



USS Constitution
Museum

Food and Drink in the U.S. Navy, 1794 to 1820

Matthew Brenckle

A publication of the USS Constitution Museum, Boston

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Introduction

Napoleon, ever the grand tactician, recognized that “an army marches on its stomach.” Army rations may have seemed poor compensation for tired feet and aching limbs, but the Grande Armée’s commander knew that a soldier with a full belly stayed healthy and responded to orders with greater speed and contentment than one who felt the pangs of hunger. Just as an army’s morale depended on a full kettle on the campfire, so too did food and drink play an important role in shipboard discipline. In many respects, the quality and quantity of naval rations was even more important than it was in the land service. A soldier on campaign frequently supplemented his diet with food foraged from the local countryside. At sea, the sailor had no option but to eat what could be carried in the ship’s hold.

Although painfully aware of the inherent limitations of naval rations, sailors were quick to complain if their food did not live up to the promised quality or quantity. Among the first demands of the British mutineers at the Nore in 1797 was that “our provisions be raised to the weight of sixteen ounces to the pound, and of a better quality; and that our measures may be the same as used in the commercial trade of this country.”¹ American sailors were equally adamant about their food. Commodore William Bainbridge faced his crew’s discontent on USS *Constitution* while cruising off Brazil in December 1812. According to the ship’s surgeon, Dr. Amos Evans, “At dinner time... the men came on deck in a mutinous manner & complained to the Comm[o]d[ore] that the allowance of bread & water are not sufficient. He spoke in a resolute manner & ordered them below, after a short explanation.”² Bainbridge convinced the men that he had to reduce their rations to extend the ship’s cruising range. It was a reasonable request, but one that did not assuage the anger of men accustomed to eating well.

The specter of starvation loomed large in the minds of sailors, and many of their lurid yarns focused on ghost ships with depleted crews or cannibalistic castaways. To guard against such unfortunate outcomes, naval vessels typically stocked enough provisions for extended cruises. Even a small vessel with a small crew required a vast amount of food and drink, and in an age before industrial food production, it was no small feat to gather the requisite provisions. Consider the enormous quantities carried to sea by *Constitution* in 1813:

¹Quoted in Dudley Pope, *Life in Nelson’s Navy* (London: Unwin Hyman, Ltd., 1987), 150.

²Amos Evans, *Journal Kept on Board the Frigate Constitution, 1812* (Lincoln, Mass: William D. Sawtell, 1967), 472-473.

PROVISIONS LOAD-OUT FOR PROJECTED SIX-MONTH CRUISE, 1813		
	Full Loadout	On Sailing
Bread	84,456 lbs	76,234 lbs
Beef	57,700 lbs	51,969 lbs
Pork	50,600 lbs	39,840 lbs
Flour	12,544 lbs	12,544 lbs
Suet	None	None
Cheese	2,174 lbs	2,174 lbs
Butter	1,765.5 lbs	1,765.5 lbs
Raisins	360 lbs	360 lbs
Peas/Beans	1,932 gals	1,286.4 gals
Rice	1,657 gals	1,316.9 gals
Molasses	870 gals	870 gals
Vinegar	870 gals	870 gals
Crout [sic]	800 gals	800 gals
Spirits	9,546 gals	5,074.7 gals
Water	-	47,265 gals

3

³Court of Inquiry Record, Captain Charles Stewart, May 1814, RG45, M239, Roll 7, DNA.

Provisioning the Ship

The burden for supplying the navy’s ships fell squarely on the shoulders of navy agents at the various yards along the eastern seaboard. Civilians appointed to the post by the Secretary of the Navy, navy agents contracted for, or purchased outright, everything required to outfit a warship. Anything from buying barrels of nails from a local blacksmith to providing timber for a new 74-gun ship-of-the-line fell under their purview. But as agents’ receipt books testify, they spent most of their time trying to keep the ships on their stations supplied with high-quality food and drink. Whether they were at sea or not, crews had to eat, so even in port a ship required periodic deliveries of meat and vegetables, water and spirits. Logistical headaches aside, this was an expensive proposition. By 1816, even after prices had fallen from their wartime highs, the navy estimated it cost \$43,009.88 to provision a 44-gun frigate with a crew of 450 men for one year.⁴

When a seaman signed the shipping papers at a recruiter’s rendezvous, he was in effect agreeing to a contract. If he held up his end of the deal (that is, to serve the United States government for two years), he expected the government to do the same. No doubt each recruit eagerly scrutinized the amount of rations allowed each man per day. In 1813, the navy provided the following weekly menu:²

	Beef (lbs)	Pork (lbs)	Flour (lbs)	Suet (lbs)	Bread (oz)	Cheese (oz)	Butter (oz)	Peas (pts)	Rice (pts)	Molasses (pts)	Vinegar (pts)	Spirits (pts)
Sun	1 ¼		½	¼	14							½
Mon		1			14			½				½
Tues	1				14	2						½
Wed		1			14				½			½
Thurs	1 ¼		½	¼	14							½
Fri					14	4	2		½	½		½
Sat		1			14			½			½	½
Total	3 ½	3	1	½	98	6	2	1	1	½	½	3 ½

⁴“Estimate of Pay and Provisions for a 44-Gun Frigate, 1816,” American State Papers, vol. XIV, No. 135. An able seaman of the period made \$12 per month.

⁵ Janet Macdonald, *Feeding Nelson's Navy: The True Story of Food at Sea in the Georgian Era* (London: Chatham Publishing, 2004), 142. It should not be forgotten that this menu represents the ideal diet, and did not always reflect actual practice. Ships provisioning for sea in New England may have been issued foodstuffs different from those provisioned in the South. Likewise, ships on foreign stations or prolonged cruises would be forced to re-supply by purchasing whatever local foods might be available. *Constitution* frequently restocked her hold with provisions taken from captured merchant vessels. Assheton Humphreys remembered the joy felt at taking a deeply laden vessel a prize: "Upon overhauling the invoices of the schooner she proved to be a perfect slop ship and grocery store, very opportunely sent to furnish a good rig and bountiful cheer for christmas [sic], and never more opportune could Fortune have us played her very best freak -- there was lots of meats tongues, corn beef in rounds, smoked salmon, dried beef and codfish, tongues and rounds, fine apple cheeses & barrels of loaf sugar of the most superior kinds, pipes of best brandy, gin, and port wine, chests of imperial and gunpowder tea, barrells [sic] of flour, hams inferior not even to Smithfield virginia [sic], and besides various other inside linings, abundance of outward covering, for use and show, from inferior qualities, to the very best superfine. No loss of time occurred in gutting the schooner of these desirable valuables, more precious than the diamonds of Golconda, and ere the Christmas sun was low it shone no longer on the hull of the Lord Nelson, it had sunk below the wave to rest with its godfather." [Assheton Humphreys, *The USS Constitution's Finest Fight, 1815. The Journal of Acting Chaplain Assheton Humphreys, US Navy*. Tyrone G. Martin, ed. (Mount Pleasant, SC: The Nautical & Aviation Publishing Company of America, 2000)].

The Naval Diet for Sailors: Plentiful and Wholesome

To modern stomachs accustomed to processed food and exotic delicacies on a daily basis, this menu may seem uninspiring at best. But when placed in the context of early 19th century foodways, one apprehends that the navy diet was in fact excellent. For the majority of the American population, whole grains formed the staple of their diet. Corn and wheat grew nearly everywhere, and were easily stored over the winter. Fresh fruits and vegetables were available only in certain seasons, although they could be dried or salted to preserve them for future use. While it is true that the average rural American consumed more meat than his European counterpart, only in certain meat-raising regions of the country did the urban poor eat beef or pork on days beyond holidays or other special occasions. The navy diet, with its abundance of protein - not to mention the daily spirit ration - appealed immensely to lower-class recruits who were accustomed to seasonal fluctuations in food sources and the concomitant hunger they produced. While he enjoyed more meat than most landmen, a country-born sailor would have missed the dairy products like milk and soft cheese that comprised a large part of a farm family's diet.⁶ Reverend Walter Colton, chaplain on board USS *Congress*, best summed up the privations of the sailor's diet:

*He makes his meals from bread which the hammer can scarcely break, and from meat often as juiceless and dry as the bones which it feebly covers. The fresh products of the garden and the fruits of the field have all been left behind. As for a bowl of milk, which the child of the humblest cottager can bring to its lips, it is as much beyond his reach as the nectar which sparkled in the goblets of the fables divinities on Ida.*⁷

Even if the navy diet seemed monotonous, it at least provided the hard-working seaman with the energy to survive at sea. The 1813 menu ensured that each man

⁶ For a detailed look at the common diet in early 19th century America, see Sarah F. McMahon, "A Comfortable Subsistence: The Changing Composition of Diet in Rural New England, 1620-1840," *The William and Mary Quarterly*, 3rd Ser., vol. 42, no. 1 (Jan., 1985), 26-65.

