. KOCHISS, *OYSTERING FROM NEW YORK TO BOSTON* (1974), which provides a detailed account of the tools and techniques of the 19th century oyster industry. Other valuable works include VIRGINIA M. GALPIN, *NEW HAVEN'S OYSTER INDUSTRY: 1638-1987* (1989) (focusing on New Haven); Samuel Paris Hanes, *The High Modernist Moment: Oysters, Knowledge Production, and Conservation in the Progressive Era, 1878-1917* (Oct. 2008) (unpublished Ph.D. dissertation, Rutgers University) (*available at* <http://mss3.libraries.rutgers.edu/dlr/outputds.php?pid=rutgers-lib:24561&mime=application/pdf&ds=PDF-1>) (exploring on the development of government bureaucracy and systems of knowledge production relating to oystering); and Andrew Paul Giering, *A Raw Deal for Oyster Growers: Overcoming the No Compensation Rule of the Navigation Servitude* (unpublished student paper, Yale Law School) (on file with author). Most modern academic works on oystering focus on other regions. *See, e.g.*, CHRISTINE KEINER, *THE OYSTER QUESTION* (2009) (Chesapeake Bay); BONNIE MCKAY, *OYSTER WARS AND THE PUBLIC TRUST* (1998) (New Jersey).

⁵ In contrast, efforts to regulate oystering and enclose oyster grounds in other American fisheries generated violent conflict. *See, e.g.*, MCKAY, *supra* note 4 (New Jersey); Anna Maria Gillis, *Oyster Wars*, *HUMANITIES*, May/June 2011, at 6 (Chesapeake Bay).

attributes that strongly influenced both the cost of enclosure and that of continued public ownership.

The account that follows is organized in five Parts. Part II describes the basic elements of Connecticut's nineteenth century oyster industry, including the oysters themselves and the technologies used to produce them. In Part III, I provide historical background to the great expansion of the fishery during the second half of the nineteenth century. Part IV describes the advent of oyster cultivation, and the halting evolution of oystering law to reflect the realities of a changed industry. This evolution culminated in the oyster reforms of 1881, which established Connecticut's bifurcated property system for good. In Part V, I explain why this unique legal structure survived the decades that followed, focusing on the potential costs of enclosing the natural beds and the actual costs of public ownership. Part VI offers brief concluding thoughts.

II. Basic elements of the nineteenth century oyster industry

A. The oyster and its ecosystem

The Eastern oyster (*Crassostrea virginica*) is a bivalve with a thick, irregular shell.⁶ Its native range extends along the Atlantic coasts of North America from Canada to Brazil.⁷ Oysters naturally grow and reproduce in estuaries and other coastal waters, and can form extensive accumulations where conditions are favorable.⁸ These accumulations are often referred to as "natural beds."⁹

⁶ Although there are many oyster species, in this paper I use the term "oyster" to refer exclusively to *Crassostrea virginica*.

⁷ See Melany P. Puglisi, *Crassostrea virginica*, SMITHSONIAN MARINE STATION AT FORT PIERCE (Oct. 1, 2008), http://www.sms.si.edu/irlspec/Crassostrea_virginica.htm.

⁸ See KOCHISS, *supra* note 4, at 5-6.

⁹ See *id.* at 8.

The oyster begins its life as a minute fertilized egg, known as “spawn.”¹⁰ For several days after fertilization, the spawn floats freely in the ocean, but it soon adheres to some stationary medium and is thereafter immobile. Spawn may attach directly to the sand or mud at the bottom of a body of water or to other materials, including natural debris, man-made objects, and above all, the shells of other oysters.¹¹ These materials are generically called “cultch.” Once immobile, the spawn is called “spat” or “set,” the latter term also being used to describe the total natural production of viable spat in a given year.¹²

Growth, fed by microorganisms that the oysters filter from the surrounding water, occurs mainly in summer and fall. In Connecticut waters, the spat can grow up to an inch in the first growing season and reach three inches by the third.¹³ The oyster continues to grow throughout its life, which may be as long as 20 years.¹⁴ Colonial writers described foot-long oysters, containing meats so large that they could not be eaten in a single bite.¹⁵

The oyster reaches sexual maturity at four months and can spawn every year thereafter for the rest of its life, sometimes several times per year. Spawning occurs in late spring and summer. Both male and female oysters spawn,¹⁶ and each releases a staggering number of gametes. The male-produced sperm and female-produced ova

¹⁰ Some sources use the terms “spawn” and “spat” interchangeably. See, e.g., *Making Oyster Homes: Methods of Work Along the Connecticut Shore*, N.Y. TIMES, Aug. 7, 1892, at 11 (available via ProQuest Historical Newspapers).

¹¹ See KOCHISS, *supra* note 4, at 7; de Broca, *supra* note 2, at 297. By attaching to one another, oysters can form large “reefs.” See Puglisi, *supra* note 7.

¹² See, e.g., Henry C. Rowe, *Deep Water Oyster Culture*, 13 BULL. U.S. FISH COMM’N 273, 275 (1983).

¹³ See KOCHISS, *supra* note 4, at 5-7.

¹⁴ See Puglisi, *supra* note 7. Kochiss claims that oysters can survive until age forty. See KOCHISS, *supra* note 4, at 7.

¹⁵ See KOCHISS, *supra* note 4, at 8.

¹⁶ See *id.* at 6.

randomly collide in the water and form fertilized eggs. Because many gametes do not so collide, and many fertilized eggs starve or are destroyed before finding a resting place, a diminished, if still impressive, population of viable spat is ultimately produced.¹⁷

Even when attached, however, spat and mature oysters face a host of dangers. Oysters are sensitive to variations in salinity, temperature, and food supply in the surrounding water; all these factors can diminish the oyster's growth or reproductive capacity or kill the organism altogether.¹⁸ Oysters may also be smothered when storms and shifting currents stir up sediment from the seabed.¹⁹ They are susceptible to diseases and parasites, and may be sickened by human-generated water pollution.²⁰ Finally, oysters are consumed by a wide array of predators. In nineteenth century Connecticut, the starfish (*Asterias sp.*) was the most significant oyster predator. A single starfish can consume up to seven oysters per day, and waves of starfish have been known to descend en masse on oyster beds, wiping them out entirely in a matter of days.²¹

¹⁷ See *id.* at 6-7; Rowe, *supra* note 12, at 274.

¹⁸ See KOCHISS, *supra* note 4, at 5, 7.

¹⁹ See Gordon Sweet, *Oyster Conservation in Connecticut: Past and Present*, 31 GEOGRAPHICAL REV. 591, 603 (1941). Severe storms can also break up and disperse oyster beds, to the detriment of oystermen (if not of the oysters themselves, which presumably might survive wherever they come to rest). See *id.*

²⁰ See, e.g., KOCHISS, *supra* note 4, at 7; *Oysters and Sewage: A Cheerful Story from New Haven*, HARTFORD COURANT, Nov. 19, 1888, at 6 (available via ProQuest Historical Newspapers).

²¹ See, e.g., KOCHISS, *supra* note 4, at 7-8; *Destroyed by Star Fish: An Enemy Which Threatens to Exterminate the Oysters*, N.Y. TIMES, Jan. 19, 1889, at 2 (available via ProQuest Historical Newspapers); *The Oysters' Enemy*, BRIDGEPORT STANDARD, Nov. 20, 1883 (on file in the Oystering Collection, collection 121, vol. 1 ("Scrapbook No. 1 (Henry C. Rowe, New Haven, Connecticut)"), G.W. Blunt White Library, Mystic Seaport [hereinafter Rowe Scrapbook, White Library]) [hereinafter *The Oysters' Enemy*]; Unidentified newspaper clipping with various observations on oystering, likely from the *Sea World* (c. 1879) (on file in the Rowe Scrapbook, White Library) [hereinafter Probable *Sea World* Article] ("[A] company of stars . . . will go through an oyster bed sometimes like fire through a forest").

B. Harvesting

For most of human history, oysters were a wild resource and were gathered wherever they could be found. Some oyster grounds are shallow enough to be exposed at low tide, allowing for harvest by hand; many of New Haven's fertile natural beds were of this sort.²² Where beds are continually covered, or in shallower areas during high tide, boats are used. In 19th century Connecticut, oystermen on the natural beds piloted dugout canoes (a technology gleaned from the Native Americans) and a wide variety of sailboats. The typical Connecticut oyster sailboat was a small, fast, shallow-draft vessel called a "sharpie." For beds further off shore and therefore requiring more robust craft, large sloops and scaled-up, modified sharpies predominated.²³

Oysters are gathered from submerged bottoms with rakes, tongs and dredges. All of these tools have existed in the Connecticut oyster fishery at least since the colonial period.²⁴ An oyster rake has curved tines with which to scoop up oysters and a handle that may extend up to thirty-five feet long.²⁵ Tongs are essentially two rakes bolted to each other to form a scissor-like contraption.²⁶ Where rakes and tongs are unsuitable due to oysters' depth or dispersion, oystermen use dredges. An oyster dredge consists of a blade or rake, which scrapes oysters up from the seabed, and a bag or similar receptacle to collect them. A cable attaches the dredge to the boat, and as the boat moves, the dredge

²² See, e.g., INGERSOLL, *supra* note 2, at 61.

²³ See KOCHISS, *supra* note 4, at 91-123.

²⁴ See KOCHISS, *supra* note 4, at 81, 82, 86. Tongs may be a Native American invention. See *id.* at 82.

²⁵ See *id.* at 81-82.

²⁶ See *id.* at 82.

drags along the seabed. When full, the dredge is pulled up and emptied. Smaller dredges can be pulled up by hand, while larger dredges require a winch.²⁷

Sailboats and hand tools were used exclusively in the Connecticut oyster fishery until the adoption of steam power in the 1870s. Peter Decker, a Norwalk oysterman, is generally recognized to have been the first to use steam on an oyster boat. He first used steam power to turn winches, but later replaced his sails with a steam engine. Within a few years, local shipyards were turning out purpose-built oyster steamers.²⁸ Steam power allowed oystermen to use considerably heavier and more capacious dredges, to harvest more oysters with fewer workers, to operate in deeper waters, and to work in windless conditions.²⁹

C. Cultivation

Wild oysters are unpredictably available and may be depleted by overfishing. To avoid these risks, Connecticut oystermen began raising their own oysters around the turn of the 19th century.³⁰ Planting, an early technique, involved bringing young oysters, called “seed,” from elsewhere and depositing them on the seabed to mature.³¹ Later, Connecticut oystermen learned that if they provided a suitable substrate in an area otherwise favorable to oyster growth, they could “catch” and cultivate free-floating spat produced by other oysters.³² Although the ancient Romans and Chinese used this

²⁷ See *id.* at 85, 88.

²⁸ See *id.* at 131-33.

²⁹ See *id.* at 89-90; Collins, *supra* note 2, at 465, 469.

³⁰ See *infra* Section III.B.

³¹ See KOCHISS, *supra* note 4, at 11.

³² Sources of spat included “brood oysters” placed on the cultivation site as well as nearby natural beds and planted tracts. See *id.* at 13; Rowe, *supra* note 12, at 274; see also Collins, *supra* note 2, at 473 (describing suitable types of seabed for oyster cultivation).

technique, it apparently was not employed in Connecticut until the 1860s or so.³³ The ideal substrate was oyster shell; Connecticut cultivators deposited vast quantities of shells on previously barren stretches of seabed throughout the later decades of the 19th century.

Initially, cultivation was practiced in the shallow coastal waters where Connecticut oysters had always been found. These waters quickly became crowded, however, as the industry grew and private ownership of plots of underwater land emerged.³⁴ Planters and cultivators therefore turned to deeper plots and, eventually, Long Island Sound, where vast stretches of empty seabed lay beneath twenty-five and seventy-five feet of water. New Haven oystermen first attempted cultivation in the Sound in the 1870s.³⁵ The technique quickly caught on, hugely increasing the output of the Connecticut oyster fishery.³⁶ Natural bed oystermen, sometimes referred to as “natural growers” or simply “growthers,” continued to harvest wild oysters during this period.

III. 1700 – 1870: The rise of Connecticut oystering

A. Wild oysters and the early trade

The Connecticut coast, with its many shallow estuaries, inlets, and bays, provides excellent habitat for oysters, and once possessed innumerable natural beds.³⁷ Native Americans harvested wild oysters from the shallows in and around present-day New Haven and left extensive shell middens throughout the area.³⁸ Oysters were an important source of food for early European settlers, and soon became a resource of some economic

³³ See EDWARD E. ATWATER ET AL., HISTORY OF THE CITY OF NEW HAVEN TO THE PRESENT TIME 615 (1887).

³⁴ See *infra* Section III.B; INGERSOLL, *supra* note 2, at 64.

³⁵ See *id.*; Rowe, *supra* note 12, at 273.

³⁶ See *infra* Section IV.A.

³⁷ See INGERSOLL, *supra* note 2, at 58-87.

³⁸ See ATWATER ET AL., *supra* note 33, at 613; GALPIN, *supra* note 4, at 13.

importance. New Haven's first oyster dealers were plying their trade in the seventeenth century,³⁹ supplied by professional oystermen who lived close to the harbor or the Quinnipiac River.⁴⁰ Even at this early stage, oysters were being exported inland from the coast as far as Albany, and by 1800, New Haven oysters were being consumed in Montreal.⁴¹ An 1824 report in the *East Haven Register* estimated local yearly production at 60,000-100,000 bushels annually, with gross revenues of \$25,000 or more.⁴²

The extensive trade quickly outpaced the ecosystem's ability to produce oysters. By the early 1700s, New Haven's natural beds were already becoming depleted.⁴³ In 1762, the town forbade residents from harvesting between May and August (i.e., the spawning season), with exceptions for the poor and infirm, and banned the removal of cultch from the natural beds in the harbor.⁴⁴ In 1766, the town meeting extended the off-season through September and outlawed dredging altogether, believing it to harm the beds.⁴⁵ Concerns over oyster scarcity extended beyond New Haven. In 1784, the Connecticut Legislature passed a law enabling towns to broadly regulate oystering within their waters.⁴⁶ Twenty-four coastal towns subsequently enacted seasonal restrictions and

³⁹ See GALPIN, *supra* note 4, at 13.