⁷ Rev Walter Colton, *Deck and Port; or, Incidents of a Cruise in the United States Frigate Congress to California* (New York: A.S. Barnes and Co., 1850), 43-44.

consumed approximately 4,240 calories per day (mostly from fat),⁸ nearly double the daily recommended allowance for a full-grown male in modern America. So did this overabundance of calories mean that there was an obesity epidemic on board American warships? As one observer noted, “Man and the hog are the only animals which thrive and fatten on board a ship. There are 450 ‘Sons of the Sea’ on board [*Constitution*], and most of them have a very healthy appearance.”⁹ However, “healthy” can have different meanings. Plenty of exercise and fresh air contributed to a crew’s physical wellbeing, but several factors prevented seamen from storing excess calories as fat. First, the average age of seamen in the early 19th century was 26 years. Many were even younger than that, and younger men have faster metabolisms capable of burning the excess calories not consumed by work. Shipboard work itself burned most of the 4,000 calories, however. Climbing aloft to set or furl a sail required a large outlay of energy. Although no one has precisely measured the actual calories consumed in such labor, a 150 pound firefighter climbing a ladder in full gear burns 680 calories per hour, while a man pulling hoses on the ground (the nearest equivalent to hauling on a line on deck) burns 476 calories per hour.¹⁰ Combining these activities, as would be necessary during sail evolutions or drilling at quarters, meant that a sailor might metabolize over 1,000 calories during a watch. Such an outlay of energy was not continuous during an average four-hour watch, but it helps to explain why sailors had very little trouble sleeping just about anywhere and at any time - and also why their minds were so preoccupied with food!¹¹

Considered within the context of early 19th century America, the Navy diet seems plentiful and wholesome. As the following sections will demonstrate, the Navy did its best to supply high-quality food and plenty of it. If it did not always live up to its promise, it certainly was not for lack of trying.

⁸ Macdonald, *Feeding Nelson’s Navy*, 142.

⁹ David Bailie Warren, “Journal of a Voyage from Annapolis to Cherbourg on Board the Frigate *Constitution*, 1 Aug. to 6 Sept., 1811,” *Maryland Historical Magazine*, Vol. XI, No.2 (June 1916), 207.

¹⁰ “Calories Burned,” CalorieLab, accessed September 2018. <http://calorielab.com/burned>.

¹¹ This also presupposes that the hypothetical ship is sailing in a warm, dry climate. Sailors were almost constantly damp, if not soaking wet. Combine wetness with cold temperatures, and the body would need many more calories to function efficiently.

Meat

Sizable portions of beef and pork supplied sailors with their largest source of protein. Besides ship's biscuit, no other foodstuff has suffered more at the hands of memoir-writers than the ever-present salted meat. Maligned by numerous colorful sobriquets, the most popular of which were "salt junk" ("junk" being old ropes usually picked apart for oakum or caulking) or "salt horse," preserved meat long bore a poor reputation.¹² Herman Melville, remembering his culinary experiences aboard a U.S. Navy frigate in the 1840s, wrote: "I sometimes thought that the junks of lean pork - which were boiled in their own bristles, and looked gaunt and grim, like pickled chins of half-famished, unwashed Cossacks - had something to do with creating the bristling bitterness at times prevailing in our mess. The men tore off the tough hide from their pork, as if they were Indians scalping Christians."¹³ As unpleasant as writers have made it sound, evidence suggests that salted meat purchased for the navy was of high quality. It may be that memorialists remembered only the occasionally bad or excessively old cask.

In reality, the U.S. Navy Department carefully controlled beef and pork purchases. The directives issued to contractors contained specific instructions for how meat should be butchered, preserved, and packed. A circular printed by Boston Navy Agent Amos Binney in 1812 noted that sealed proposals would be received for a contract to supply the navy with:

700 Barrels navy Mess Beef and 500 Bbls Mess Pork, the Beef to be packed in the best White Oak Barrells full bound with white oak or walnut hoops, from well fatted Oxen weigh[ing] not less than 600 pounds each, excluding the neck, shins, shoulder blades and leg rounds and to be cut into ten pound peices [sic] or 20 peices to each Barrell. The Pork is to be pack'd also in the Bbls of the above description, and from well fatted Hogs weighing not less than 180 lbs and excluding the heads, legs & hands and to be cut into 8 lb peices or 25 peices to each Barrell. The whole to have a sufficient quantity of good Salt and Salt Petre and to be branded according to the

¹²Take for example this ditty: "Old horse, old horse, what brought you here,/ From Saccharappa to Portland pier, / Where you've carted stones for many a year?/ They treated you with much abuse,/ Then salted you down or sailors' use./ They curse your eyes when they've picked your bones;/ Then give you a toss to Davy Jones." Charles Erskine, *Twenty Years Before the Mast* (reprint ed. 1985, Washington, D.C.: Smithsonian Institute Press, 1890), 168.

¹³Herman Melville, *White Jacket, or the World in a Man-of-War* (New York: Oxford University Press, 1995), 61.

Not only did Binney specify exactly from what part of the animal the meat should come, but he also stipulated the quality of the salt and shipping containers. Binney later wrote to Secretary of the Navy Paul Hamilton notifying him that he (Binney) had contracted with E. and A. Winchester, A. Davis, Jonathon Door, and Elisha Forbes for 1,000 barrels of beef and 800 barrels of pork each.¹⁵ Just what Binney agreed to pay for the meat was not specified, but some years before the Navy Department gave \$14 per barrel for beef and \$18 per barrel for pork.¹⁶ By 1816, the Department estimated that a 44-gun frigate required 410 barrels of beef at \$17.50 per barrel and 351 barrels of pork at \$21.50 per barrel annually.¹⁷ Whatever the cost, it appeared that the navy had a tradition of providing choice cuts of meat to its men. As early as 1799, the Secretary of the Navy warned a navy agent that “the Navy Sailors having been used to the best Beef will not eat the common kind . . . If you cannot be sure of getting of proper quality such as will do credit to the place you had better have nothing to do with Beef.”¹⁸

According to Binney’s circular (and to other navy meat contracts), each piece of pork weighed eight pounds and each piece of beef 10 pounds. This may seem an oddly arbitrary mandate until one considers the size of each ration and the way in which ships’ crews ate. In every ship, the enlisted men divided themselves into messes, which typically numbered eight to 12 men. Since the ration allowed either a pound of pork or a pound-and-a-quarter of beef per day, the eight- or 10-pound piece of meat could be evenly divided among all the members of an eight-man mess. Presumably, if a piece were under-weight for a larger mess, an additional helping would be added to make up the deficiency.

In port, navy agents or pursers almost always provided fresh meat. Not only did this break the monotony of salt fare, but it also saved the stored provisions for the cruise. While the USS *Hornet* lay in Boston Harbor in September 1812, grocers E. and A. Winchester delivered 200 pounds of beef to the ship every day for 30 days.¹⁹ *Constitution*, with a much larger crew, required between 600 and 610 pounds of beef

¹⁴ Circular, December 15, 1812, Amos Binney Letterbook, 1810-1814, Manuscript Collections, American Antiquarian Society.

¹⁵ Letter to Paul Hamilton, January 2, 1813, *ibid.*

¹⁶ Scott & McClellan merchants, contract for pork and beef, 1804, Contracts, RG 45, E 336, vol.1, NARA.