⁴⁰ See INGERSOLL, *supra* note 2, at 61.

⁴¹ See GALPIN, *supra* note 4, at 14; INGERSOLL, *supra* note 2, at 61.

⁴² See ATWATER ET AL., *supra* note 33, at 613-14. Several different units are used to denominate quantities of oysters; the most common are bushels of unopened oysters (i.e., oysters in the shell) and gallons or barrels of opened oysters (i.e., oyster meats). The individual oyster, being variable in size, is rarely used as a unit of quantity. See KOCHISS, *supra* note 4, at 75; Collins, *supra* note 2, at 479.

⁴³ See GALPIN, *supra* note 4, at 13.

⁴⁴ See KOCHISS, *supra* note 4, at 9-10.

⁴⁵ See *id.* at 10.

⁴⁶ See An Act for encouraging and regulating Fisheries, 1784 Conn. Pub. Acts 78, 78. Galpin suggests that the Legislature was influenced in part by the depletion of oyster beds in Rhode Island and Massachusetts. See GALPIN, *supra* note 4, at 13.

catch limits. Under these ordinances, oystermen were limited to two bushels a day and could only harvest within their own towns.⁴⁷

The two-bushel limit and the locality requirement were widely flouted, thus beginning Connecticut's rich tradition of oyster poaching and leading to the erection of watch houses in New Haven harbor.⁴⁸ The seasonal restriction apparently held up better, and by the early 1800s had been extended in New Haven until the end of October.⁴⁹ Even though it was obeyed, however, temporal restrictions did not appreciably slow depletion of the beds. In an 1880 account of oystering earlier in the century, Ernest Ingersoll vividly depicted the race to harvest wild oysters during the legal season, beginning at midnight on November 1:

No eye could see the great face of the church-clock on the hill, but lanterns glimmered upon a hundred watch-dials, and then were set down, as only a coveted minute remained. . . . [T]he great bell struck a deep-toned peal. It was like an electric shock. Backs bent to oars, and paddles churned the water. From opposite banks navies of boats leaped out and advanced toward one another. . . . Before the twelve blows upon the loud bell had ceased their reverberations, the oyster-beds had been reached, tongs were scraping the long-rested bottom, and the season's campaign upon the Quinepiac had begun. In a few hours the crowd upon some beds would be such that the boats were pressed close together. They were all compelled to move along as one, for none could resist the pressure of the multitude. The more thickly covered beds were quickly cleaned of their bivalves A week of this sort of attack. . . usually sufficed so thoroughly to clean the bottom, that subsequent raking was of small account. . . . It was not long. . . before the old-fashioned large oysters, "as big as a shoe-horne," were all gone, and most of those caught were too small for market.⁵⁰

⁴⁷ See GALPIN, *supra* note 4, at 13-14.

⁴⁸ See *id.* at 14.

⁴⁹ See INGERSOLL, *supra* note 2, at 63.

⁵⁰ INGERSOLL, *supra* note 2, at 63-64. Although Ingersoll wrote many years after the events he described took place, an 1867 newspaper article corroborates his description, see *The Fair Haven Oyster Trade: The Bivalves From Infancy to Death*, HARTFORD COURANT, Sept. 28, 1867, at 1 (available via ProQuest Historical Newspapers) [hereinafter *The Fair Haven Oyster Trade*], and an 1887 source assures us that "the old

In addition to formal regulation, local residents had informal mechanisms for excluding outsiders. Residents of the “back country” descended on New Haven at the beginning of the season, hoping to harvest personal stocks of oysters for the winter ahead. Ingersoll writes that “these rustics always met with a riotous welcome from the town boys, who hated rural competitors. They were very likely to find their boats, if not carefully watched, stolen and hidden before they had a chance to launch them, or even temporarily disabled.”⁵¹ Another source relates:

Many pranks were played by the Fair Haven men upon their unwelcome competitors from the surrounding town. . . . On one morning when the [seasonal restriction] was off, Hezekiah Bradley’s canoe was found standing on end in an apple tree, up on the hill where the Shore Line railroad still runs At another time a large fleet of visiting boats . . . were prevented from participating in the grand rush by the sudden disappearance of every rope and anchor in the fleet, and the owners of the boats on visiting the local stores to purchase new rope, found that their opponents had been there before them, and their money could not purchase any rope in Fair Haven.⁵²

B. The development of planting and early enclosure of the seabed

Despite these formal and informal regulations, the natural beds continued to decline over the first half of the 19th century. At the same time, demand was booming, driven in large part by population growth.⁵³ New Haven oystermen turned to cultivation to fill the gap. Planting began in New Haven harbor around 1800. Planters used seed oysters both from local beds and from further afield, including the Housatonic River,

residents pronounce [Ingersoll’s] account quite correct.” ATWATER ET AL., *supra* note 33, at 614.

⁵¹ INGERSOLL, *supra* note 2, at 63

⁵² ATWATER ET AL., *supra* note 33, at 614.

⁵³ See GALPIN, *supra* note 4, at 17.

New York, Delaware Bay, and, by some time between 1817 and 1830, the vast natural beds of the Chesapeake Bay.⁵⁴

Fueled by imported Chesapeake seed and the advent of rail transport, the New Haven oyster industry expanded greatly from the 1830s to the 1850s.⁵⁵ An 1857 article in the *New York Tribune* reported that “[t]he Hartford and New Haven are at present running from six to ten cars daily, loaded with oysters, mostly destined for the Western market, though a portion pass up the Connecticut valley and find their way into Canada East.”⁵⁶ Levi Rowe & Co., one of the city’s leading firms, sold 150,000 gallons of opened oysters in 1856 alone.⁵⁷ A fleet of at least 80 boats was employed in transporting seed from southern waters.⁵⁸ Hundreds were worked in shucking and packing,⁵⁹ and Fair Haven developed a thriving manufacturing sector secondary to the fishery, producing goods such as barrels, cans, tubs, pails, and oyster-shell lime.⁶⁰

As planting entered its boom years, full-fledged cultivation (i.e., catching spat, rather than planting seed) was just beginning to emerge. Various oystermen experimented

⁵⁴ Sources differ as to the onset of the Chesapeake trade. *See, e.g.*, ATWATER ET AL., *supra* note 33, at 614; KOCHISS, *supra* note 4, at 15-17; *The Fair Haven Oyster Trade*, *supra* note 50.

⁵⁵ *See* INGERSOLL, *supra* note 2, at 61. During this period, many New Haven oyster dealers opened warehouses and processing plants in Baltimore, fostering that city’s rise as a major center of oyster production. *Id.* at 61, 63. The Baltimore branches shipped oysters to southern and western states, while the New Haven branches exported to New England and Canada. *See* GALPIN, *supra* note 4, at 17.

⁵⁶ *Oyster Trade at Fairhaven*, N.Y. DAILY TRIBUNE, Jan. 9., 1857, at 6 (available via ProQuest Historical Newspapers) [hereinafter *Oyster Trade at Fairhaven*].

⁵⁷ *See* INGERSOLL, *supra* note 2, at 61.

⁵⁸ *See Oyster Trade at Fairhaven*, *supra* note 56.

⁵⁹ *See id.*; *The Fair Haven Oyster Trade*, *supra* note 50.

⁶⁰ *See* ATWATER ET AL., *supra* note 33, at 621; *The Fair Haven Oyster Trade*, *supra* note 50.

with cultivation using shells in the 1850s and 1860s;⁶¹ however, the practice only became dominant after technological developments in the 1870s.⁶²

Cultivation and planting both differed from wild harvesting in that they required long-term investment on the part of producers, raising the possibility of free ridership; an industrious oysterman might plant a few acres of seabed and return years later to harvest the mature oysters, only to find them harvested in the meantime by an unscrupulous competitor. Underwater land was deemed public property both under the common law and in popular opinion, and in turn, planters had little ability to exclude others from planted grounds.⁶³

In 1845, the Connecticut Legislature took initial steps toward revising this state of affairs and formally recognizing the ongoing practice of planting Southern oysters. A law passed that year authorized town committees to allow oystermen to stake out areas of the seabed and plant them with imported oysters, and imposed penalties for trespassing upon staked-out grounds.⁶⁴ In 1846, the law was amended to permit planting native oysters as well as imported seed.⁶⁵ With these laws, Connecticut established a sort of tenancy in underwater land, but did not actually provide for private ownership of the seabed.

In 1855, however, with the southern trade flourishing, the Legislature provided further security for planters by allowing the town committees to grant perpetual titles in

⁶¹ See INGERSOLL, *supra* note 2, at 72-77; KOCHISS, *supra* note 4, at 17.

⁶² See *infra* Section IV.A.

⁶³ See THOMAS W. MERRILL AND HENRY E. SMITH, PROPERTY: PRINCIPLES AND POLICIES 308-313 (1st ed. 2007) (land underlying navigable waters was presumptively public property under Roman law, English common law, American common law); INGERSOLL, *supra* note 2, at 65 (describing contemporary public sentiment).

⁶⁴ See An Act in addition to an Act entitled “An Act for the Growing of Oysters,” 1845 Conn. Pub. Acts 41-42 [hereinafter 1845 Act].

⁶⁵ See An Act relating to the growing of Oysters, 1846 Conn. Pub. Acts 32; Sweet, *supra* note 19, at 593.

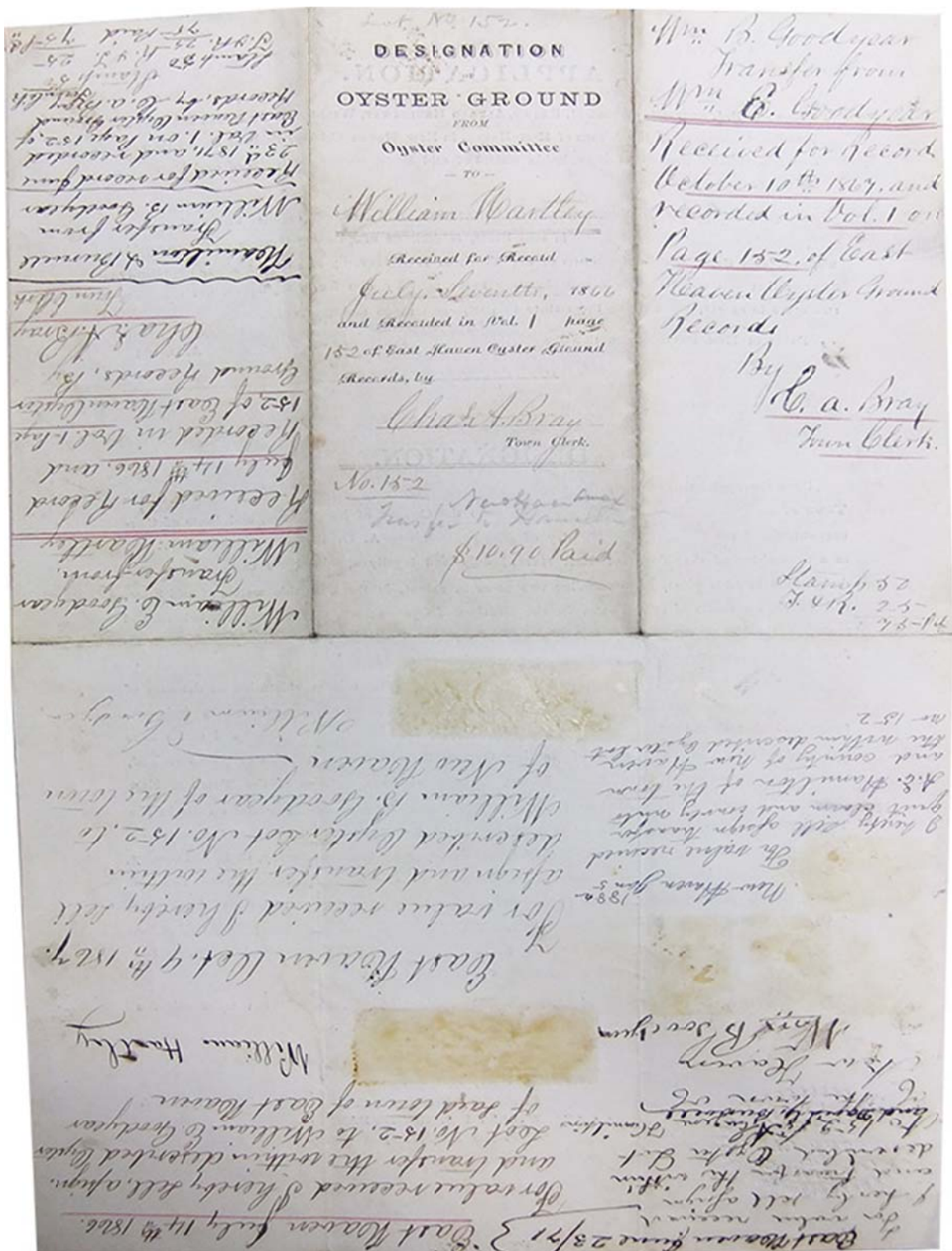
the seabed to individuals.⁶⁶ The 1855 statute restricted individual ownership to two acres, but entrepreneurs could evade this restriction by gathering together the grants of friends, relations, and even strangers, whether by transferring deeds or by listing the willing third parties in a single application.⁶⁷ A critical account in the April 9, 1878 *New Haven Journal-Courier* described the typical outcome under this and subsequent laws:

[U]nder the various acts of legislation . . . parties had got persons to put down their names for the limited two acres and assigned them to the one operator. In this way men in the dry goods business on Chapel street and lawyers had had lots marked off, and had assigned them, themselves not knowing or caring anything about oysters or the oyster business.⁶⁸

⁶⁶ See An Act regulating and protecting the planting of Oysters, 1855 Conn. Pub. Acts 112 [hereinafter 1855 Act].

⁶⁷ See *id.* at § 2; INGERSOLL, *supra* note 2, at 64; Sweet, *supra* note 19, at 594.

⁶⁸ *The Oyster Interest: Differing Opinions on the Subject of Grants of Oyster Lots*, NEW HAVEN J.-COURIER, Apr. 4, 1878 (on file in the Rowe Scrapbook, White Library).