¹⁷ “Estimate of Pay” American State Papers, vol. XIV, No. 135.

¹⁸ “To William Marbury, Navy Agent, Georgetown and Washington, D.C., from Secretary of the Navy, 31 Oct. 1799,” in *Naval Documents Related to the Quasi-War Between the United States and France: Naval Operations from August 1799 to December 1799* (Washington, D.C.: Government Printing Office, 1936), 344.

¹⁹ E. and A. Winchester voucher, November 17, 1812, Fourth Auditor Settled Accounts, Alphabetical Series, RG 217, Box 38, NARA.

per day throughout November 1813.²⁰ During *Constitution's* cruise in late 1812, the ship frequently received fresh meat from shore. As the ship's fifer, Thomas Byron, remembered: "We had some fresh meat whilst on that Coast [of Brazil], he [Com. Bainbridge] sent in and had a lot of cattle brought off which we hoisted in by the horns and slaughtered on board also yams and other produce which was very good with salt grub."²¹

Salt meat had to be soaked in a tub²² of freshwater before being boiled in the large copper or iron cauldrons on the galley stove. The purser's steward issued food the day before,²³ but even if soaked overnight, it is unlikely that much of the salt was in fact removed from it. Some writers recommended that salt meat be towed astern in nets to wash away the brine. The cooking process would have leached out more of the salt, but even so, the quantity of salt consumed by sailors on a daily basis must have been shockingly high.

²⁰ E. and A. Winchester voucher, January 31, 1814, Fourth Auditor Settled Accounts, Alphabetical Series, RG 217, Box 38, NARA.

²¹ Thomas Byron, "The Narrative of the Cruises of the U.S. Frigate *Constitution*," 1861. USS *Constitution* Museum Collection [1294.1].

²² Currently on board USS *Constitution*, the steep tub (which is actually made as a "harness cask," a tub with a lid used to hold fresh meat for immediate use) is located on the gun deck, abaft the galley. There are a number of sources, however, that suggest that the tubs were actually lashed on the channels, outside the rail and inside the shrouds. For example, the ship's log for Saturday, March 18, 1815, notes that the British prisoners from HMS *Cyane* and HMS *Levant* were directed "to wash and bathe in the channel tubs." Now, there is nothing in this brief passage to suggest that the tubs the prisoners washed in were in fact steep tubs, but then there is another curious passage from the 1802 *Naval Regulations* that causes one to ponder. Under "Of the Duties of a Cook," we find that "in stormy weather he is to secure the steep-tub, that it may not be washed overboard; but if it should be inevitably lost, the captain must certify it, and he is to make oath to the number of pieces so lost, that it may be allowed in the purser's account." This begs the question, if the steep tub were on the gun deck, how could it possibly be in danger of being washed overboard? If, however, the tubs were lashed to the shrouds, they would be in danger of being swept away if the vessel shipped a heavy sea. In this location they could be easily drained by simply pulling a plug and letting the water run into the sea. On the other hand, they may have been placed on the spar deck, as was the scuttlebutt for drinking water, and could thus be equally in danger in bad weather.

²³ On issues surrounding the distribution of rations, see Macdonald, *Feeding Nelson's Navy*, 100-104. See also John Rodgers, "Internal Rules and Regulations, US Ship *Maryland*," August 29, 1799, [John Rodgers Papers, 1796-1908, William L. Clements Library, University of Michigan], who requires that "the salt meats agreeable to Act of Congress are to be delivered out every evening, before sun down to the Cook, who is to be answerable and to have the same well washed and soaked by changeing [sic] the water in steep Tub every four hours. The flour peas and other provisions to be served out every morning in due time for the Cook." That there were standard times for the distribution of rations is further substantiated by William Bainbridge's "Internal Rules and Regulations, frigate *Philadelphia*, 1803," (*Naval Documents Relating to the Barbary Wars*, vol. 3, 32-41): "The Key of the Steward's room is to be in the possession of the first Lieutenant or Commanding Officer who will deliver it to him for the purpose of preparing and serving provisions from 7 O'clock in the Morning till 10, and from 4 in the afternoon till 7 O'clock, and at such other times as Circumstances of particular duty may render necessary."

Bread

Aside from meat, the other staple of the naval diet was ship's bread,²⁴ an unleavened biscuit of flour and water baked until thoroughly dry and hard. What it lacked in taste it made up for in longevity. Kept in a dry, well-ventilated bread room, a barrel of biscuit could last for years. As with all victuals supplied to the Navy, navy agents made every attempt to find bakers who could produce wholesome, high-quality biscuits. The oft-repeated tales of biscuits crawling with weevils or made with pea-flour and bone dust are mostly the concoctions of civilian writers.²⁵

A post-war contract for "Navy Bread" stipulates that the "bread shall have no rye flour or any other than Wheaton flour in it - & after being baked shall be thoroughly kiln dried & prepared in all respects for shipment."²⁶ Surviving pieces of British-made biscuit confirm that they were in fact made of whole-wheat flour.²⁷ To ensure that the biscuit's interior dried properly, bakers punched a series of perforations in each one. Surviving British biscuits are usually about a half-inch thick, measure from 4 $\frac{3}{4}$ to 5 $\frac{3}{4}$ inches wide, and weigh about four ounces each. Assuming American-made biscuit conformed to these dimensions, each man received between three and four whole pieces per day.²⁸ As detailed above, *Constitution* carried 84,456 pounds of bread for a six-month cruise, or a total of about 337,824 individual biscuits. In 1816, it was estimated that the average 44-gun frigate required 143,550 pounds of biscuit annually at a cost of \$.06 per pound.²⁹ How did a navy agent ever find enough bread to outfit a single ship, let alone an entire squadron?

The Royal Navy equipped its dockyards to produce bread on an industrial scale. At Deptford alone, the King's bakers could produce enough biscuit in a day to feed more than 24,000 men. American bakers made navy bread on nearly as large a scale.

²⁴ The term "hardtack," often used to describe ship's bread, is an invention of the 1840s, and was only popularized during the American Civil War.

²⁵ For examples of such pervasive myths, see John Masefield, *Sea Life in Nelson's Time* (reprint ed., 1984, London: Conway Maritime Press, 1905), 121-122. Masefield was only 24 when he wrote his book, and though he had been to sea himself, "many of the stories he repeats in this book," as Janet Macdonald writes, "smack of an ancient mariner getting more and more outrageous as the grog went down, and of course they nicely reinforced the late Victorian sense of superiority over their forebears." [Macdonald, *Feeding Nelson's Navy*, 12.]

²⁶ William McKenny contract, 1818, Contracts, RG 45, E 336, vol.2, NARA.

²⁷ For examples of biscuit, see James P. McGuane, *Heart of Oak, A Sailor's Life in Nelson's Navy* (New York: W.W. Norton & Co., 2002), 36.

²⁸ Dr. Cutbush says that "from three to three and a half biscuits will generally weigh fourteen ounces." Edward Cutbush, *Observations on the Means of Preserving the Health of Soldiers and Sailors*, (Philadelphia: Thomas Dobson, 1808), 123.

²⁹ "Estimate of Pay and Provisions for a 44-Gun Frigate, 1816," American State Papers, vol. XIV, No. 135.

Stephen Harris of Norfolk, Virginia used three brick ovens to bake 21 barrels of flour into biscuit per day.³⁰ Baker William McKenny promised to deliver 2,000 barrels containing 160,000 pounds of bread, or 640,000 individual biscuits.³¹

Unless graced with strong teeth and powerful jaws, sailors could not bite into the bread, but there were several ways to overcome its obdurate hardness. Wrapping a biscuit in a cloth and smashing it with something hard (such as a knife handle) would succeed in breaking it into bite-sized bits. If one were truly desperate, one could suck on these pieces, allowing the natural moisture of the saliva to break down the biscuit. Alternately, the biscuit might be soaked in whatever liquid was at hand.

Numerous shipboard recipes called for a quantity of biscuit. For breakfast, a sailor might warm his innards with a can of “Scotch coffee,” that is to say, cheap or imitation coffee made from burnt bread boiled with water and sweetened with molasses or sugar.³² Similarly, a mess with a desire for a sweet dish might make “dandy funk,” or “dunderfunk.” According to Melville, “*Dunderfunk* is made of hard biscuit, hashed and pounded, mixed with beef fat, molasses, and water, and baked brown in a pan. And to those who are beyond all reach of shore delicacies, this *dunderfunk*, in the feeling language of the Down Easter, is certainly ‘a cruel nice dish.’”³³ Biscuit also figured in other concoctions such as lobsouse and possibly duff (boiled or steamed sweet pudding). In 1813, however, David Porter “gave the strictest orders to the cook, not to permit any person to use the slush from the cask, for the purpose of frying their bread, &c., as this practice is very common among seaman;” he was afraid that the habit caused scurvy, “that dreadful scourge.”³⁴

Biscuit (when not fried in beef slush from the cask) was certainly wholesome - it provided 1,727 calories per day³⁵ - and probably not vile-tasting. For years, however, writers have repeated lurid tales of biscuits swarming with maggots, weevils, and other undesirable creatures. Unfortunately, the word “maggot” calls to mind fly larvae that tend to breed in rotten meat.; clearly, such animals never attacked ship’s bread, but it could play host to two other unpleasant insects. Tobias Smollett, among others, reported that “cockroaches” regularly consumed biscuit and reduced

³⁰ A. G. Roeber, *A New England Woman’s Perspective on Norfolk, Virginia, 1801-1802: Excerpts from the Diary of Ruth Henshaw Bascom* (Worcester, Mass: American Antiquarian Society, 1979), 304.

³¹ William McKenny contract, 1818, Contracts, RG 45, E 336, vol.2, NARA.

³² William Robinson, *Jack Nastyface: Memoirs of a Seaman* (Annapolis, Md., Naval Institute Press: 1983), 33.

³³ Melville, *White Jacket*, 134.

³⁴ David Porter, *Journal of a Cruise Made to the Pacific Ocean*, reprint edition (Upper Saddle River, N.J.: The Gregg Press, 1970), 63.

³⁵ Extracted from the calorific content of British naval rations as summarized by Macdonald, *Feeding Nelson’s Navy*, 177. The American ration was 14 ounces per day, which equals 396 grams.

it to dust. These were probably not real cockroaches, but rather the Cadelle beetle (*Tenebroides mauritanicus*). The beetle's larvae can grow up to 20mm long, and appear as white, black-headed worms - the sailor's "maggot." Jocularly referred to as "bargemen" because they made their appearance in the messes' bread barge, or because they looked like small crewmen swarming on a boat, the insects did not eat the biscuit themselves, but rather hunted the miniscule bread beetle (*Stegobium paniceum*). Scarcely 4mm across when mature, the bread beetle's larvae were the creatures with an appetite for biscuit, and it was they who could reduce a bag to dust. True weevils (of the family *Curculio*) might also have been present, since several species feed on grain; these are also quite small and would be indiscernible in their larval stage. All three insects breed quickly in warm, damp conditions, and once packed away in the bread room, they would have multiplied rapidly.³⁶ None of these was particularly harmful if ingested, and since many below-decks regions of the ship were dark even in the middle of a sunny day, many an unwitting sailor likely consumed the creatures on a daily basis. Charles Erskine, a sailor on an around-the-world exploring expedition in 1838, remembered that "our hard-tack was very moldy, and alive with grub-worms. We used to soak the bread in our tea, when the animals would float on top, and we would skim them off. We did not exactly relish this at first, but soon got used to it, however."³⁷

How did the biscuit become infected in the first place? The baking facilities available in 1812 were not kept to the same standard we would expect from a bakery today, and they were likely magnets for any creature that fed on grain. After baking, biscuits were left to dry on racks, where a beetle could easily lay its eggs among the batches' many perforations. Royal Navy bakers placed biscuit in 112-pound bags and then packed them in barrels for transport. Although this was the standard method of food transport in the early 19th century, a barrel is not the ideal container for biscuit. According to one source, the U.S. Navy recognized this and by the War of 1812 regularly packed biscuit in airtight boxes, which kept it "tasty."³⁸ Alas, no precaution could defend against the most persistent pest of all: ship rats. During the *Essex's* passage to the Pacific, rats "had found the way into our bread-rooms, and had occasioned a great consumption of that precious article."³⁹

³⁶ Macdonald, *Feeding Nelson's Navy*, 97-98.

³⁷ Charles Erskine, *Twenty Years Before the Mast*, 211. Note that Erskine's ship had been at sea for many months and likely had been supplied with infested provisions.

³⁸ *Ibid.*, 18. It should be noted that every receipt for bread in Boston mentions "bags" and "barrels" rather than "boxes."

³⁹ Porter, *Journal*, vol. 1, 75.

Suet and Flour

At first glance, it does not make sense for seamen to be issued both biscuit and flour. A ship had only rudimentary baking facilities, and then not on a scale to allow for baking for 450 men at one time. So, rather than making bread with their bi-weekly ration of a half pound of whole-wheat flour, they made a dish called “duff.” Consisting of flour and suet (finely chopped beef fat) and raisins, currants, prunes, or other dried fruit, the mess cook mixed the ingredients well and then placed them in a canvas “pudding bag.” Dropped into a boiling cauldron, the bag and its contents cooked for about an hour. When boiled to perfection, a proper duff was much like a bread pudding, though rather denser. If overcooked, it would come out of the bag “harder than a sinner’s heart.”⁴⁰ According to Dr. Edward Cutbush, “the puddings, generally made by the men, are almost as hard as a thirty two pound shot; if they receive no nourishment from them, it is certain they cannot complain that they have not something in their *stomachs that they can feel*; and sometimes, among those whose digestive powers are weak, violent pains of colic are the consequence.”⁴¹ Regardless of the dangers to one’s digestive tract, cut into slices and served with molasses, duff provided a welcome respite from salt meat and biscuit.

The weekly duff seems to have been the only use for suet, but for that reason alone it was an important part of the weekly ration. Navy contracts were as particular about suet as they were about beef and pork. According to one such contract, “The Kidney Suet of the beef is to be cleaned of the blood, veins, and all parts of the skin & cut into small pieces well dried & then packed with a sufficient quantity of Dry Liverpool fine salt.” The dried and salted suet was packed in white oak barrels.⁴²

Melville suggests that a duff could be made with beef fat or “slush” skimmed off the tops of the coppers by the cook,⁴³ and when *Constitution* sailed in 1813, she carried no suet at all.⁴⁴ Still, this was an unusual situation, and most ships carried a large store of suet. In 1816, a 44-gun frigate needed 11,700 pounds of suet annually at a cost of \$.20 per pound.⁴⁵

⁴⁰ Melville, *White Jacket*, 62.

⁴¹ Cutbush, *Observations*, 123.

⁴² Williams and McClellan contract for beef suet, June 10, 1805, Contracts, RG 45, E 336, vol.1, NARA.

⁴³ Melville, *White Jacket*, 61.

⁴⁴ Court of Inquiry Record, Captain Charles Stewart, May 1814, RG45, M239, Roll 7, DNA.

⁴⁵ “Estimate of Pay,” American State Papers, vol. XIV, No. 135.

Cheese and Butter

Among the most perishable of provisions, butter and cheese were the only dairy products a sailor was likely to eat at sea. While in harbor, pursers could often procure milk and soft cheeses, but at sea, unless the ship was well provided with milk-producing animals, there would be none. Moreover, without proper preservation, cheese and butter turned rancid sooner than other provisions. Well-made and preserved butter and cheese, however, could last six months or more.