Reverse of oyster ground designation document bearing multiple assignments and transfers. On file in the Oystering Collection, collection 121, box 1, folder 4, G.W. Blunt White Library, Mystic Seaport.

Through such transactions, oyster entrepreneurs quickly claimed and enclosed a great deal of land. Tracts were marked off with poles or branches sunk into the seabed. In 1862, a French envoy visited New Haven and described its harbor thus: “As far as the eye can see, the bay is covered with myriads of branches, waving in the wind, or swayed by the force of the currents. It looks as if a forest were submerged, the tops of the trees only rising above the surface of the water.”⁶⁹

At this nascent stage in the development of underwater property rights, enclosure was pursued in ad hoc fashion and sat poorly with public sentiment. Grants often described the tracts at issue in loose terms, the seabed was poorly surveyed, and procedures for designating and transferring land were irregular and inconsistent.⁷⁰ Moreover, many oystermen staked out and claimed ground without legal sanction.⁷¹ Disputes were common, especially when land granted through the town committees was already in use or had been staked out under previous laws. Ingersoll writes:

Cultivators of all grades found many and many instances in which their staked-out ground was reappropriated, or the oysters, upon which they had spent a great deal of time and money, were taken by their neighbors even, who angrily resented any imputation of stealing. . . . Having put some oysters on a piece of ground and found them to do well, a man would put in a claim for a grant of that piece, and feel greatly abused because it had previously been designated to some man who knew that the only proper or safe way was to get legal possession of the ground first, and make a trial afterwards.⁷²

In 1864 and 1865, the Legislature formally banned the practice of staking out plots without committee consent, mandated the recording of designations and transfers, and allowed towns to tax the beds, thereby providing some modicum of additional

⁶⁹ de Broca, *supra* note 2, at 306.

⁷⁰ See Sweet, *supra* note 19, at 594.

⁷¹ See ATWATER ET AL., *supra* note 33, at 615.

⁷² INGERSOLL, *supra* note 2, at 65.

certainty.⁷³ Property disputes nonetheless continued, and would be a fixture of Connecticut's oyster fishery for decades to come. Many planters turned to private enforcement to better secure their crops. New Haven's planters formed an association and hired four watchmen, who kept an eye on the beds from watch houses built on boats anchored in the harbor.⁷⁴

Notably, the creation of property rights did not mean the end of the natural beds, which were expressly excluded from staking out and from private ownership in the laws of 1845 and 1855 and continued to be reserved for the public under subsequent legislation.⁷⁵ The Legislature also enacted new regulations applicable to the natural beds during this period, including a statewide off-season from March 1 to November 21, a ban on nighttime oystering on the public beds, and a total ban on the harvest of oysters by nonresidents of Connecticut.⁷⁶ Oystermen continued to gather tens of thousands of bushels from natural beds throughout this period, although due to intensive harvesting, the oysters taken up were too small to sell for consumption.⁷⁷ Instead, they were used as seed on other grounds.⁷⁸ An 1867 article commented that "[a] good many of the native

⁷³ See An Act in addition to and in alteration of "An Act Regulating and Protecting the Planting of Oysters," 1864 Conn. Pub. Acts 69; An Act in addition to an Act entitled "An Act regulating and protecting the Planting of Oysters," 1865 Conn. Pub. Acts 61.

⁷⁴ de Broca, *supra* note 2, at 306.

⁷⁵ See 1845 Act, *supra* note 64, at § 3; 1855 Act, *supra* note 66, at § 3; INGERSOLL, *supra* note 2, at 64; Sweet, *supra* note 19, at 594.

⁷⁶ See An Act to promote the Growing of Oysters, 1842 Conn. Pub. Acts 49-50 (off-season) [hereinafter 1842 Act]; 1845 Act, *supra* note 64, at § 4 (nighttime oystering ban); An Act regarding the taking of Oysters, 1848 Conn. Pub. Acts 56-57 (ban on oystering by out-of-state residents). Towns were allowed to opt out of the legislatively imposed off-season, which functioned as a default rule. See 1842 Act, *supra*.

⁷⁷ See Collins, *supra* note 2, at 468; Sweet, *supra* note 19, at 593; *see also* INGERSOLL, *supra* note 2, at 86 (describing the depletion of the vast natural bed at Bridgeport).

⁷⁸ See, e.g., Collins, *supra* note 2, at 468.

oysters are also taken out of the Quinnepiack and planted on the planting grounds. These are said to make the best oysters in the country.”⁷⁹

IV. 1870 – 1881: Expansion and reform

A. A boom in cultivation

Two technological developments during the 1870s fueled a massive expansion in oyster cultivation, threatening to destabilize the uneasy coexistence of property regimes in the Connecticut oyster fishery. Between 1869 and 1874, Peter Decker, a Norwalk oysterman, experimented with using steam engines to propel his sloop and turn its winches. In 1874, he took the sails off the *Early Bird* for good, ushering in a new era in oystering.⁸⁰ Oyster steamers were radically more productive than their sail counterparts. “It must rather disturb those who have only the ordinary implements used in catching oysters,” one journalist commented, “to see the rapidity with which these steam monsters rake up the bivalves and deposit them on ship-board.”⁸¹ An 1881 report estimated that “[a] medium sized sail vessel with three men will dredge up about twenty-five bushels of oysters in a day; while a medium-sized steamer with only one man more will take twenty times as many.”⁸² The *New York Times* observed that oystermen with steamers were able “to secure the lion’s share of seed from the public beds.”⁸³ Decker’s fellow oystermen

⁷⁹ *The Fair Haven Oyster Trade*, *supra* note 50.

⁸⁰ See KOCHISS, *supra* note 4, at 131-32.

⁸¹ See *Steam Dredging*, c. 1878 (newspaper clipping) (on file in the Rowe Scrapbook, White Library).

⁸² 1 COMM’RS OF SHELL-FISHERIES OF CONN. REP. 74 (1882) [hereinafter 1882 REPORT]; see also Untitled article, BRIDGEPORT FARMER, Aug. 25, 1881 (on file in the Rowe Scrapbook, White Library) [hereinafter Untitled *Bridgeport Farmer* Article] (equating the productivity of the average steamer with that of thirty-two average sail vessels).

⁸³ *Law-Making in Connecticut*, N.Y. TIMES, Mar. 22, 1881, at 1 (available via ProQuest Historical Newspapers); see also *The Oyster*, HARTFORD COURANT, Mar. 16, 1881, at 1

were quick to realize the advantages of the new technology, and several were operating from purpose-built steamers by the late 1870s.⁸⁴

The advent of steam facilitated a concurrent expansion of oystering into deeper and deeper water. Shallower oyster grounds had been entirely claimed by the early 1870s. In 1874, Henry Rowe, a prominent New Haven cultivator, obtained a tract under 35 feet of water in Long Island Sound and successfully cultivated a crop of oysters on it.⁸⁵ Rowe's success shattered the long-held belief among Connecticut oystermen that the Sound's deep and frequently turbulent waters were unsuitable for cultivation.⁸⁶ The coastal towns were soon granting land far offshore.⁸⁷ Steam power was essential as cultivators pushed into deeper water, where the use of hand tools was infeasible.⁸⁸

With steam power and deep-water cultivation, Connecticut's oyster production expanded as never before, and its growers became largely independent from imported seed for the first time in decades.⁸⁹ Observers in other states looked on with some awe. “. . . [T]he only noteworthy increase [in oyster production] is upon the Connecticut shore,” the *New York Sun* reported. “Six or seven years ago the oyster cultivators of New Haven,

(available via ProQuest Historical Newspapers) (describing steamers' advantage in harvesting seed from natural beds).

⁸⁴ See *Catching Oysters by Steam Power*, SEA WORLD, Aug. 4, 1879 (on file in the Rowe Scrapbook, White Library).

⁸⁵ See Rowe, *supra* note 12, at 273.

⁸⁶ See KOCHISS, *supra* note 4, at 18-22.

⁸⁷ See, e.g., *The Connecticut Oyster Grounds: Report of the Commissioners of the General Assembly*, HARTFORD POST, Feb. 19, 1880 (on file in the Rowe Scrapbook, White Library) [hereinafter *The Connecticut Oyster Grounds*].

⁸⁸ See, e.g., 1882 REPORT, *supra* note 82, at 74 (“For deep-water cultivation steamers are indispensable. They . . . enable the growers to work at times and in places and ways that no sail vessels would attempt. . .”).

⁸⁹ See, e.g., *id.* at 56-57.

Fair Haven, and Norwalk were in the habit of going over . . . to buy two-year-old oysters from the beds ‘off Fire Island way,’ for their planting. Now the process is reversed.”⁹⁰

B. Growing pains

Deep-water oyster culture, facilitated by steam, both enabled oystermen to work on larger tracts and made larger tracts an economic necessity. Steamers were highly efficient, allowing growers to cover more land with fewer hands on deck. However, in order to defray the large capital investments required to build and operate steamers, growers had to expand their holdings. The *Sea World*, a trade paper, wrote in 1879:

There are very few oyster growers who do a business sufficiently large to afford the heavy outlay of the first cost, and the still more telling one of the constant expense, thus making what may be termed an “elephant” to any dealer not having an immense quantity of oysters to catch up every year.⁹¹

Rowe’s first steamer, a 63-foot vessel with three steam engines, four dredges, and a crew of ten, cost \$6,500; he acquired a second steamer a few years later at a cost of \$9,000.⁹²

Rowe was greatly increasing his holdings at the same time he was foraying into deep-water oystering. He had amassed several hundred acres already by 1875. In August of that year, the *New Haven Register* reported that Rowe, along with 59 willing co-claimants, had obtained a grant for 128 additional acres in the deep water of the New

⁹⁰ *Sound Oyster Growing: Connecticut’s Enterprise in Newly Acquired Territory*, N.Y. SUN, Sept. 4, 1881 (on file in the Rowe Scrapbook, White Library) [hereinafter *Sound Oyster Growing*].

⁹¹ *Catching Oysters by Steam Power*, *supra* note 84.

⁹² *See id.*; Unidentified newspaper clipping discussing Henry Rowe’s new steamer, likely from the *Sea World* (c. 1882) (on file in the Rowe Scrapbook, White Library).

Haven harbor channel.⁹³ The article demonstrates an already prevalent fear that public property was being monopolized and the livelihoods of the natural growers endangered, as well as a lack of understanding of the new deep-water techniques:

The poor oystermen who have depended on earning a living by catching native oysters in the channel, have, by these grants, been deprived of their right to fish . . . [w]hile these lots have been taken with the avowed purpose of planting and cultivating oysters, we are informed that the whole of the grant now in Mr. Rowe's name is directly in the channel of the harbor and so deep that planting would be of little utility. It is said that the real object is to control the land where the native oysters grow and catch them as they develop in size.⁹⁴

In a letter to the editors the next day, Rowe was unapologetic:

[I]f fifty-nine citizens make application for oyster ground, it is the duty of the committee to grant it, and if those fifty-nine see fit to transfer their rights to fifty-nine other or to one other, the committee are not to blame, nor could they prevent it if they chose. . . . Meanwhile I have laid out a considerable sum in attempting to start a crop of oysters on the ground, and have put down over fifteen thousand bushels of shells for that purpose, besides seed.⁹⁵

⁹³ See *Monopoly of Oyster Grounds*, NEW HAVEN REGISTER, Aug. 24, 1875 (on file in the Rowe Scrapbook, White Library).

⁹⁴ *Id.*

⁹⁵ Henry C. Rowe, *Monopoly of the Oyster Grounds*, NEW HAVEN REGISTER, Aug. 26, 1875 (on file in the Rowe Scrapbook, White Library). Rowe may have been unusually visible in attempting to cultivate on a large scale, but he was hardly alone in doing so. In 1877, a Hartford paper reported:

It appears that an East Haven oyster dealer came up here a few weeks ago and, calling upon marketmen and other business acquaintances, requested their signatures to a document of legal phraseology, in which the signers agreed to transfer to him all their interest in two acres of oyster grounds, or grounds suitable for the planting of oysters. The signatures were given as an accommodation, cheerfully, because the signers had no objection to deeding away property they didn't know they owned, and which they could not utilize in any way. It is said that the signatures were requested without any regard to whether the signer was a citizen of this state, or an alien, and the only aim of the bearer of the document seemed to be to get as many names as possible.

An Oyster Speculation: Do You Own An Oyster Bed? If So, On What Terms?, HARTFORD GLOBE, May 6, 1877 (on file in the Rowe Scrapbook, White Library).

Given the scale demands of the bigger operations, by the late 1870s, many were calling for the two-acre limit to be abandoned outright. The *Sea World* commented: “It is universally shown that the ‘two acre law’ is useless except as a vexation. No cultivator can really do anything with two acres alone. About as well attempt to navigate a steamboat in a washtub.”⁹⁶ Another editorial predicted that “[t]en years may show that even fifty acres is too small a piece.”⁹⁷

The 1870s oyster boom strained the existing legal regime in several other ways. As grantors of property, recorders of deeds, and enforcers of boundaries, coastal towns were proving slow to catch up to expanding cultivation. Oystermen frequently staked out land deeded to others, and towns deeded lands already granted by their neighbors.⁹⁸ The two-acre requirement contributed to the confusion, as many assembled plots were inevitably irregular in shape. An 1881 article commented:

[T]he plots granted [under the two-acre system] were of all sizes and shapes, run in such irregular lines that a map of them looked like a Chinese puzzle more than anything else, and it must have been almost impossible for dredgers to avoid at times trenching upon the property of their neighbors and thus begetting disputes, reprisals, and law suits.⁹⁹

Disputes over town boundaries, which affected both the ability of towns to grant oyster land in certain areas and the validity of titles already granted, proliferated, both between oystermen fighting over tracts and between towns seeking to tax the increasingly

⁹⁶ *Notes from the Commission*, SEA WORLD, Oct. 27, 1879 (on file in the Rowe Scrapbook, White Library).

⁹⁷ *See, e.g., Change in Oyster Laws*, SEA WORLD, Jan. 5, 1880 (on file in the Rowe Scrapbook, White Library).

⁹⁸ *See, e.g., Oyster Grounds*, NEW HAVEN J.-COURIER, June 30, 1876 (on file in the Rowe Scrapbook, White Library); *Troubles of Oystermen*, NEW HAVEN UNION, July 15, 1876 (on file in the Rowe Scrapbook, White Library); Untitled newspaper clipping, NEW HAVEN J.-COURIER, May 6, 1878 (on file in the Rowe Scrapbook, White Library).

⁹⁹ *Sound Oyster Growing*, *supra* note 90.

valuable seabed.¹⁰⁰ The towns surrounding New Haven harbor, a vital oystering ground divided along numerous uncertain jurisdictional boundaries, resorted to the courts, the Legislature, and private negotiation to resolve their disputes, with varying results.¹⁰¹

The increasing enclosure of oyster grounds, and the growing holdings of Rowe and a few other prominent cultivators, also exacerbated longstanding social tensions between small-scale natural growers and their sympathizers and advocates of a cultivation-oriented private property system. A packed session of the town meeting of Guilford passed a resolution denouncing “the recent legislation under which private individuals and corporations have obtained exclusive and permanent control of vast areas of natural claim and oyster grounds, viz., the rivers, coves and bays along the coast of this State”¹⁰² Similar sentiments were widespread in contemporary newspapers.¹⁰³

Finally, difficulty of enforcement, adverse public sentiment, and confusion as to the validity and precise meaning of titles all fostered theft from private grounds. A Greenwich oyster ground watchman was killed in 1874, apparently by thieves.¹⁰⁴ Henry

¹⁰⁰ See, e.g., *Rowe v. Smith*, 48 Conn. 444 (Conn. 1880); Collins, *supra* note 2, at 469; *Oyster Grounds*, NEW HAVEN PALLADIUM, Jan. 24, 1877 (on file in the Rowe Scrapbook, White Library) (“Lots are said to be worth from \$50 to \$500 and an acre of oyster grounds from \$500 to \$1,000 – more than the value of a similar area of upland”); *Troubles of Oystermen*, *supra* note 98 (noting that oyster grounds were becoming “more and more valuable”).

¹⁰¹ See, e.g., *Recent Legislation for Protecting Oyster Growers*, NEW HAVEN PALLADIUM, Apr. 2, 1877 (on file in the Rowe Scrapbook, White Library); *Troubles of Oystermen*, *supra* note 98; Untitled newspaper clipping, *supra* note 98.

¹⁰² See *Town Meeting in Guilford*, c. 1877 (otherwise unidentified newspaper clipping) (on file in the Rowe Scrapbook, White Library).

¹⁰³ See, e.g., *Monopoly of Oyster Grounds*, *supra* note 93; *New Haven Oyster Grounds*, HARTFORD TIMES, Aug. 26, 1875 (on file in the Rowe Scrapbook, White Library).

¹⁰⁴ See *Murder at Greenwich – A Night Watchman Killed by Oyster Thieves*, HARTFORD COURANT, Nov. 7, 1874 (available via ProQuest Historical Newspapers).

Rowe employed two watchmen of his own,¹⁰⁵ and in 1879, he joined other cultivators in forming an association to prosecute thieves and trespassers.¹⁰⁶ A similar association, consisting of 23 planters of Southern oysters, employed watchmen around the clock in New Haven harbor.¹⁰⁷ Because towns had not reliably fixed the boundaries of natural beds, and the limits of private beds were often similarly uncertain, cases often arose where natural growers arrested for stealing from private beds claimed that the beds were in fact public.¹⁰⁸ In a much-publicized incident in 1879, for example, several natural growers were arrested for taking oysters from a private bed in the New Haven harbor channel. Their foray was widely perceived to be an attempt at creating a test case as to the general validity of designations of the seabed.¹⁰⁹

¹⁰⁵ See Unidentified newspaper clipping discussing Henry Rowe's operation (c. 1876) (on file in the Rowe Scrapbook, White Library).

¹⁰⁶ See George Foote et al., Letter to the Editor, NEW HAVEN PALLADIUM, Aug. 5, 1879 (on file in the Rowe Scrapbook, White Library). In a letter to the editor of the *Palladium*, several growers denounced local oyster dealers who knowingly purchased stolen oysters. *Id.* Although it is unclear from the source, these dealers may have been the same parties accused of backing the natural growers involved in the 1879 test cases. See *infra* note 109 and accompanying text.

¹⁰⁷ See INGERSOLL, *supra* note 2, at 61. Ingersoll relates that the watchmen lived in houses built on piles driven into the seabed, and elaborates: "[T]hey walk or row about day or night [parts of the harbor bottom were exposed at low tide] to guard the property. They go on duty at the time of the first planting, and remain until the last oyster is gathered, a period usually about nine months long." *Id.*

¹⁰⁸ See, e.g., *Averill v. Hull*, 37 Conn. 320 (Conn. 1870); INGERSOLL, *supra* note 2, at 65.

¹⁰⁹ See *The Oyster Controversy – Vexations of Oyster Owners and Oyster Takers*, NEW HAVEN J.-COURIER, Aug. 18, 1879 (on file in the Rowe Scrapbook, White Library); *An Alleged Trespass*, 1879 (otherwise unidentified newspaper clipping) (on file in the Rowe Scrapbook, White Library); *Who Owns the Oysters?*, NEW HAVEN PALLADIUM, Aug. 22, 1879 (on file in the Rowe Scrapbook, White Library); *Seizing a Boat*, 1879 (otherwise unidentified newspaper clipping) (on file in the Rowe Scrapbook, White Library); *Not Oyster Thieves*, NEW HAVEN REGISTER, Aug. 24, 1879 (on file in the Rowe Scrapbook, White Library). The accused escaped being convicted for theft, but the judge's decision was relatively narrow and did not settle the broader issue of ownership of the private bed in dispute and other beds similarly situated. A subsequent newspaper article reported:

C. The legislative response and the reforms of 1881

During the late 1870s, the Connecticut Legislature enacted a flurry of piecemeal legislation that partially addressed these issues. Acts passed during this period clarified the boundaries of certain towns' marine lands,¹¹⁰ mandated the demarcation of all designated oyster grounds with personalized stakes or buoys,¹¹¹ banned nighttime oystering,¹¹² and established procedures for boundary dispute resolution.¹¹³ Several validated all titles previously granted by the town oyster committees, underlining the fact that despite the legislature's best efforts, disputes over the validity of designations

Since Judge Stoddard's decision in the city court the other day discharging Smith and Keister, accused of stealing oysters from the lot of Amelia A. Tuttle, there have been numbers of oyster boats dredging for the bivalves. Some place the figure at thirty or forty. "I suppose the parties claim the ground is a natural oyster bed," said a reporter to a man much interested in harbor matters last evening. "Oh, yes," he replied, "it is a natural bed." The oyster lot owner's committee have been hard at work for the last few days watching the grounds, intending to arrest the parties and dispose of their property according to law.

Seizing a Boat, supra. Further litigation ensued, during which it was alleged that wealthy rivals of Henry Rowe had backed at least one of the accused. Again, however, the litigation apparently failed to generate significant precedent. *See id.*; *Oyster Planters Aroused*, NEW HAVEN UNION, Aug. 24, 1879 (on file in the Rowe Scrapbook, White Library); *An Oyster Case Settled*, NEW HAVEN J.-COURIER, Sept. 20, 1879 (on file in the Rowe Scrapbook, White Library); *Seeing Him Through*, SEA WORLD, Oct. 1, 1879 (on file in the Rowe Scrapbook, White Library); M. P. Smith, Letter to the Editor, SHORE LINE TIMES, Oct. 11, 1879 (on file in the Rowe Scrapbook, White Library); Charles Thompson, Letter to the Editor, NEW HAVEN J.-COURIER, Oct. 17, 1879 (on file in the Rowe Scrapbook, White Library).

¹¹⁰ *See, e.g.*, An Act amending Sections 21 and 22 of Article 1 of Part 1, Chapter IV, Title 16, of the General Statutes relating to Fisheries, § 2, 1875 Conn. Pub. Acts 14, 14; An Act concerning Fisheries, 1878 Conn. Pub. Acts 273.

¹¹¹ *See* An Act concerning Fisheries, § 1, 1877 Conn. Pub. Acts 228, 228.

¹¹² *See* An Act relating to Oyster Lots and Fisheries, § 7, 1878 Conn. Pub. Acts 274, 276.

¹¹³ *See id.* at § 1; An Act in alteration of an Act relating to Oyster Lots and Fisheries, § 3, 1879 Conn. Pub. Acts 422, 424-25.

continued to fester.¹¹⁴ As cultivators pushed further out into the Sound, where town jurisdiction was uncertain and state regulation nonexistent, these disputes promised to proliferate.¹¹⁵ In 1879, the Legislature established a state commission “to prepare a plan . . . for the gradual disposal of the [deep-water] grounds in the waters of this State which are suitable for the cultivation of oysters.”¹¹⁶

One of the Legislature’s thorniest tasks was to establish regulations on steam oystering. The early adopters of the technology faced strong political resistance, both from small-scale natural bed oystermen and from larger planters and oyster ground owners who had not acquired steamers. In New Haven in particular, only Henry Rowe had adopted steam power, and his fellow oystermen opposed him bitterly.¹¹⁷ Both sides energetically petitioned the Legislature,¹¹⁸ which responded in 1879 with a law that limited steam dredging on the natural beds to two days per week, but did not address the use of steam on private beds.¹¹⁹

This apparently satisfied no one, and lobbying continued apace. An anonymous editorial in the *New Haven Palladium* wearily commented that “[o]f late every session of

¹¹⁴ See, e.g., An Act relating to Fisheries for Shell-fish in Tide-waters and Rivers, 1875 Conn. Pub. Acts 14-15; An Act relating to Oyster Lots and Fisheries, *supra* note 112, at § 8; An Act concerning Fisheries, 1878 Conn. Pub. Acts 273.

¹¹⁵ The southern boundaries of the coastal towns, past which the state would exercise sole jurisdiction, were apparently undefined during this time, but were assumed to exist somewhere. See, e.g., *Oyster Legislation*, NORWALK SENTINEL, Apr. 7, 1880 (on file in the Rowe Scrapbook, White Library). State laws passed during this period gave New Haven and Orange special permission to grant deep-water beds, but other towns also gave grants without such permission. See, e.g., *The Connecticut Oyster Grounds*, *supra* note 87.

¹¹⁶ See Concerning Raising of Oysters, 1789 Conn. Spec. Acts 128.

¹¹⁷ See ATWATER ET AL., *supra* note 33, at 620.

¹¹⁸ See, e.g., Petition from advocates of steam power (Jan. 31, 1879) (on file in the Rowe Scrapbook, White Library).

¹¹⁹ See An Act to prohibit the Dredging for Shell Fish by Steam, 1879 Conn. Pub. Acts 442.

the legislature is importuned through the committee on fisheries, to enact some new law .

. .”¹²⁰ Rowe himself was highly active in this and subsequent legislative battles. A

correspondent for the *Norwalk Sentinel* remarked:

I think there is no man in the oyster trade that will accomplish so much with a legislative body as H.C. Rowe of Fair Haven. If he goes for anything he most always gets it. He is a great worker. He will go right into the house when they are in session and buttonhole the members, and then he has a way of getting about what he wants from the committee. More than half the members are away during the session more than H.C. Rowe, and he only a lobby member¹²¹

Along with cultivators from Bridgeport, Norwalk, and other cities further west, Rowe pushed for open access for steamers.¹²² His opponents turned out in force at the Legislature, arguing in a public hearing that steam dredging injured the oyster beds – a point the proponents of steam strenuously disputed.¹²³ Meanwhile, the *Norwalk Sentinel* correspondent opined that

[t]here is no business in the state that the members are so unfamiliar with as the oyster interest. Some of the back country members have an idea that there is literally millions in it. They think the state should get enough out of it . . . to pay its whole expenses. They believe the town committies [sic] are robbers and that oystermen generally are not far behind them.¹²⁴

Out of this chaotic situation emerged another compromise measure, which repealed the 1879 law and banned steam outright on certain public beds.¹²⁵ Thanks to an

¹²⁰ *East Haven Matters*, NEW HAVEN PALLADIUM, Mar. 6, 1880 (on file in the Rowe Scrapbook, White Library).

¹²¹ *Oyster Legislation*, *supra* note 115.

¹²² *See The Steam Dredge Bill*, NEW HAVEN J.-COURIER, Mar. 5, 1880 (on file in the Rowe Scrapbook, White Library).

¹²³ *See id.*

¹²⁴ *Oyster Legislation*, *supra* note 115.

¹²⁵ Specifically, the law designated all coastal waters from Penfield lighthouse (off of Fairfield) westward off-limits to steamers. *See An Act Regulating the Dredging for Shell-fish by Steam Power*, 1880 Conn. Pub. Acts 544.

amendment apparently introduced by Rowe himself,¹²⁶ owners of private grounds were explicitly allowed to use steam on their properties, but this allowance was limited within New Haven harbor, perhaps due to the strong opposition from the majority of Fair Haven planters.¹²⁷

In February 1880, as controversy over steam raged and boundary disputes continued, the state commission reported back to the Legislature. Their report concluded that under the system of town jurisdiction, “law[s] [were] diverse and conflicting, and their administration [was], to the last degree, loose and inefficient.”¹²⁸ The commissioners proposed a bill that created a state oyster commission, established state jurisdiction over all oyster grounds in the Sound, and provided for ten-year leases of deep-water beds to oyster growers.¹²⁹

The sweeping reforms proposed in the “commissioner’s bill” generated great controversy.¹³⁰ The first hearing on the bill in Hartford drew such a crowd that it had to be moved to the hall of the House of Representatives.¹³¹ Although the idea of state jurisdiction in the abstract had many growers’ support,¹³² many present expressed

¹²⁶ See ATWATER ET AL., *supra* note 33, at 620; *The Steam Dredge Bill*, *supra* note 122 (Rowe referring to “my amendment”).