Elizabeth Lea's 1853 *Domestic Cookery* gives instructions for preserving butter with salt. She recommends that salt be added to butter during manufacture ("rather more than for table use"); the top of the jar should then be covered with a thin cloth and "salt on it an inch thick." Alternatively, one could cure butter by creating a fine powder composed of salt, sugar, and saltpetre, and mixing it at the rate of one ounce to every pound of butter. When cured in this way and stored in wooden vessels, it "will keep good for several years."⁴⁶

Most butter for naval use was packed in small wooden casks called firkins. The Royal Navy typically bought firkins containing 56 pounds of butter, but American sources suggest that the U.S. Navy purchased butter in whatever kegs were available, ranging in weight from 43 to 68 pounds.⁴⁷ Dr. Cutbush recommended that butter be "put up" in waxed canvas bags. These 50 pound bags would then be dropped in casks full of seawater. By changing the water once or twice each week, the "butter will be preserved always sweet, and will be a considerable *saving*, as none will be *condemned*."⁴⁸ It was estimated that a 44-gun frigate required 2,985 pounds of butter per year.⁴⁹ Despite contractors' best efforts, butter often did not last several months, let alone "several years." Once condemned, rancid butter could be used for any number of lubrication applications on board ship.

Unfortunately, there exists little information about cheese issued in the U.S. Navy.

⁴⁶ Elizabeth Lea, quoted in Virginia Mescher, "Salt in the Kitchen," *Food History News*, vol. 17, no.3, 4.

⁴⁷ For British firkins, see Macdonald, *Feeding Nelson's Navy*, 32. For American weights, see Hezekiah Loomis, *Journal of Hezekiah Loomis, Steward on the US Brig Vixen, Captain John Smith, USN* (Salem, Mass: The Essex Institute, 1928), 33: "I opened a firkin of butter which had not been opened after coming on board. I served 30¾ lbs, and there appeared to be left about 10 lbs. The cask was marked 68 lbs, but when serving it out I found a large vacancy in the middle which had been made there before it came on board. Mr. Nevitt saw the serving and the deficiency." Also, Stephen Cushing voucher, September 3, 1812, Fourth Auditor Settled Accounts, Alphabetical Series, RG 217 Box 38, NARA.

⁴⁸ Cutbush, *Observations*, 108.

⁴⁹ "Estimate of Pay," American State Papers, vol. XIV, No. 135.

The few documents that do mention cheese procurement tersely refer to the product as “cheese” and provide no elaboration. American naval agents probably followed the earlier example of their British counterparts and bought something akin to Suffolk cheese: a flinty, skim milk cheese that had little to recommend it beyond its long shelf life. After 1758, the British Victualling Board abandoned Suffolk cheese in favor of softer, fuller, more flavorful Cheshire, Cheddar, Gloucester, or Warwickshire cheeses. These were bought as whole wheels, wrapped in cheesecloth and packed in barrels, where they were stored until issued. Depending on the place of manufacture, these cheeses could weigh anywhere between 12 and 37 pounds. Because each man received two ounces of cheese on Tuesday and four ounces on Friday, a crew of 450 would require about 168 pounds of cheese per week. In 1816, a 44-gun frigate was thought to require 9,000 pounds of cheese per year at a cost of \$.20 per pound.⁵⁰

⁵⁰ *Ibid.*

Peas and Rice (and Beans)

As with cheese, historians know very little about the types of peas and rice purchased for navy use. It is not even known if the men were issued whole green peas or the yellow split variety (both of which are but different forms of the same species, *Pisum sativum* subspecies *arvense*). Whole peas require overnight soaking and must be cooked for several hours, while split peas may be cooked satisfactorily in a pudding bag in a few hours. However, the Royal Navy rarely issued split peas before 1856; whether or not the U.S. Navy followed suit is not known.⁵¹ Peas grow best in cool climates, and the market-oriented farmers around Boston were likely able to supply the Navy Yard there with all the peas that were wanted. And wanted they were. An 1816 report estimated that a 44-gun frigate with a 450 man crew required 374 bushels of peas per year, at a price of \$1 per bushel.⁵²

Rice, on the other hand, grows only in warm, humid climates. During the early 19th century, the center of rice production was the Carolina low country. Both Charleston and Savannah, graced with rich agricultural hinterlands, were major rice exporters, and the government turned to these regions for its rice. As with other provisions, there exists very little information about the types of rice bought by the navy. Most likely, it was the so-called “Carolina Gold” popular throughout antebellum America.⁵³ A 44-gun frigate’s crew consumed more than 23,000 pounds of rice per year (at a cost of \$.05 per pound).⁵⁴

One would expect that dried peas would be impervious to degradation, but the crew of USS *Essex* found otherwise during her voyage to the Pacific. According to Captain David Porter, “our peas and beans...had not escaped so well; for, as in this cold climate the allowance of water enabled us to spare enough to permit the boiling and use of them, I directed them to be served; but on opening the barrels that contained them, we found only a mass of chaff and worms.”⁵⁵ Perhaps the peas had not been properly dried before they were packed away, but their condition surprised even Porter, an experienced officer.

⁵¹ Macdonald, *Feeding Nelson’s Navy*, 34.

⁵² “Estimate of Pay,” American State Papers, vol. XIV, No. 135. A bushel equals 8 gallons.

⁵³ Siddartha Mitter, “An heirloom rice returns,” *Boston Globe*, September 21, 2005. http://www.boston.com/ae/food/articles/2005/09/21/an_heirloom_rice_returns/.

⁵⁴ “Estimate of Pay,” American State Papers, vol. XIV, No. 135.

⁵⁵ Porter, *Journal*, vol. 1, 75.

Drink in the “Grog” Tub: Beer, Rum, and Whiskey

Perhaps no image of the early navy is more ubiquitous than that of a circle of red-nosed tars (sailors) taking deep draughts of grog from their overflowing tankards. Yet, as with so many other facts about life at sea during the period, the story of the daily spirit ration has been contorted in the retelling. To be sure, sailors received a half pint (8 ounce) of spirits daily, but it was served to them in a controlled manner and in such a way as to curb drunkenness - or at least the bad behavior associated with inebriation. It cannot be denied that sailors drank large quantities of alcohol. The average alcoholic beverage consumption across the drinking-age population in the early Republic stood at about 6.8 to 7.1 gallons per person per year, whereas a sailor receiving his full spirit ration every day consumed slightly over 27 gallons per year.⁵⁶

Though involved, the spirit ration's origins must be plumbed to understand how deeply ingrained it had become in the navy. In the Royal Navy, as in England itself, beer was the favored beverage of all classes. Unfortunately, beer did not keep well on extended sea voyages, and as the 18th century progressed and British fleets sailed farther and farther from the Channel, substitutes had to be found. In the Mediterranean, the fleet purchased the local *vin du pays*, while in the West Indies, dark, high-proof rum became the drink of choice. Prior to 1740, sailors received one half pint of rum daily, to do with as they pleased. Admiral Edward Vernon (for whom Laurence Washington, brother of George, named his house Mount Vernon), the hero of Portobello and the Commander-in-Chief of the West Indies Station, became concerned with what he called the “swinish vice of drunkenness,” which he believed was caused by drinking the daily allowance of rum neat, or unmixed. He surmised that if the rum ration were mixed with the same amount of water, it would reduce drunkenness and discipline problems. On August 21, 1740 he issued his infamous “Order to Captains No. 349.” This stipulated that the daily allowance of rum “be every day mixed with the proportion of a quart of water to a half pint of rum, to be mixed in a scuttled butt kept for that purpose, and to be done upon the deck, and in the presence of the Lieutenant of the Watch who is to take particular care to see that the men are not defrauded in having their full allowance of rum... and let those that

⁵⁶ W.J. Rorabaugh, *The Alcoholic Republic, An American Tradition* (Oxford: Oxford University Press, 1979), 233.

are good husband men receive extra lime juice and sugar that it be made more palatable to them." His sailors had affectionately nicknamed Admiral Vernon "Old Grog" from the program cloak he often wore on the quarterdeck. The watered rum gave offense to the men, and soon they began referring to it contemptuously as "Grog."⁵⁷