¹²⁷ The relevant text limits steam dredging in New Haven harbor to a period ending “thirty days after the rising of the General Assembly.” See *An Act Regulating the Dredging for Shell-fish by Steam Power*, *supra* note 125, at § 1. It is unclear whether this connotes a period of thirty days each year, or a one-off period. See also *The Steam Dredge Bill*, *supra* note 122 (describing “a provision limiting the oyster dredging in New Haven harbor to thirty days.”).

¹²⁸ See *The Connecticut Oyster Grounds*, *supra* note 87.

¹²⁹ See *id.*; *Our Shell Fisheries: Shall They Be Leased Or Sold?*, NEW HAVEN REGISTER, Feb. 26, 1880 (on file in the Rowe Scrapbook, White Library).

¹³⁰ See, e.g., *Oyster Legislation*, *supra* note 115.

¹³¹ See *Our Shell Fisheries: Shall They Be Leased Or Sold?*, *supra* note 129.

¹³² See *Connecticut Oyster Grounds*, HARTFORD COURANT, Feb. 20, 1880 (available via ProQuest Historical Newspapers). In 1879, the *Sea World* reported that “[t]he

suspicion that the reforms would erode natural bed protections, and several growers also denounced the leasing provision, arguing for full ownership instead.¹³³ At a subsequent hearing in February 1881, the major oyster growers (including Rowe) turned out in force against the bill, with the leasing provision apparently a major point of contention. One editorial described the provision as “the groundwork of the entire bill.”¹³⁴ Indeed, the “commissioner’s bill” had become known as the “Lease Bill” by this point.¹³⁵

Others objected to state jurisdiction in the first place, fearing capture, inefficiency, and a loss of democratic control.¹³⁶ A circular distributed to state legislators protested:

The bill establishing a State Commission is in the interest of monopoly. None but the large owners of ground can comply with its cumbrous and unnecessary provisions. It is in the interest of the few as against the many, and favors the formation of rings and combinations, which are never a benefit to the general public.¹³⁷

A strident 1880 editorial focused on the three commissioners’ proposed leasing power, including their ability to revoke leases, and argued that

[b]y this bill a commissioner is given something amounting to almost, if not quite, despotic powers . . . Shall the legislature of Connecticut lay a burden on the back of this industry for the support of three luxurious State

universal sentiment of all the oyster growers is in favor of State control or regulation of the whole matter. The by-laws of the various towns differ so much that men are often unwillingly law breakers. As the case now is, a little excitement aroused may induce a town meeting to pass resolutions which will practically kill all the oyster business in that town.” *Notes from the Commission*, *supra* note 96.

¹³³ See *Our Shell Fisheries: Shall They Be Leased Or Sold?*, *supra* note 129.

¹³⁴ See *Connecticut Oyster Laws*, SEA WORLD, Mar. 8, 1881 (on file in the Rowe Scrapbook, White Library).

¹³⁵ See, e.g., *Connecticut’s Proposed Oyster Laws: A Hearing Before the Committee*, SEA WORLD, Feb. 1, 1881 (on file in the Rowe Scrapbook, White Library).

¹³⁶ See, e.g., Reasons Why the “Act Establishing a State Commission for Designation of Oyster Grounds,” Being File No. 314, Ought Not to Pass (1881) (anonymous unpublished circular) (on file in the Rowe Scrapbook, White Library).

¹³⁷ *Id.*

paupers, which will be like the Old Man of the Sea to Sinbad, the Sailor?
Shall it thus hinder the production and increase the cost of oysters?¹³⁸

As the “Lease Bill” controversy developed, dispute over the use of steam shifted to focus on the natural beds. The *New York Times* noted the dual argument of the “sail men”: “The many small operators . . . claim, first, that steam dredging destroys the natural beds, and, secondly, that it favors a monopoly at the expense of the many.”¹³⁹ Rowe and his smaller competitors debated through circulars distributed to state legislators, with Rowe denouncing “the jealousy of a class” and arguing that “[t]he sail vessel men ask the Legislature to rid them of the *competition* of the *steamers*.”¹⁴⁰ His opponents responded:

It is only when steam and other modern agencies are *properly applied* that they are in the line of progress and improvement The sailing men do *not* ask that competition may be restricted as to private planting. They ask only that public growth may be preserved.¹⁴¹

The debate among the legislators was substantially along the same lines, and newspapers across Connecticut enthusiastically reported their exchanges throughout 1880 and 1881.¹⁴² Despite the fact that the “sail men” were poorer and less reputable than

¹³⁸ *Connecticut's Proposed Oyster Laws*, Feb. 1880 (otherwise unidentified newspaper clipping) (on file in the Rowe Scrapbook, White Library).

¹³⁹ *Law-Making in Connecticut*, *supra* note 83; *see also* Untitled *Bridgeport Farmer* Article, *supra* note 82 (“The parties opposed to steam dredging claimed it would monopolize the business . . .”).

¹⁴⁰ Henry C. Rowe, Ought the Steam Dredge Bill to Pass? (Jan. 1881) (unpublished circular) (on file in the Rowe Scrapbook, White Library).

¹⁴¹ Charles W. Bell et al., Answer to Statements Made by Mr. Henry C. Rowe in his Circular Entitled “Ought the Steam-Dredge Bill to Pass?” (1881) (unpublished circular) (on file in the Rowe Scrapbook, White Library).

¹⁴² *See, e.g., The Order of the Day*, Apr. 5, 1881 (publication name illegible) (on file in the Rowe Scrapbook, White Library); Unidentified newspaper clipping describing natural beds (c. 1881) (on file in the Rowe Scrapbook, White Library); Untitled newspaper clipping, CONN. REPUBLICAN, Mar. 12, 1881 (on file in the Rowe Scrapbook, White Library).

Rowe and his ilk, they had the advantage of numbers,¹⁴³ and many legislators demonstrated a healthy respect for their power. An editorial in the *Meriden Republican* described how major players in the state Republican Party, including an ex-governor and a current U.S. congressman, had descended on Hartford to make their comrades did not disappoint the anti-steam lobby.¹⁴⁴ Rowe, for his part, sniped that “[m]owing machines, reaping machines, horse rakes and many other labor-saving devices were introduced amid great opposition from the *ignorant* and the *prejudiced*, and from those *demagogues* who depend on the ignorant for their political and pecuniary support.”¹⁴⁵

The laws that emerged in April 1881 embodied a compromise between small and large oystermen and between advocates of centralized and decentralized management. Under a modified form of the “commissioner’s bill,” the town committees retained jurisdiction north of a line drawn close to the coast, but were still banned from granting natural beds; south of the line, a board of three state commissioners was empowered to grant perpetual franchises (rather than ten-year leases) to Connecticut residents in “such undesignated grounds . . . as are not and for ten years have not been natural clam or oyster beds,” with no limit on grant size. The newly created state oyster commission was directed to comprehensively map oyster grounds and grants within both state and town jurisdiction. Finally, the law again validated all titles previously granted in the Sound and

¹⁴³ See, e.g., 1882 REPORT, *supra* note 82, at 69 (natural growths are “by far the most numerous”); *The Oyster*, *supra* note 83.

¹⁴⁴ See *Steam Dredging*, MERIDEN REPUBLICAN, Mar. 31, 1881 (on file in the Rowe Scrapbook, White Library) (“[A]ll over the House, it was secretly and industriously circulated that ‘the party’ would suffer; that the oystermen . . . would all go back on the ticket; and thus right was sacrificed to fear and prejudice.”)

¹⁴⁵ Rowe, *supra* note 140.

established procedures for resolving the location and extent of natural beds within town waters.¹⁴⁶

Simultaneously, the legislature passed bills that allowed the use of steam on private grounds, banned steamers from all other oyster grounds, and limited the weight of dredges used on the natural beds.¹⁴⁷ Another law banned dredging altogether in the waters immediately off the coast of Stratford and Milford, and another set forth additional protections for natural beds within the town waters of Guilford, where natural growers had been especially vocal.¹⁴⁸

The 1881 reforms established a legal regime that would remain substantially intact throughout the golden years of Connecticut oystering. Central to this regime was a property system split between private and natural beds. Under this regime, lands within the same industry would be subject to radically different laws and reserved for different communities and technologies. In an industry experiencing dramatic change and fierce political competition, the 1881 reforms sought to establish a durable compromise. In so doing, they clarified and reaffirmed the uneasy balance between small-time oyster

¹⁴⁶ See An Act Establishing a State Commission for the Designation of Oyster Grounds, 1881 Conn. Pub. Acts 100; see also *Valuable Farming Land: But All of It Under Water*, NEW HAVEN REGISTER, Aug. 8, 1883 (on file in the Rowe Scrapbook, White Library) (“[The commissioners] endeavor to adjust amicably the differences between parties at variance concerning lots located by the old and notoriously defective town deeds and surveys . . .”).

¹⁴⁷ See An Act Concerning Shell Fisheries, 1881 Conn. Pub. Acts 58; An Act regulating the Dredging for Shell Fish and Shells, 1881 Conn. Pub. Acts 58-59; An Act to regulate Dredging with Sail Vessels on Natural Oyster Beds, 1881 Conn. Pub. Acts 87.

¹⁴⁸ See An Act regulating the Taking of Oysters in the Waters of Long Island Sound, and within the Towns of Milford and Stratford, 1881 Conn. Pub. Acts 56; An Act relating to Oysters in the towns of Guilford and Madison, 1881 Conn. Pub. Acts 64; *Our Shell Fisheries: Shall They Be Leased Or Sold?*, *supra* note 129; *Town Meeting in Guilford*, *supra* note 102.

harvesters and large, efficient cultivators that had been evolving for decades before, both in law and on the water.

V. 1881 and onward: The surprising persistence of the bifurcated system

A. Disadvantages of the natural bed fishery

The reforms of 1881 may have ratified the legal privileges of the natural growers, but it was far from clear whether the natural beds could last much longer. Indeed, there was considerable evidence to suggest that large-scale industrialized cultivators would soon supplant the growers, both politically and economically.

First, natural growth oystering was demonstrably inefficient, indicating that the public beds of the late 1800s could go the way of those picked over during the 1700s and early 1800s.¹⁴⁹ The natural beds were formally an open-access resource, open to any Connecticut resident with a sailboat and a hand dredge,¹⁵⁰ and they exhibited many of the signs of diluted conservation incentives, overharvesting, and degradation typically associated with such resources. The *Sea World* noted in 1880 that “the oysters on well known natural beds are kept used up too closely to grow to any valuable size, except for seed. If a new bed is discovered it is soon cleaned and brought to the condition of the older ones.”¹⁵¹ If the claims of contemporary cultivators are to be believed, the natural

¹⁴⁹ Modern scholars have empirically demonstrated that across states, public beds are less efficient at producing oysters than private beds. *See, e.g.*, Richard J. Agnello & Lawrence P. Donnelley, *Property Rights and Efficiency in the Oyster Industry*, 18 J.L. & ECON. 521 (1975).

¹⁵⁰ *See* 1882 REPORT, *supra* note 82, at 70 (“The natural beds are by law common property, and are free to all.”).

¹⁵¹ *Change in Oyster Laws*, *supra* note 97. In the *Hartford Courant*, Henry Rowe wrote that

. . . the oystermen of Norwalk, Darien and other towns (not the oyster growers) have dredged some of the public beds so persistently that the oysters are caught before they are the size of the thumb-nail, and as one of them testified before the

beds were also badly infested with starfish.¹⁵² In their 1884 annual report, the state commissioners described the this problem as a classic tragedy of the commons:

The natural or public beds are not so carefully and thoroughly worked as the private beds are, and no systematic efforts are made to destroy the starfish In the free scramble for the oysters, [the natural growers] have no thought but “to keep what they get and catch what they can,” and it would be lost time to them to dredge for stars while others dredge for oysters The Commissioners . . . would [not] give the impression that the natural-bed oystermen as a class are any worse than the same number of men in any other occupation. The Commissioners have found them, with few exceptions, honest, industrious and well disposed. No one can be reasonably blamed for omitting to do that which is the joint duty of all – for failing to coöperate where coöperation is impossible [sic].¹⁵³

The commissioners also noted numerous reports that natural growers threw starfish caught in dredges back onto the beds, rather than destroying them.¹⁵⁴ Large-scale cultivators, on the other hand, employed boats exclusively to remove starfish from their properties, using “mops” dragged along the seabed.¹⁵⁵

Second, even if the natural beds could last, it was far from clear that they would support a substantial fishery in their degraded state, especially given competition from efficient cultivators. One pro-steam observer wrote in the early 1880s that already, “[although] [t]here are still a few individuals of the old school who are toiling along in

fisheries committee, he thought it “lucky to get enough big oysters for a stew” in all day.

Henry C. Rowe, *A Great Revolution*, HARTFORD COURANT, Apr. 1, 1884, at 1-2 (available via ProQuest Historical Newspapers).

¹⁵² See, e.g., Henry C. Rowe, *Rowe Refutes Bell: The State Association Vindicated*, NEW HAVEN PALLADIUM, Mar. 24, 1884 (on file in the Rowe Scrapbook, White Library); *The Foe of the Oyster: The Fish Commission to Study the Starfish Problem*, N.Y. TIMES, Jul. 15, 1889, at 3 (available via ProQuest Historical Newspapers).

¹⁵³ 3 COMM’RS OF SHELL-FISHERIES OF CONN. REP. 13 (1884) [hereinafter 1884 REPORT].

¹⁵⁴ See *id.* at 12-13; see also *The Oysters’ Enemy*, *supra* note 21 (corroborating these reports).

¹⁵⁵ See, e.g., 1884 REPORT, *supra* note 153, at 12; *The Hungry Starfish*, N.Y. TIMES, June 11, 1886, at 1 (available via ProQuest Historical Newspapers).

the manner their fathers did . . . happily these parties are small in number and steadily decreasing. The old methods cannot compete in the market . . .”¹⁵⁶ By contrast, large-scale cultivation was expanding rapidly. Soon after passage of the commissioner’s bill, the state commission had already received applications for 18,300 acres of deep-water ground,¹⁵⁷ and enclosure continued rapidly over the following years.¹⁵⁸ Cultivation was profitable during this period.¹⁵⁹ Nor, apparently, did the large cultivators depend on the natural beds for their success. In 1882, the state commissioners reported that “. . . already some of the deep-water growers claim that their dependence on natural beds for spat or seed becomes less every year, and that the time rapidly approaches when all the beds will be self-supporting.”¹⁶⁰ In 1884, Rowe boasted that his operation was entirely self-sustaining.¹⁶¹

Third, the natural growers profoundly annoyed the wealthier and better-organized large-scale cultivators, who were understandably eager to eliminate the separate natural bed regime entirely. Cultivators blamed the natural beds for breeding hordes of starfish that then came onto private grounds. In a front-page editorial in the

¹⁵⁶ *Developing the Oyster Industry*, c. 1880 (otherwise unidentified newspaper clipping) (on file in the Rowe Scrapbook, White Library).

¹⁵⁷ Unidentified newspaper clipping discussing pace of applications to state commission (c. 1881) (on file in the Rowe Scrapbook, White Library). In addition, the town committees granted over 20,000 acres during the two-week period after the “commissioner’s bill” had been passed but before it entered into effect. Prominent oyster growers, including Henry Rowe, acquired large tracts at low prices in this way. *See* 1882 REPORT, *supra* note 82, at 47-52.

¹⁵⁸ The extent of privately held oyster ground peaked in 1888 at 86,761 acres. By 1900, the total had declined to 63,850 acres, in part because some of the granted land had turned out to be unsuitable for cultivation. *See* Sweet, *supra* note 19, at 599.

¹⁵⁹ *See* Henry C. Rowe, *Destroying a Food Producing Industry: Is It Sound Public Policy?*, 46 TRANSACTIONS AM. FISHERIES SOC. 62, 64.

¹⁶⁰ 1882 REPORT, *supra* note 82, at 70.

¹⁶¹ *See* Rowe, *supra* note 151.

Hartford Courant, Henry Rowe went so far as to declare the large natural bed off of Stratford and Bridgeport (commonly known as the Bridgeport bed) a “public nuisance.”¹⁶² Cultivators also blamed natural growers for theft, and indeed, some growers did steal from private grounds.¹⁶³ In 1789, the *Sea World* reported:

Captain Caleb Luddington thinks if there was a public oyster park in New Haven harbor it would take forty policemen to prevent depredators from stealing off the private beds. . . . It was argued by those owning grounds in New Haven and other harbors that, to set out the channels for common beds would drive the whole business away. The difficulties of protecting their beds would be so multiplied that they would be forced to give up the business.¹⁶⁴

The large-scale cultivators were well organized and highly motivated. By 1881 they had formed an official Oyster Growers’ Association.¹⁶⁵ They were energetic advocates both in Hartford and in the press,¹⁶⁶ and entertained legislators, regulators, and other notables with steamer cruises in New Haven harbor.¹⁶⁷ The natural growers were a ragtag bunch in comparison. Although more numerous, they lacked wealth and social

¹⁶² *Id.*; see also 1884 REPORT, *supra* note 153, at 11-12 (another oysterman’s claims that the natural bed harbored starfish).

¹⁶³ See KOCHISS, *supra* note 4, at 156 (discussing “poaching raids” and nighttime theft by natural growers); *Oyster War Opens at Bridgeport: Eight Oyster Sloops Seized by Deputy Sheriff*, HARTFORD COURANT, May 22, 1906, at 11 (available via ProQuest Historical Newspapers).

¹⁶⁴ *Notes from the Commission*, *supra* note 96; see also Probable *Sea World* Article, *supra* note 21 (“Geo. N. Townsend says, if the harbor of New Haven, or any considerable portion of it, was to be designated as a natural oyster bed . . . he would not attempt to raise another oyster on his private beds . . .”). *But see* Audio tape: Interview with John Thomas by John Kochiss, OH 70-3 (Apr. 15, 1970) (on file with the G.W. Blunt White Library, Mystic Seaport) (discussing the growers’ reputation for thievery, but claiming that “the dealers stole off the natural growers more than the natural growers stole.”).

¹⁶⁵ See 1882 REPORT, *supra* note 82, at 54 (describing “[t]he Oyster Growers’ Association, comprising most of the prominent men in deep-water cultivation . . .”).

¹⁶⁶ See, e.g., *Monopoly of the Oyster Grounds*, *supra* note 95; *Oyster Legislation*, *supra* note 115; Rowe, *supra* note 151.

¹⁶⁷ See, e.g., *Oysters as a Crop*, HARTFORD COURANT, Sept. 2, 1885, at 1 (available via ProQuest Historical Newspapers); Untitled *Bridgeport Farmer* Article, *supra* note 82.

standing, and each one individually had far less at stake than the large cultivators. Indeed, many, if not most, were part-time or casual oystermen. John Kochiss writes:

At the beginning of the oyster season when the pickings were best, Bridgeport factory and office workers left their work on vacation time for “a bit of fresh air and a quick buck.” . . . Tradesmen – in particular carpenters and mechanics who did not have work all the time – oystered between jobs Though the incentive to oyster was great, the part-timers sometimes showed little interest in improving or changing conditions for natural growers.¹⁶⁸

B. The survival of the natural bed fishery

By the 1880s, then, there were many indications that the natural bed fishery was headed into oblivion. Yet despite apparently overwhelming odds, the natural beds and their corresponding property regime survived over the following decades. To be sure, private grounds produced the great majority of Connecticut’s oysters into the twentieth century. The natural beds were also less productive than the private beds acre for acre.¹⁶⁹ Yet in 1887, 1888, and 1889, they produced fifteen, twelve, and five percent of the total volume of oysters harvested in Connecticut, respectively.¹⁷⁰ The Bridgeport bed alone

¹⁶⁸ See KOCHISS, *supra* note 4, at 161; *see also* Collins, *supra* note 2, at 463 (“[S]ome of the men do not engage exclusively in the oyster trade, but devote a portion of their time to fishing, farming, or some other occupation.”). In addition to compromising the natural growers’ potential political power, the part-timers would have had less of an incentive to fish responsibly.

¹⁶⁹ Natural beds encompassed 19,911 acres, while private cultivators held 77,008 acres. Collins, *supra* note 2, at 472, 474.

¹⁷⁰ These percentages are derived from Collins, *supra* note 2, at 490-491. Specifically, in 1887 the natural beds produced 242,800 bushels of oysters, out of a state total of 1,572,670 bushels; in 1888, they produced 184,910 out of a state total of 1,509,867; and in 1889, 73,850 out of 1,485,861. However, because the oysters harvested from the natural beds were small, they were less valuable than cultivators’ oysters, so the proportion of the value of the fishery created by natural beds was consistently lower than their share of biological productivity. In 1887, the natural beds accounted for six percent (\$64,255/\$1,035,783) of total sales of Connecticut oysters; in 1888, six percent (\$58,515/\$1,059,704); and in 1889, three percent (\$31,305/\$1,055,807). *Id.*

was capable of producing over 100,000 of seed oysters in a good year,¹⁷¹ and in 1899, it yielded 400,000 bushels – roughly ten percent of the state’s total yield.¹⁷² The natural beds also continued to provide hundreds of jobs. In 1890, over two hundred boats, each with two or three crewmembers, worked the Bridgeport bed; notably, state statistics indicated that 1,024 men were employed in the fishery as a whole the prior year.¹⁷³ In 1903, a bad year, the *Hartford Courant* reported that “the interests of about 600 men [were] unfavorably affected” by adverse conditions on the bed.¹⁷⁴ In 1904, a better year, the *New York Tribune* wrote of the same bed:

. . . [T]here is a fleet of at least two hundred boats working each day that the weather permits. There are men working on the beds this fall who have worked there every year for a quarter of a century, and there are mere boys doing their first “stunt” on the beds, but they are all making “big money.”¹⁷⁵

Just as the natural bed fishery itself persisted, so too did its legal framework. The bifurcated system of the 1881 reforms and the ban on steam on the natural beds remained in place well into the twentieth century. The state commissioners’ cartographical and adjudicatory efforts over the following years maintained a large amount of land as “natural,” and in some cases, even revoked land previously granted to cultivators

¹⁷¹ Collins, *supra* note 2, at 491.

¹⁷² See GALPIN, *supra* note 4, at 30. 1899 was the year of the “great set.” The Connecticut fishery produced roughly 4,000,000 bushels that year. *Id.*

¹⁷³ See 9 COMM’RS OF SHELL-FISHERIES OF CONN. REP. 14 (1891); *The Enemy of the Oyster: A Successful Device for Capturing and Destroying the Starfish*, BALTIMORE SUN, Dec. 23, 1890, at 3 (available via ProQuest Historical Newspapers) [hereinafter *The Enemy of the Oyster*].

¹⁷⁴ *No Oyster Set About Bridgeport*, HARTFORD COURANT, Aug. 24, 1903, at 9 (available via ProQuest Historical Newspapers).

¹⁷⁵ *Oyster Dredging*, *supra* note 1.

(including Rowe) and declared it public.¹⁷⁶ Natural growers continued to fight, both before the state commission and in court, to sustain and expand the area open to the public, and they sometimes prevailed.¹⁷⁷ On the whole, however, the bifurcated property system appears to have earned the grudging acceptance of both sides of the industry. The *Baltimore Sun* reported that “[w]hile there are many differences of opinion . . . the general feeling is one of satisfaction with the present law.”¹⁷⁸

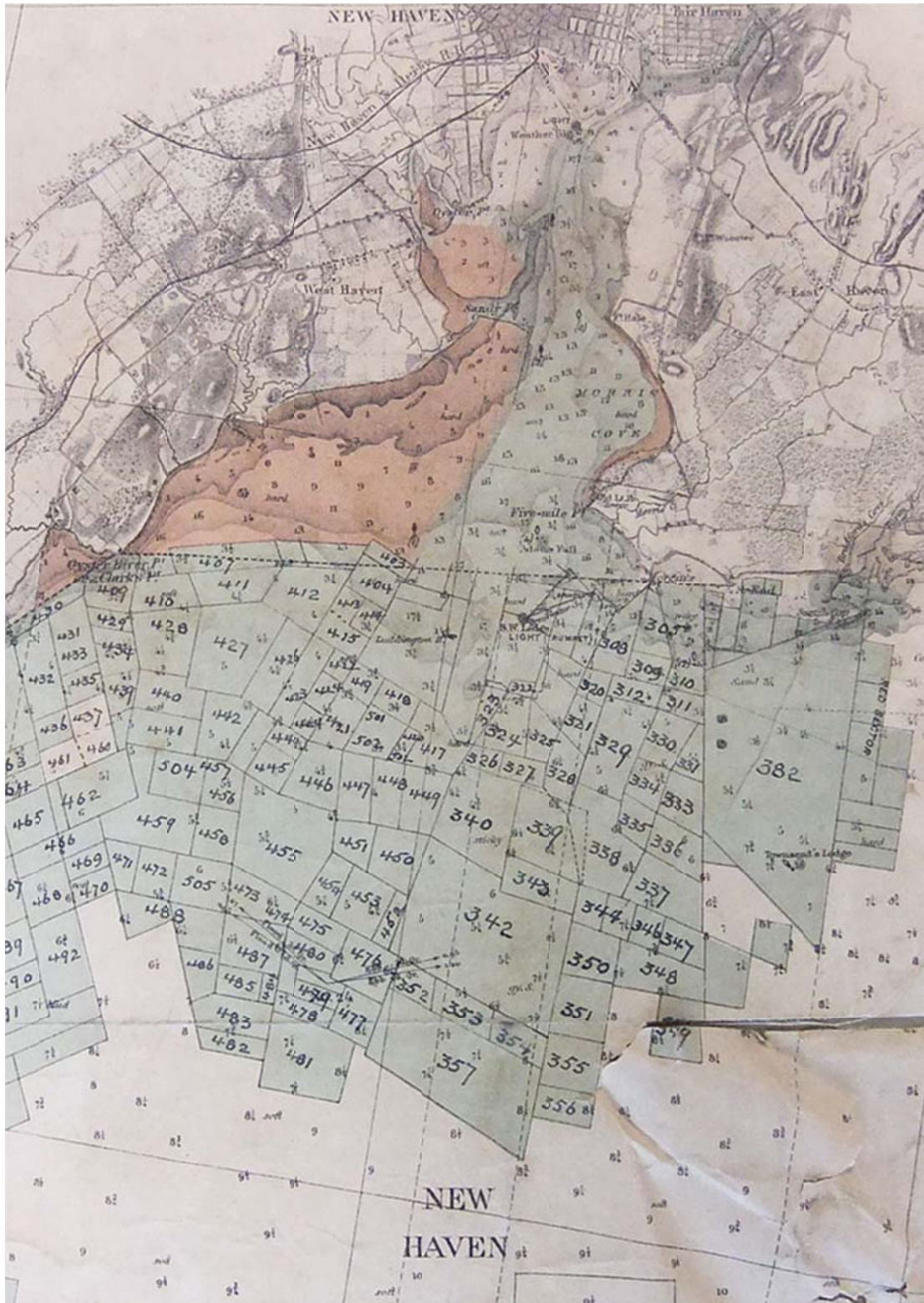
¹⁷⁶ See, e.g., *The Oyster Commission*, NEW HAVEN J.-COURIER, Sept. 12, 1882 (on file in the Rowe Scrapbook, White Library); *The Stratford Grounds: A New Boundary Fixed for the Natural Oyster Beds*, NEW HAVEN EVENING REGISTER, Aug. 23, 1882 (on file in the Rowe Scrapbook, White Library) (“Mr. Rowe said this afternoon that although he suffered severely he should accept the decision if others did.”).

¹⁷⁷ See, e.g., *Appeal of Keister*, 92 A. 744 (Conn. 1914); *State v. Bassett*, 29 A. 471 (Conn. 1894); *State v. Nash*, 25 A. 451 (Conn. 1892); *In re Application of the Oyster-Ground Comm. of Clinton*, 52 Conn. 5 (Conn. 1884); *May Work Natural Oyster Beds: A Decision of a Connecticut Court Which Has Brought Joy to Poor Oystermen on Long Island Sound*, N.Y. TIMES, Nov. 28, 1894, at 3 (available via ProQuest Historical Newspapers) [hereinafter *May Work Natural Oyster Beds*]; *Natural Oyster Beds: Attorney-General Phelps Advises the Shell-Fish Commissioners*, HARTFORD COURANT, Nov. 9, 1899, at 7 (available via ProQuest Historical Newspapers).