Consciously copying the Royal Navy, the new United States Navy also provided a spirit ration to its crews. The navy issued rum until 1806, when the Navy Department became persuaded that native whiskey was a "more wholesome drink" and somewhat cheaper (probably the real reason for the change). The Secretary of the Navy reiterated this order in 1808: "I have determined to introduce in lieu of West India Rum the use of Rye Whiskey on the different Stations. From the experiment made, this liquor is approved by the Seaman."⁵⁸ This change also took valuable contracts from New England rum distillers and placed them in the hands of westerners, who had perfected the manufacture of whiskey from corn or rye. In 1809, Lewis Sanders of Lexington, Kentucky received a contract for "10,000 gallons of good merchantable proof whiskey...the whiskey is to be contained in barrels of from 30 to 33 gallons each...the barrels are to be secured with eight substantial iron hoops;" he would receive \$0.45 per gallon plus \$1.25 per barrel.⁵⁹ At the same time, it was decreed that any man passing up his spirit ration would be allowed four cents in lieu thereof.⁶⁰

For many seamen, the grog "ceremony" was the highpoint of the day. At seven bells (11:30am), under the charge of a master's mate, the steward pumped whiskey from the cask in the spirit room into a covered wooden grog tub. In the 1820s, *Constitution's* chaplain described what happened next:

Shortly after eight bells [12.00], as the drum rolls, all move aft, towards the grog tub. Around this point of time concentrate half the meditations of the day. I often place myself at the tub, to watch the rolling eyes, and the look of supreme gratification with which they swallow their half pint, for that is the measure to each; it is one gill of whisky diluted with an equal quantity of water. A rope is drawn athwartships, near the tub; each as his name is called, and crossed, takes his allowance which must be drunk on the spot. From this, they pass to dinner. The whole operation is superintended by the

⁵⁷ A.J. Pack, Nelson's Blood, *The Story of Naval Rum* (Annapolis, Md.: Naval Institute Press, 1983), 22-24.

⁵⁸ Secretary of the Navy to Keith Spence, November 11, 1808, M209, Vol. 9, Miscellaneous Letters Sent by the Secretary of the Navy, NARA.

⁵⁹ Lewis Sanders Whisky contract, 1809, Contracts, RG 45, E 336, vol.1, NARA.

⁶⁰ Pack, *Nelson's Blood*, 132-135.

| *officer of the deck.*⁶¹

Earlier in the century “three water grog,” a concoction of three parts water to one of liquor, was the usual ration, although it sometimes was served at a ratio of one to one. As much as the men enjoyed their twice-daily libations, many medical men considered spirituous liquors enervating at best. As one naval surgeon complained, “the drink of the sailor called grog is highly pernicious to his constitution, destructive of his morals, and productive of insubordination and wickedness.”⁶² Despite these legitimate concerns, grog remained a part of the American sailor’s diet until the American Civil War.

⁶¹ George Jones, *Sketches of Naval Life: With Notices of Men, Manners, and Scenery on the Shore of the Mediterranean, in A Series of Letters from Brandywine and Constitution Frigates*, vol. 1 (New Haven: Hezekiah Howe, 1829), 101.

⁶² William P.C. Barton, *A Treatise Containing a Plan for the Internal Organization and government of Marine Hospitals in the United States; Together with a Scheme for Amending and Systematizing the Medical Department of the Navy* (Philadelphia: Printed for the author, 1814), 223.

The Essential Beverage: Water

Although the grog rations loom large in narratives of the early navy, the most common beverage was also the most elemental: water. “Seamen,” as one doctor commented, “in consequence of their salt diet, drink a great quantity of water, unless on an allowance.”⁶³ David Porter, in command of USS *Essex* during a long sea voyage, understood the importance of fresh water when surrounded by an ocean of salt:

As to our water, none could be sweeter or purer; it had not undergone the slightest change. And the only fact I think it necessary to state in support of this assertion is, that a live mullet, nearly three quarters of an inch in length, was this day pumped from a cask filled with the water in the river Delaware: had this water undergone any corruption, the fish could not certainly have existed in it. This little fish I have put in a bottle of its native water, with a view of preserving it alive. From its size, I should suppose it to have been produced from the spawn while in the cask. The water taken in at St. Catharines [on the coast of Brazil], was found to be equally good; and my own experience now enables me to assure all navigators, that the only precaution necessary to have good water at sea is, to provide casks made of well seasoned staves, have them cleansed, and filled with pure water. Should it be necessary at any time (for the trim or safety of the ship, which is sometimes the case) to fill them with salt water, particular care must be taken that they be filled and well soaked, and cleansed with fresh water before they are filled with the water intended for use. These particulars, as I have before observed, have never been neglected by me since I had the command of a vessel; and consequently no one on board has ever suffered from the use of bad water. This is an object that well merits the attention of every commander, when the chief comfort and the health of his crew are so much dependent thereon. For who has experienced, at sea, a greater enjoyment than a draught of pure water? Or who can say that the ship-fever and scurvy do not originate, frequently, in the stinking and disgusting water which seamen are too often driven to the necessity of drinking at sea, even when their stomachs revolt at it?⁶⁴

⁶³ Cutbush, *Observations*, 119.

⁶⁴ Porter, *Journal*, 75-76.

If seamen had no qualms about drinking water in which fish had spawned, how truly vile was the average cask of water after being stowed for several months?

The arid regions of the world to which American vessels ventured often could not provide enough water to replenish the supply. Every attempt was made to gather passing showers with rain awnings, but without filling water casks at a proper spring or pool, it was very difficult to restock this vital resource. According to regulations, “one half gallon of water at least shall be allowed every man [per day] in foreign voyages, and such further quantity as shall be thought necessary on the home station, but on particular occasions the captain may shorten this allowance.”⁶⁵ This edict refers only to the water allowed for drinking, which on a frigate with a crew of 450 meant that the crew consumed at least 225 gallons of water per day. This figure, however, does not include the water expended for cooking, which might require as much as 150 gallons per day. When *Constitution* sailed in 1813, she had on board approximately 47,000 gallons.⁶⁶ According to the testimony of Lieutenant Ballard, the crew was allotted “250 Gallons, except on pea & rice days when it was 280 till the first of February after which grog water being allowed 310 gallons except on pea & rice days; when it was 340.”⁶⁷

A water shortage could mean hardship for a crew, especially since it was vital for preparing and cooking salt meat. Marine Fifer Thomas Byron remembered the situation on board *Constitution* when the water ran low:

Now I will state our sufferings on the night we crossed the equinoctial line, that night all hands came near dying for want of water. A number were dipping up with tin pots the water that had fallen from a small shower into the boats on deck and mixed with the salt water that had flew [sic] over the side into it also old tobacco chews which the men had thrown into the boats and they had to drink it. About daylight it began to rain as it generally does in crossing the line and we were very glad but was not allowed to catch a drop for our messes untill [sic] it was all over, but had to get up casks and spread sails over the deck and fill them and strike them down into the hole [sic]. This was the way we had to live. Every shower the men would run with their pots and cans and stop the scupper holes up to catch the water

⁶⁵ *Naval Regulations Issued by Command of the President of the United States of America, January 25, 1802* (reprint ed., Annapolis, Md.: Naval Institute Press, 1970), 26.

⁶⁶ Court of Inquiry Record, Captain Charles Stewart, May 1814, RG45, M239, Roll 7, DNA.

⁶⁷ It was common practice for the men to be allowed to drink at will from the scuttlebutt. On *Constitution*, the scuttlebutt was located on the spar deck, beside the mainmast. See reference to this in the Trial of Quarter Gunner Thomas McCumber, July 5, 1811 (101), M273, Records of General Courts-Martial and Courts of Inquiry, 1799-1867, NARA.

that fell on deck, dirty as it was they had to use it and sometimes it was so tarry that they could hardly swallow it others running & catching a little here and there upon the painted hamms [sic: hammock cloths] or some other place which would be so painty that it was almost impossible to use it, this was hard for us and I will now account to my readers for it in the first place we dare not venture into a port in the day time so that the enemy could blockade us and having but six months provisions and water on board and daily taking prisoners to help drive it up. We had to put up with two thirds rations of provisions and three pints of water for twenty four hours, this was the cause of the great suffering on board as the men could not eat the salt grub without water and this caused Captain Steward [sic] to search out a by place [sic] to get water, so we run off to Juan Fernandez the place where Robinson Crusoe was cast away....⁶⁸

Crews required water to make another favorite beverage: tea. Not until later in the century was tea included in the official naval ration.; in the early 19th century, tea drinkers had to purchase it from the purser's stores. After the usual markup included by a purser, sailors paid between \$1.50 and \$2 per pound.⁶⁹ Herman Melville mentions tea being boiled for the whole crew in the ship's coppers, but this was in the 1840s, after tea had become part of the issue rations. During the War of 1812, sailors likely brewed their tea individually using boiling water from a galley kettle. As of 1813, *Constitution's* galley had at least one 16-quart copper teakettle. Coffee may also have been available to the enlisted men, but there is little documentary evidence for its use at this period. The officers' messes, however, included liberal amounts of the drink.