¹⁷⁸ *Oyster Farming: Results Accomplished by the Connecticut Laws*, BALTIMORE SUN, Jul. 23, 1892, at 8 (available via ProQuest Historical Newspapers); see also *Long Island Oyster Beds: Development of the Connecticut Planting Industry – Enemies of the Oyster*, BALTIMORE SUN, Aug. 2, 1886, at 5 (available via ProQuest Historical Newspapers) [hereinafter *Long Island Oyster Beds*] (“If the ‘natural growers’ of the Chesapeake bay and its tributaries would look into the Connecticut system they would find it to their personal advantage to have it introduced into the Chesapeake, just as the ‘natural growers’ here have found it to their advantage.”).



Detail from an 1889 map of Connecticut oyster grounds, showing natural beds (red) and private tracts (green) off the coast of Bridgeport and Stratford. The famous Bridgeport natural bed is the trapezoidal area at top center. On file at the G.W. Blunt White Library, Mystic Seaport.



Detail from an 1889 map of Connecticut oyster grounds, showing natural beds (red) and private tracts (green) outside New Haven harbor. On file at the G.W. Blunt White Library, Mystic Seaport.

C. Natural beds as anomaly

Harold Demsetz has argued that property rights tend to change according to “the emergence of new or different beneficial and harmful effects” produced by those rights. In brief, when changes in the circumstances of production make it more profitable to society as a whole to establish a new property regime, such a regime will tend to emerge, whether through legislation, judicial decisions, or the evolution of social mores.¹⁷⁹ Demsetz’s case in point is the early Canadian fur trade, where the rising value of furs and the consequent expansion of hunting increased externalities to common hunting ground ownership and prompted a move toward enclosure.¹⁸⁰

Demsetz’s framework substantially illuminates the general evolution of property rights in the Connecticut oyster fishery. The universal right to unrestricted oystering was first restricted when increasing demand and limited natural supply caused depletion, thereby raising the costs of open access. Later, the property regime shifted toward enclosure, as booming demand and the advent of rail increased the value of the resource and new technologies (first planting, then cultivation, and finally capital-intensive deep-water cultivation) rendered private ownership, with the long-term investment and economies of scale it enabled, uniquely beneficial. Other revisions increased the

¹⁷⁹ See Harold Demsetz, *Toward a Theory of Property Rights*, 57 AM. ECON. REV. (PAPERS & PROC.) 347, 350 (1967); Thomas W. Merrill, *Introduction: The Demsetz Thesis and the Evolution of Property Rights*, 31 J. LEG. STUD. S331, S331 (2002).

¹⁸⁰ See Demsetz, *supra* note 179, at 351-52 (“The property right system began to change, and it changed specifically in the direction required to take account of the economic effects made important by the fur trade. . . . [T]he fur trade made it economic to encouraged the husbanding of fur-bearing animals. Husbanding requires the ability to prevent poaching and this, in turn, suggests that socioeconomic changes in property in hunting land will take place.”); see also GARY D. LIBECAP, *CONTRACTING FOR PROPERTY RIGHTS* 16 (1989) (articulating several factors that may alter the balance of benefits and costs of a given property arrangement and precipitate a change in property rights).

efficiency of the property system and the benefits of private ownership by simplifying and partially centralizing its administration, removing scale restrictions, and better establishing boundaries. Finally, the introduction of steam power prompted additional changes in the form of legislation that protected the right to steam.

At first glance, the persistence of the natural bed regime seems anomalous within this general narrative. Under this regime, valuable beds – indeed, those most suited of all to oystering, judging from the vast numbers of bivalves that naturally grew on them – were subjected to a common property system that reduced productivity and promoted destructive habits among oystermen. Despite its obvious disadvantages, this system persisted throughout economic and technological disruptions that caused major changes in other areas of the industry. At the very least, the natural bed regime seems to contradict Demsetz’s general framework. Here, apparently, was a cost-inflicting, benefit-eliminating property rights arrangement that stubbornly resisted evolving with the times.

D. Explaining the persistence of the natural beds

In fact, a closer look at the Connecticut oyster industry reveals distinctive biological, social, and economic dynamics that both increased the potential cost of enclosure and mitigated the cost of common ownership. In this way, the survival of the natural growers and their unique system can be reconciled with Demsetz’s general cost-benefit approach.

1. The social and economic characteristics of the oyster fishery exacerbated the potential cost of enclosure

Numerous theorists have invoked the concept of path dependence to explain the persistence of systems.¹⁸¹ Path dependence theory claims that initial conditions strongly shape final outcomes by encouraging fixed investment in a certain pattern. The initial conditions then ossify, as changing them would require the costly removal or revision of the investments that were built to suit them. In its most literal application, for example, path dependence explains the persistence of early roads. Once a road is laid out, society improves it, builds along it, and settles near it. Any attempt at revision must overturn physical and social arrangements that depend on the road's existing form and overcome the objections of the homeowners and businesses along the road. Eliminating prior development and laying a new path may well be costlier than the new path would be beneficial.¹⁸²

The concept of path dependence helps illuminate the persistence of the natural beds. The early conditions of the Connecticut oyster industry entailed relatively open access to certain preexisting beds – that is, the natural beds – with limited government regulation. Over the decades and centuries, Connecticut oystermen became accustomed to this state of affairs. By the 19th century, it had become the “people’s right[.]”¹⁸³ and the basis for a social and economic system involving hundreds of capital-poor oystermen,

¹⁸¹ See, e.g., Mark J. Roe, *Chaos and Evolution in Law and Economics*, 109 HARV. L. REV. 641, 643-52 (1996).

¹⁸² *Id.* at 643-44.

¹⁸³ See *Town Meeting in Guilford*, *supra* note 102.

who were understandably attached to the status quo. To end the natural bed system would have wrenched them from a way of life, with serious utilitarian consequences.¹⁸⁴

In turn, revoking the natural beds' protection would necessarily have entailed a process that would have been quite costly in its own right. Because of the historically open access nature of the resource, a large number of parties were directly interested in the beds, increasing transaction costs to any potential private negotiation and giving anti-enclosure forces political clout.¹⁸⁵ Indeed, although many growers were minimally invested part-timers, sheer numbers ensured that any threat to the public beds would attract significant interest, and allowed the growers to compete politically with the well-connected large cultivators. In 1891, the *New York Times*, in a report on the formation of the Natural Growers' Association, claimed (perhaps hyperbolically) that the new group "is destined in all probability to hold the balance of power The vote of the men employed on the oyster boats along the Connecticut shore is always considered at election time."¹⁸⁶

¹⁸⁴ Cf. George D. Santopietro & Leonard A. Shabman, *Can Privatization Be Inefficient?: The Case of the Chesapeake Bay Oyster Fishery*, 26 J. ECON. ISSUES 407, 413-15 (1992) (arguing that distributional, social, and quality-of-life characteristics of the Chesapeake natural bed system ought to be taken into account in evaluating that system's efficiency and desirability).

¹⁸⁵ By the same logic, the fact that other beds (namely, the planting and cultivation grounds in town waters and the deep-water beds) had never been extensively cultivated likely reduced opposition to the enclosure of those beds, as there were no entrenched communities to uproot.

¹⁸⁶ *Oystermen Will Vote: A Factor of Importance in the Coming Connecticut Election*, N.Y. TIMES, Nov. 1, 1891, at 9 (available via ProQuest Historical Newspapers). The article also claimed that "[i]t is an open secret that the vote of the oystermen last year went a great way toward electing R. E. De Forest Congressman from this district." *Id.* It estimated the number of Connecticut oystermen at 3,000, which seems rather high. Cf. *supra* note 173 and accompanying text (1,024 men employed in the industry).

Given Connecticut's long history of oystering, an even greater number of voters were indirectly interested. The natural beds had shaped popular social and ideological preferences in addition to legal and political ones. To a considerable degree, the Connecticut electorate preferred and was accustomed to the open-access system, and distrusted the private ownership system that sought to supplant it – so much so that in 1884, after the legal regime was more or less settled, Henry Rowe was still denouncing “. . . the prejudices of those whose fathers and grandfathers used to go down to the shore and go oystering and put a bushel or two in the cellar.”¹⁸⁷

The ideological currents of the time heightened popular support for the natural growers and thereby reinforced the effects of social and ideological path dependence. The Connecticut public of the late 1800s was wary of monopolies and inclined to support the humble but independent workingman.¹⁸⁸ Especially toward the turn of the century, local newspapers frequently reported on schemes to form “oyster combines” and oyster ground monopolies,¹⁸⁹ and monopolization concerns were prominent in the legislative

¹⁸⁷ Rowe, *supra* note 151.

¹⁸⁸ See generally ERIC FONER, *FREE SOIL, FREE LABOR, FREE MEN: THE IDEOLOGY OF THE REPUBLICAN PARTY BEFORE THE CIVIL WAR 11-18* (1970) (discussing the Republican party's ideological affinity toward hard work and small-scale entrepreneurship during the mid-1800s); *May Work Natural Oyster Beds*, *supra* note 177 (“There is great rejoicing among the oystermen along the Sound over the decision of Judge Downs of Stamford The decision is in favor of the hundreds of sturdy oystermen who own little sloops, and make a living by hard work spent on the natural oyster beds along the Sound. It is also a rebuke to those who have an idea that the waters of Long Island Sound belong to them, and establishes the fact that people cannot be deprived of their rights of gaining a livelihood.”).

¹⁸⁹ See, e.g., *Big Oyster Syndicate: New York Men to Control Many Acres in the Sound*, HARTFORD COURANT, Jan. 19, 1898, at 11 (available via ProQuest Historical Newspapers); *Talk of Oyster Syndicate*, HARTFORD COURANT, Nov. 8, 1898, at 11 (available via ProQuest Historical Newspapers); *Oyster Syndicate Collapses*, HARTFORD COURANT, June 16, 1900, at 2 (available via ProQuest Historical Newspapers). Few, if any, of these schemes appear to have been successful.

debates that gave rise to the reforms of 1881.¹⁹⁰ In a rapidly modernizing society, the natural growther must have seemed a welcome remnant of an earlier time. In 1883, a writer for the *Bridgeport Standard* waxed eloquent about the natural beds:

Here high and low, rich and poor may plant at leisure and catch at pleasure all the oysters needed, with no private owners to dictate or stilted rules of a commission to restrict. On these beds the casual oysterman can rise in his majesty and assert with none to dispute, “I am monarch of all I survey.”¹⁹¹

In addition to social and ideological path dependence, economic path dependence affected the natural bed regime and the industry in which it was embedded. Over the course of the 1800s, as Connecticut oystermen embraced planting and cultivation, the natural beds became thoroughly integrated into the regional oyster economy. Natural bed seed was an important input into local oyster growing. Indeed, transplantation of natural bed seed, along with full-fledged cultivation (i.e., oyster growing using shells to attract spat) and the use of seed from both private beds, largely replaced the planting of Southern oysters by late in the century.¹⁹² “With [the] rapid growth of the market,” the state commissioners commented in 1882, “there was increasing demand for native oysters; which stimulated further planting of seed from the natural beds. So that while the cultivation of Virginia oysters has materially fallen off that of Connecticut natives has largely increased, and the latter seem destined to drive all others from the Sound.”¹⁹³

¹⁹⁰ See *supra* Section IV.C.

¹⁹¹ *The Oysters’ Enemy*, *supra* note 21. The historic privileges of the poor and indigent under Connecticut’s natural bed regulations likely reinforced the public’s association of those beds with the common man. See *supra*.

¹⁹² See KOCHISS, *supra* note 4, at 154 (noting that most Connecticut seed was produced on private grounds, but that “much of the best came from the state’s and towns’ natural beds.”); Collins, *supra* note 2, at 478-79 (describing private seed cultivators); Sweet, *supra* note 19, at 597.

¹⁹³ 1882 REPORT, *supra* note 82, at 61.

Indeed, by the late 1880s Chesapeake seed provided less than ten percent of the state's total oyster harvest.¹⁹⁴

Unlike Chesapeake seed, native seed was cheap and convenient.¹⁹⁵ It transplanted well, and local growers preferred it to seed from further afield.¹⁹⁶ Although Henry Rowe claimed to be independent of seed from the natural beds, the fact remains that the natural growers sold great quantities of seed to nearby cultivators, as well as out-of-state oyster growers, into the twentieth century.¹⁹⁷ In 1904, a good year, the *New York Times* reported:

[The] prolific set will mean much to the oystermen of the Long Island shore, who depend so largely for their seed oysters on the set on this coast in the Rhode Island waters. How much they will have to buy will depend largely on the set that has been made in the great natural bed off Bridgeport It is from these freebooters of the Sound [i.e., the natural growers] that the Long Island growers will buy seed in great quantities, and at low prices¹⁹⁸

¹⁹⁴ Collins, *supra* note 2, at 489-490.

¹⁹⁵ See *Long Island Oyster Beds*, *supra* note 178.

¹⁹⁶ See, e.g., *id.*; *Fair Haven Oyster Trade*, *supra* note 50 (native seed was “said to make the best oysters in the country”); *For Four Days: Adjournment of the Legislature*, NEW HAVEN PALLADIUM, Mar. 13, 1883 (on file in the Rowe Scrapbook, White Library); Audio tape: Interview with James Fletcher Lewis by John Kochiss, OH 68-3 (Mar. 6, 1968) (on file with the G.W. Blunt White Library, Mystic Seaport) [hereinafter Lewis Interview] (discussing the superior form of natural bed oysters).

¹⁹⁷ See, e.g., *Long Island Oyster Beds*, *supra* note 178; *The Enemy of the Oyster*, *supra* note 173; Unidentified newspaper clipping discussing export of natural bed seed (c. 1882) (on file in the Rowe Scrapbook, White Library).

¹⁹⁸ *Oystermen Rejoice in the Season's Big "Set": Biggest Crop of Baby Bivalves for Four Years*, N.Y. TIMES, Aug. 28, 1903, at FS4 (available via ProQuest Historical Newspapers). Another account claims that the Bridgeport bed produced 500,000 bushels of seed in 1880, and that some ninety percent of this seed was planted in Connecticut waters. The 500,000 bushels figure seems suspect, however. 1881 history of Bridgeport bed

Many small-scale oystermen used seed from the natural beds to transition into part-time or full-time cultivation.¹⁹⁹ “The catch on Fridays [is] generally carried home on Saturdays and planted on their own grounds,” the *New Haven Palladium* reported in 1883, “while the catch during the balance of the week was sold to boatmen who came around for the purpose.”²⁰⁰ Meanwhile, various mechanisms had emerged by which natural bed seed entered into the broader oyster economy. “Buy boats” anchored near the beds and took on oysters from the natural growers, who queued in their sloops alongside the buy boats.²⁰¹ Other natural bed oystermen delivered directly to oyster houses along the shore. Seed buyers bid against one another, and some oyster houses had exclusive contracts with particular oystermen.²⁰²

In this way, the natural beds, with their cheap, abundant, and high-quality seed, came to play an important enabling role in the oyster industry and the livelihoods of many beyond the grower community. To be sure, if the natural beds were enclosed, other sources likely would have emerged to meet demand, and these other sources might well have operated more efficiently than the natural bed system. Nonetheless, replacing the established, smoothly functioning system by which growers obtained seed from the natural beds would have disrupted the operations of businesses throughout and beyond Connecticut, and it is uncertain whether the system that replaced it would have been equally advantageous for growers. These potential costs further weighed against substantial revision of the bifurcated property regime.

¹⁹⁹ See, e.g., KOCHISS, *supra* note 4, at 159; Collins, *supra* note 2, at 463.

²⁰⁰ *For Four Days: Adjournment of the Legislature*, *supra* note 196.

²⁰¹ See KOCHISS, *supra* note 4, at 167; Lewis Interview, *supra* note 196 (describing queues of ten to fifteen boats).

²⁰² See KOCHISS, *supra* note 4, at 167-168.

2. The social and biological characteristics of the oyster fishery mitigated the inefficiencies of common ownership

At first glance, Connecticut's natural bed regime appears to have been an archetypal example of an inefficient open-access system. In fact, however, the natural bed regime possessed several mechanisms that reduced or compensated for the inefficiencies of public ownership. These mechanisms allowed the natural bed fishery to survive, and occasionally even thrive, well into the twentieth century.

First, and most obviously, the natural beds were not a true open access resource under law, and had not been so for centuries. As described above, natural bed regulation was omnipresent. The most consequential regulation was the steamboat ban, but lesser laws, such as the seasonal restriction, the dredge weight restriction, the ban on oystering by out-of-state residents, and catch limits imposed on specific areas also imposed barriers to entry and slowed exploitation.²⁰³ In part because of these restrictions, the natural beds were harvested intensively, but irregularly, and some of their reproductive potential was thereby preserved.²⁰⁴ In turn, although regulations could not totally prevent the degradation of the resource, they helped save it from destruction.

Second, numerous extralegal mechanisms dissuaded potential entrants. Although the natural beds were legally open to all Connecticut residents, it seems that oystermen tended to stay within their "turf," and in practice, the natural growers of the late 1800s, like Fair Haven oystermen earlier in the century,²⁰⁵ seem to have had their own ways of

²⁰³ See *supra* Sections IV.B-C.

²⁰⁴ See *supra* note 153 and accompanying text; see also *Oyster Dredging*, *supra* note 1 (describing sailboats clustering on the "paying drifts").

²⁰⁵ See *supra* notes 51-52 and accompanying text.

excluding outsiders.²⁰⁶ In 1890, after several lean years, the natural beds at the mouth of the Housatonic experienced an abundant set, attracting oystermen from further afield.

The *Hartford Courant* reported what happened next:

The invasion of the grounds by the outsider seemed to the small local fishermen little short of robbery. As the beds were natural beds the other parties had legal right of access to them, however, and the small fishermen could only protest and set forth their grievances. This they did, until all of the offending parties but one – Lorenzo Smith of New Haven – agreed to keep off the grounds.

Smith refused to enter into any compact, and as a result sometime between Saturday night and Sunday morning a fine sharpie of his was set afloat and her sails cut.²⁰⁷

Other means of exclusion were less violent. Because the natural beds were consistently submerged, it was possible for oystermen to “exclude” others from their preferred grounds through secrecy.²⁰⁸ They used triangulation and their own memories to designate particularly rich areas within the natural beds. The *New York Tribune* explained:

The water out in the Sound all looks alike, and once an oysterman strikes a fertile spot for dredging he does not like to leave it till he has it worked out. It is impossible to mark the spot by buoys, for they would point out to the other oystermen the location of the paying bed. So the crafty oysterman strikes upon the ranges to fix his find.

²⁰⁶ Cf. JAMES M. ACHESON, *THE LOBSTER GANGS OF MAINE* (1988) (describing self-help exclusion measures in the Maine lobster fishery). As a practical matter, the sail-only law also served as an exclusion measure; without steam, it was more difficult to reach remote beds, especially in low-wind conditions.

²⁰⁷ *A Little Oyster War: The Quiet Serenity of Stratford and Milford Disturbed*, HARTFORD COURANT, Aug. 26, 1890, at 1 (available via ProQuest Historical Newspapers); see also *Oystermen at War: Bridgeport Fishers Take the Law Into Their Own Hands*, N.Y. TIMES, Aug. 27, 1890, at 1 (available via ProQuest Historical Newspapers) (reporting that Smith’s boat “mysteriously disappeared” and the sails of another boat were cut).

²⁰⁸ Cf. Daniel Fitzpatrick, *Evolution and Chaos in Property Rights Systems: The Third World Tragedy of Contested Access*, 115 YALE L.J. 996, 1017 (discussing resources for which “prohibitive costs [of enforcing the exclusion right] . . . arise from the nature of the resource itself.”)

Ranges are established in this way: When the oysterman finds a “snye,” as he calls a paying drift, he looks to the west and to the north for some objects on shore to fix the location of his “snye.”²⁰⁹

Moreover, although it took little financial capital to work the natural beds, harvesting oysters by sail was inherently complicated and demanding work. Natural bed oystermen had to be expert sailors, navigators, and fishermen, all at once.²¹⁰ Their work was taxing, and it took a toll on the body.²¹¹ Natural bed oystering, in short, was not a job for the faint of heart.²¹² This, too, reduced the number of potential entrants and helped contain the exploitation of the natural beds.

Finally, the oyster’s specific biological characteristics sustained the natural beds and their legal framework. Numerous scholars have noted that the costs and contours of property regimes are powerfully shaped by the nature of the resource being subjected to those regimes.²¹³ Connecticut’s natural bed system was no exception. Two of the oyster’s biological traits were especially important. First, young oysters are capable of being

²⁰⁹ *Oyster Dredging*, *supra* note 1.

²¹⁰ See, e.g., KOCHISS, *supra* note 4, at 159; *Oyster Dredging*, *supra* note 1. The need to gain experience and learn difficult skills may help explain why natural bed oystering was often a family trade. See, e.g., KOCHISS, *supra* note 4, at 159-61.

²¹¹ See, e.g., KOCHISS, *supra* note 4, at 157 (“Hard, honest work, in sun, rain and snow marked the life of a typical full-time natural growth oysterman. From fall to spring he pulled heavy dredges, tended sails, managed his boat, and delivered his cargo – always outside, exposed to the winds and waves of Long Island Sound.”); *Oyster Dredging*, *supra* note 1 (“There is hardly [a natural bed] oysterman who hasn’t a finger tied up with rags, because of the cuts he has received from handling the shells. Some of them have every finger tied up.”)

²¹² Cf. KOCHISS, *supra* note 4, at 161 (“Ash Bond, the well-known Bridgeport oysterman around the turn of the century, sometimes took on waterfront bums to get them off the docks, but they seldom lasted more than a day.”)

²¹³ See, e.g., Fitzpatrick, *supra* note 208, at 1017 (fish and bison); Amy Sinden, *The Tragedy of the Commons and the Myth of a Private Property Solution*, 78 U. COLO. L. REV. 533, 578 (2007) (water); cf. Robert C. Ellickson, *A Hypothesis of Wealth-Maximizing Norms: Evidence from the Whaling Industry*, 5 J. L. ECON & ORG. 83, 89-92 (1989) (historical differences in whaling property norms reflected biological differences between whale species).

transplanted. Because of this capability, and because surrounding planters needed a source of fertility, tiny oysters from the natural bed, which in other circumstances would be useless, were a valuable commodity in the Connecticut context. Indeed, as described above, over the years, local growers had come to incorporate and rely on natural bed seed; natural bed seed was interchangeable with or even superior to seed from other sources, and was a necessary input for many of Connecticut's oystermen.²¹⁴ The *Baltimore Sun* noted that Connecticut's legal framework "affords [growthers] an unlimited market for all the seed they can gather."²¹⁵ Because of the happy alignment of biological capability and economic context, the natural beds were able to provide an adequate livelihood for hundreds of growthers, despite the degradation of the beds.

Second, as discussed above, oysters reproduce by releasing spawn, which fertilize in the water, drift on the current, and eventually settle as spat.²¹⁶ Oyster growing therefore generates a significant positive externality, in that an oyster in one place can produce spat in another place. This "spat externality" was especially beneficial to the natural beds. Although these beds were overharvested, and therefore were less capable of independent regeneration, the intensive cultivation of oysters on private grounds all around them constantly replenished the natural beds. Indeed, because the natural beds were unusually suitable habitat for spat, they likely benefited from the spat externality even more than other grounds.

Various contemporary sources suggest that the spat externality was a major support for public beds. One observer wrote in 1879 that "[i]t is found, in oyster

²¹⁴ See *supra* subsection V.D.1.

²¹⁵ *Long Island Oyster Beds*, *supra* note 178.

²¹⁶ See *supra* section II.A.

cultivation, that what one man does for the improvement of his own grounds, and the protection of his own crops, greatly helps all the other oyster beds in the vicinity. Thus oyster cultivation helps to increase and enlarge so-called ‘natural beds.’”²¹⁷ And in 1892, the *Baltimore Sun* reported:

The great Stratford [Bridgeport] bed, which is one of the best in Connecticut, is surrounded on the east, south and west for many miles by cultivated farms . . . The spat floating from all these farms in all directions greatly benefits this natural bed, just as such accretions have benefited all the natural beds of Connecticut.²¹⁸

In this way, the biology of the oyster interacted with and sustained Connecticut’s bifurcated property regime.

VI. Conclusion

The golden years eventually drew to an end. Over the initial decades of the 20th century, pollution, pests, hurricanes, and bad spawning conditions wrought havoc on the Connecticut oyster industry, and its ranks dwindled.²¹⁹ But while it thrived, the industry was a major economic force and a national model. Its unique institutions, most notably its bifurcated property regime, embodied a contested but surprisingly durable compromise

²¹⁷ Probable *Sea World* Article, *supra* note 21; *see also Notes from the Commission*, *supra* note 96 (“It seems generally true that the people from the back country have a much better chance of securing a few bushels of oysters now near shore, because of the appropriation of waters by the cultivators. There are more oysters and more get within their reach, or where they can get them without a boat. They wash ashore from the beds, and the seed spreads to all the adjacent grounds.”).

²¹⁸ *Oyster Farming: Results Accomplished by the Connecticut Laws*, *supra* note 178. Notably, according to the state commissioners’ statistics, the acreage of major natural beds actually *expanded* during late 1800s. Between 1881 and 1894, the Bridgeport bed nearly tripled in size. *See KOCHISS*, *supra* note 4, at 155. Some of this expansion derived from redefinition of the boundaries of the bed, *see, e.g., The Stratford Grounds: A New Boundary Fixed for the Natural Oyster Beds*, *supra* note 176, but it is reasonable to assume that at least some was caused by accretion.

²¹⁹ *See GALPIN*, *supra* note 4, at 30-34.

between diverse interests and sectors of society, enabling prosperous and sufficiently peaceful coexistence for several decades.

The Connecticut oyster industry of the 1800s may be gone, but its history has much to tell us about property rights and their emergence. Broadly speaking, the form and development of its property system provide general support for Demsetz's cost-benefit argument. From early protections for planters of Chesapeake seed to the steam-friendly perpetual franchise regime of the 1881 reforms, Connecticut's laws evolved to enable the greater societal benefits that changing technologies and markets made possible. At the same time, they preserved a regulated commons regime in certain areas, thereby producing only modest inefficiencies and avoiding potentially severe social, political, and monetary costs.

The history of Connecticut oystering reminds us that the Demsetzian cost-benefit framework only holds insofar as "costs" and "benefits" are understood broadly. The calculus that shaped the oyster industry's property laws encompassed not only dollars and cents and bushels of oysters, but also transaction costs and ideological preferences, all of which were shaped by path dependence. The persistence of the natural beds also corroborates modern scholars' observations that non-privatized resources often benefit from mechanisms, both overt and subtle, that contain overexploitation.²²⁰ Indeed, formal and informal regulation pervaded the natural bed regime, and its particular economic and

²²⁰ See, e.g., ELINOR OSTROM, GOVERNING THE COMMONS 8-14 (1990) (arguing that "many solutions exist to cope with many different [commons] problems" and that privatization and centralized management do not exhaust the list of options observed in successful real-world production systems); Fikret Berkes, *Revising the Commons Paradigm*, 1 J. NAT. RESOURCES POL'Y RES. 261, 262-63 (2009) (observing that common property is often efficient, that different property regimes, including private property, state property, and common property, are viable in different settings, and that most real-world production systems display features of multiple regimes).

biological context helped reduce the inefficiencies of common ownership. Finally, Connecticut oystering reminds us that property law responds to the nature of owned resources. The unique biological characteristics of the oyster, when situated in a context of widespread cultivation, supported the natural beds, enabling them and the laws that shaped them to remain viable elements of a leading industry.