⁶⁸ Byron, "Narrative."

⁶⁹ Christopher McKee, *A Gentlemanly and Honorable Profession: The Creation of the US Naval Officer Corps, 1794-1815* (Annapolis, Md.: Naval Institute Press, 1991), 496.

Livestock

Ships commonly sailed with a large complement of animals on board. The mess caterers bought pigs, chickens, goats, cows, and sheep in large numbers to supplement the salt provisions with the animals' milk and flesh for the first few weeks of the voyage. Between the animal pens and the fodder needed to feed them, the decks of a ship sailing on a long voyage would have been much encumbered, so much so that the crew might not have room to work the guns.

A frigate typically carried a sizeable menagerie. Captain Porter mentioned that "Orders were given to lose no opportunity of catching rain-water for the stock, of which we had a large quantity on board, every mess in the ship being supplied with pigs and poultry."⁷⁰ When she sailed from the mouth of the Delaware on October 28, 1812, *Essex* had a crew of 256, divided into 32 eight-man messes. If each mess had at least two pigs, there would have been (without counting swine bought by the officers) 64 pigs on board. Two pigs per mess, however, would not have lasted very long, so it is entirely possible that there were in fact three times as many on board the ship. Unfortunately, by the time the ship reached the tropics, water was in such short supply that Captain Porter "directed that the seamen should kill all their pigs; and as the young goats, by sucking the old, deprived us of their milk, I directed that they also should be killed." This order did not sit well with the men, however, many of whom had formed an attachment to the animals. "Many petitions were sent in to me to save from slaughter a favorite kid, or a pig that had been destined for a Christmas dinner, with assurances from the owner that it should be supplied with water from his own allowance, although each man was allowed only half a gallon; yet I found it necessary to be inflexible, to avoid the imputation of partiality." Porter could not afford to be charitable. "If I had granted the petition in one instance, I should have had to do so in all, and the quantity of stock, and the dirt occasioned by them, were no inconsiderable inconveniences on board."⁷¹

⁷⁰ Porter, *Journal*, vol. 1, 2.

⁷¹ Porter, *Journal*, vol. 1, 25.

Fishing

The waters gliding beneath the ship's keel would seem a perfect source of fresh food in the form of fish and other sea life. The Navy recognized this and ordered that "every ship be provided with a seine [a drag net], and the crew supplied with fresh provisions as it can conveniently be done."⁷² This worked well in harbor when sailors could use a boat or the beach to cast their nets. Porter claimed that at Porta Praya, "an abundance of fish may be caught with the hook and line alongside, and with the seine on the beach, where we hauled every morning during our stay."⁷³ At sea, it was a different matter. Optimal trawling speed ranges between only two and four knots depending on conditions. While making a passage on the open sea, most sailing ships frequently exceeded that. Nevertheless, under the right circumstances, fishing could provide both amusement and supplemental nutrition. *Constitution's* surgeon Amos Evans feasted on an Albacore tuna caught in the middle of the Atlantic.⁷⁴ During a passage to Europe before the war, the ship's crew avidly fished for sharks and cod and collected flying fish from the decks.⁷⁵ A seaman in the British blockading squadron remembered that:

*We trawled often and took plenty of fish. The trawl was made fast to the trawl-yard arm, that is to say, the line to which the trawl was fastened was rove through a tail block, the trawls itself being at the bottom of the sea, (we were near the shore on the coast of France). As soon as the trawl was properly let down, the main yard was filled and the ship was made to go ahead, drawing the trawl along the ground. We, in general, procured some flat fish, such as skate, plaice, etc., and also some oysters of large size. This served as a diversion for in cruising off an enemy's coast there is but little to do.*⁷⁶

In this case, the vessel was moving slowly, maintaining position off a French port, not making a long-distance passage.

⁷² *Naval Regulations Issued by Command of the President of the United States of America, January 25, 1802* (reprint ed., Annapolis, Md.: Naval Institute Press, 1970), 26.

⁷³ Porter, *Journal*, vol. 1, 19.

⁷⁴ Evans, *Journal*, 470.

⁷⁵ Warren, "Journal," 140, 206, 209.

⁷⁶ William Mark, *At Sea with Nelson. Being the Life of William Mark, a Purser who served under Admiral Lord Nelson*. (London: Sampson Low, Marston, 1929), 81.

Messes and Messing

The basic unit of organization on board a man-of-war was the mess. Within this small group the sailor ate and socialized. Each mess typically occupied its own “berth,” the space between two guns on the gun deck, or between knees on the berth deck.⁷⁷ The number of men in each mess varied according to the size of a ship and its crew. Some ships’ internal regulations stipulated that there should be exactly six, eight, or 12 men per mess, and on some ships there may have been as many as 16.⁷⁸ On board the brig *Vixen* in 1803 and 1804, there were 11 messes that averaged six men each; one contained only five men, while another had as many as nine.⁷⁹ There exists no exact record of the number of messes or number of men per mess for *Constitution* during the War of 1812, but the number may be estimated using an 1812 receipt for mess chests, the wooden boxes in which each mess kept its bowls, kids, utensils, and condiments. On October 21, Silas Niles and William Champney delivered 35 painted chests, at a total cost of \$65.45.⁸⁰ Assuming that the ship’s enlisted crew numbered 437 men at the time (the number after subtracting the 39 officers and petty officers), and that the number of mess chests ordered equaled the number of messes, this means that each mess contained about 12 men (some probably had 10, others 13). It is possible the chests ordered were not intended to replace every mess chest, but only those recently damaged or destroyed. If *Constitution*’s crew were divided into eight-man messes, that would have made for a total of 55. This number, however, is probably much too high. Melville states that on a frigate the size of *Constitution* (he was, after all, on USS *United States*) “the common seamen...are divided into some thirty or forty messes.”⁸¹ According to Charles Erksine, on board the sloop-of-war *Vincennes* in 1838:

⁷⁷ William Falconer, *An Universal Dictionary of the Marine* (1780, reprint ed., New York: Augustus M. Kelly, 1970), 36. A deck plan of USS *United States* by Charles Ware [Charles Ware, “Frigate United States Ware #15,” c. 1820. From Drawings of Naval Vessels and Equipment, 1939-1945, RG45, NARA.] shows 35 mess chests ranged along the sides of the berth deck, and it is likely that this was the most usual arrangement.

⁷⁸ For mess numbers, see William Bainbridge, “Internal Rules and Regulations, Frigate *Philadelphia*, 1803,” in *Naval Documents Related to the United States Wars with the Barbary Powers*, vol. 3, 32-41, and John Rodgers, “Orders and Regulations for the Government of the United States Frigate Constitution addressed to the first Lieutenant and other Commissioned Warrant and petty officers under my command, 1809,” Rodgers Family Papers, 1791-1885, Historical Society of Pennsylvania.

⁷⁹ Loomis, *Journal of Hezekiah Loomis*, 62-63.

⁸⁰ Miles and Champney voucher, October 21, 1812, Fourth Auditor Settled Accounts, Alphabetical Series, RG 217 Box 38, NARA.

⁸¹ Melville, *White Jacket*, 58.

We were divided into sixteen messes, twelve men in a mess. I was in one of the petty officer's messes. Each mess was provided with a piece of canvas, - which, when spread on deck, served as a table-cloth,- a large tin pail and pan, and two wooden kids or little tubs, with brass hoops. We each furnished ourselves with a tin pot, pan, and spoon, likewise our small stores, such as tea, sugar, pepper, soap, etc., not forgetting our tobacco, all our clothing, with needle thread, and wax. We drew on the purser for these things, and they were charged to our accounts.⁸²

When it came to the berths for the messes, the American Navy was infamously Spartan. In the Royal Navy, at least on board larger frigates and ships-of-the-line, regulations allowed tables and benches, and racks for dishes and cutlery.⁸³ But the mess cloth and a small chest were the American sailor's only furniture. A sailor on board the *United States* in 1824 wrote that "in our frigates there are no mess tables, and as for lights, a piece of spermaceti candle about four inches long, stuck in its own grease upon the chest lid, sheds 'a dim, religious light' over the gloomy birth deck."⁸⁴

The mess was also the only democratic institution on board a warship, a group in which there was true equality regardless of age or station. According to Charles Nordhoff:

*To each mess there is a **mess-cook**, who has charge of all the mess-property, and receives the rations from the purser's steward, takes them to the ship's cook, and gets the victuals when they are cooked. Every member of the mess takes his turns, for a week, at this duty, which is on many accounts a very disagreeable one. It is one of the few privileges left to the crew of a man-of-war, that messes shall be composed of individuals voluntarily associating themselves together. No one is forced on a mess not willing to receive him, and changing messes is allowed every three months.⁸⁵*

⁸² Erskine, *Twenty Years*, 17-18.

⁸³ Robinson, *Jack Nastyface*, 33, and Melville, *White Jacket*, 89.

⁸⁴ Nathaniel Ames, *A Mariner's Sketches* (Providence: Cory, Marshall and Hammond, 1830), 197.

⁸⁵ Charles Nordhoff, *Man-Of-War Life: A Boy's Experience in the United States Navy, During a Voyage Around the World in a Ship-of-the-Line* (1855, reprint ed. Annapolis, Md.: Naval Institute Press, 1985), 74-75.

Wardroom and Cabin Dining

It has been said that in the sailing navies, sailors ate and officers dined.⁸⁶ Generally, the officer experienced different foods at sea than his shipmates forward of the wardroom. All officers were allowed and expected to draw one ration per day while at sea. Moreover, all commissioned and warrant officers above midshipman received additional rations according to their rank. This did not mean that the officers consumed more than three meals per day: the additional rations were not issued, but rather the officers received the cash equivalent to augment their pay. During the War of 1812, the annual cash value of each extra ration was \$72. After December 31, 1813 it rose to \$90.⁸⁷ The officers typically clubbed together to procure provisions for the wardroom mess. Usually one officer volunteered his services as mess caterer and bought provisions in bulk. Included among the comestibles could be found such delicacies as smoked oysters, dried fruits, jellies, and fine wine. The last item probably made up the largest portion of the private sea stores. When Commodore Edward Preble sailed to the Mediterranean in 1803 with Consul General Tobias Lear aboard, he purchased a half-pipe and six demijohns (about five gallons each) of ordinary madeira, 20 bottles of fine Madeira, 10 dozen bottles of old port, four cases of claret, two barrels of strong beer, six hogsheads of London porter (about 65 gallons each), eight gallons of old cognac, two cases of gin, a case of cherry brandy, and 10 dozen bottles of cider, among other liquors.⁸⁸ While she lay in Boston Harbor in 1813, *Constitution's* officers placed a large order for alcohol. On October 7, "1 doz. [bottles] Brown Stout" came aboard, and six days later there were "12 doz [bottles] Porter" delivered. On October 9, D.W. Bradlee provided two iron-bound casks of "old Madeira." In the middle of November, Cushing and Clark sent on board six casks of gin totaling 654 gallons. Finally, in December, Cushing and Clark also sent on board four hogsheads of rum totaling 434 gallons (this may have been for the ship's company). It is unlikely that the beer, gin, or Madeira were intended for the crew (unless they were hospital stores). Likewise, the amounts purchased would not have sufficed for a long cruise, so the officers probably consumed it while the ship remained in port. In addition to liquor, the officers frequently owned the largest proportion of livestock on board, thereby assuring a supply of fresh eggs, meat, and

⁸⁶ Sandra L. Oliver, *Saltwater Foodways* (Mystic, Conn.: Mystic Seaport Museum, 1995), 84.

⁸⁷ McKee, *Gentlemanly and Honorable Profession*, 490-491.

⁸⁸ *Ibid.*, 451.

milk for several weeks at sea.

Still, providing food for oneself for a three- or four-month voyage could seriously strain a young officer's finances. Assheton Humphreys, chaplain on *Constitution*, confided in his journal after a trying series of stormy days:

Add to all these little sea miseries that the last bone of the fresh beef we brought out from Boston was finished by the first lieutenant to day [sic] at dinner, and unless we shortly fell in with something of a prize salt junk and biscuit must be our portion, for as to any thing [sic] else 'tis wholly out of the question. Indeed so miserably poor were we all when we left port, by reason of treasury notes being at 30 Per cent discount, and too proud to ask for credit (and in fact I have been since assured that we were looked upon so indifferently that the credit of every man seen in conversation with a navy uniform was in some degree rendered equivocal) that save a few pounds of fresh beef and an ounce or two of sugar & tea, the parsimonious savings of the caterer, we had nothing. Things must mend when at the worst and it is now as near that as can be without being really the case, so a little salt beef and a glass of grog and I'll turn in, trusting to chance for better fare on the morrow.⁸⁹

Humphreys' assertion that naval officers had trouble buying sea stores on credit highlights one of the most unfortunate aspects of genteel living: an officer's mess-bill could be alarmingly excessive. Midshipman Charles Lacey's account book for 1809 shows that between April and December he spent \$25 on "mess stores."⁹⁰ During the same period he made \$19 per month - and midshipman did not receive extra rations - so his mess stores cost 14 percent of his income. Most likely the steerage (sailor) mess lived frugally. The wardroom generally lived in better style, but also had to bear the burden of frequent dinner guests. More often than not, most junior officers simply subsisted on the same fare as the common seamen.

⁸⁹ Assheton Humphreys, *The USS Constitution's Finest Fight, 1815. The Journal of Acting Chaplain Assheton Humphreys, US Navy*. Tyrone G. Martin, ed. (Mount Pleasant, SC: The Nautical & Aviation Publishing Company of America, 2000), 7-8.

⁹⁰ "Charles Lacey's Cash Book, April 10, 1809 - July 23, 1810," Charles Lacey Papers, 1809-1814, Booth Family Center for Special Collections, Georgetown University.

The Parting Glass

Naval rations have formed the backdrop of many lurid sea story over the years, yet when one examines the historical record, it quickly becomes clear that many of these tales are highly exaggerated and reflect extraordinary conditions instead of the commonplace. In reality, the navy by both law and custom provided its crews with the best food available. While it did so within the limits of 19th century technology, and with inadequate preservation techniques, the food that naval sailors consumed was often much better than that served to their counterparts in the merchant service. As one veteran recalled, “I can say conscientiously, that were my life to be passed over again, without the hope of commanding a vessel, it should be passed in the navy. The food is better, the service is lighter, the treatment is better, if a man behave himself at all well, he is better cared for, has a port under his lee in case of accidents, and gets good, steady, wages, with the certainty of being paid.”⁹¹ While the occasional barrel of beef or biscuit had to be condemned as unfit for human consumption, naval rations were for the most part wholesome and plentiful, providing seamen with the energy necessary to sail and fight a vessel. The highpoint of the day at sea, the dinner hour was a time for camaraderie and relaxation. A ship’s officers, and the Navy Department, too, knew that a well-fed crew worked more efficiently and willingly, and they took pains to ensure that the men had all that their hearts, or stomachs, could desire.

⁹¹ Ned Myers, *Ned Myers; or, A Life Before the Mast*, James Fenimore Cooper (1843, James Fenimore Cooper reprint ed. Annapolis, Md.: Naval Institute Press, 1989), 212-13.

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