

**A SEARCH FOR SUSTENANCE:
FOOD, NUTRITION AND AGRICULTURE
IN BENJAMIN FRANKLIN'S WRITINGS**

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In the *Autobiography*, Franklin recounts his father's disinterest in culinary matters.

At his Table he lik'd to have as often as he could, some sensible Friend or Neighbour, to converse with, and always took care to start some ingenious or useful Topic for Discourse, which might tend to improve the minds of his Children. By this means, he turn' d our Attention to what was good, just, and prudent in the Conduct of Life; and little or no Notice was ever taken of what related to the Victuals on the Table, whether it was well or ill drest, in or out of season, of good or bad flavour, preferable or inferior to this or that other thing of the kind: so that I was bro' t up in such a perfect Inattention to those Matters as to be quite Indifferent what kind of Food was set before me; and so unobservant of it, that to this Day, if I am ask' d I can scarce tell, a few Hours after Dinner, what I din' d upon¹.

At the age of 16 (in 1722), Franklin adopted vegetarianism, having read Thomas Tryon's book, *The Way to Health, Long Life and Happiness, or a Dis-*

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¹ Benjamin Franklin, *The Autobiography of Benjamin Franklin*, Leonard W. Labaree, et al., eds. New Haven, 1964, p. 55.

course of Temperance (2d ed., London, 1691)¹. Although his dietary habits were often ridiculed, he maintained the advantages of a «greater Clearness of Head and quicker Apprehension which usually attend Temperance in Eating and Drinking». In addition, he was able to save money for books.

However, on the voyage from Boston to Philadelphia, his observations on larger fish eating smaller fish led Franklin to conclude,

If you eat one another, I don't see why we mayn't eat you. So I din' d upon Cod very heartily and continu'd to eat with other People, returning only now and then occasionally to a vegetable Diet. So convenient a thing it is to be a reasonable Creature, since it enables one to find or make a Reason for every thing one has a mind to do (Autobiography, p. 98).

In Philadelphia, the journeyman printer Franklin persuaded his employer, Samuel Keimer, to follow the tenants of vegetarianism, at least for a while.

We had our Victuals dress' d and brought to us regularly by a Woman in the Neighbourhood, who had from me a List of forty Dishes to be prepar' d for us at different times, in all which there was neither Fish, Flesh nor Fowl, and the whim suited me the better at this time from the Cheapness of it, not costing us above the 18 d. Sterling each, per Week. I went on pleasantly, but poor Keimer suffer' d grievously, tir' d of the Project, long' d for the Flesh Pots of Egypt, and order' d a roast Pig. He invited me and two Women Friends to dine with him, but it being brought too soon upon the table, he could not resist the Temptation, and ate it all up before we came (Autobiography, p. 89).

What sources did Franklin consult on health and diet during the span of his *Almanack*, between 1733 and 1759?

Tobias Venner's *Via Recta ad Vitam Longam* (1628) was one of the most popular Seventeenth Century works. Venner, who lived to the age of eighty-three, advocated a moderate diet and the curative waters of Bath. John Arbuthnot's *Practical Rules of Diet...* (1732) and Louis Lemery's *A Treatise of All Sorts of Foods, Both Animal and Vegetable...* (1745, translated by D. Hay from the French) were more general in their writings on food. Lemery's work, a dictionary of edibles containing their nutritional value, first appeared in 1702. Much of his scientific writings dealt with problems of chemical analysis, especially of organic materials².

The *Aphorisms of Hippocrates and Sanctorius* (1712), and Jeremiah Wainwright's *A Mechanical Account of the Non-Naturals: Being a Brief Explanation of the Changes Made in Human Bodies, by Air, Diet, etc.* were also in Franklin's library.

¹ *Autobiography*, p. 63.

² «Louis Lemery», *Dictionary of Scientific Biography*, 8, 1973, p. 171.

Medical handbooks, such as Quincy's *New Dispensary* (1753), Culpepper's *English Physician*, and Allen's *Synopsis Universae Medicinae*, a compilation of practice and advice of the most famous physicians from antiquity to the compiler's day, were owned by Franklin. The latter was regarded as so valuable for laymen that the Library Company ordered it in its first shipment of 1732¹.

Poor Richard's, with a circulation of almost ten thousand copies per year, promoted Franklin's views on the diet to an audience that had little access to information of this kind elsewhere.

The state of chemistry in the first half of the eighteenth century was rudimentary to say the least. There was no science of nutrition during most of Franklin's lifetime. However, dietetics and nutrition education, like medicine, are practical, applied sciences, and the problems of daily life with which they are concerned have always existed in some form or other and have had to be addressed.

Poor Richard's Almanacs contained numerous references to health and diet. The 1742 *Almanac* includes «Rules of Health and Long Life, and to Preserve from Malignant fevers and sicknesses» and «Rules to find out a fit measure of meat and drink». The reader is advised to consult the original source, Tom Tryon's *The Way to Health* in a note at the conclusion of the pieces.

The pronouncements on eating and health recommended that one «eat to live and not live to eat (1733); «He that never eats too much will never be lazy» (1756); «Few die of hunger, one hundred thousand of eating» (1736); «A full Belly is the Mother of all Evil» (1743); «a full Belly makes a dull Brain» (1758); and «Be temperate in Wine, in eating, Girls, and Sloth, or the Gout will seize you and plague both» (1734)².

From Franklin's correspondence with Jacques Barbeau Dubourg, a Parisian physician who translated Franklin's works into French, we learn of another physician who made experimental studies. Franklin writes,

Having some suspicions that the common notion, which attributes to cold the property of stopping the pores and obstructing perspiration was ill founded, I engaged a young physician, who is making some experiments with Sanctorius' balance to estimate the different proportions of his perspiration, when remaining one hour quite naked, and another warmly clothed. He pursued the experiment in this alternate manner for eight hours successively and found his perspiration almost doubled during those hours in which he was naked³.

¹ See Edwin Wolf II, «Frustration and Benjamin Franklin's Medical Books», in Randolph S. Klein ed., *Science and Society in Early America: Essays in Honor of Whitfield J. Bell, Jr.*, Philadelphia, 1986, pp. 57-91. *Memoirs*. American Philosophical Society, vol. 166.

² See Whitfield J. Bell, Jr. compiler, *The Complete Poor Richard Almanacks*, Barre, 1970, 2 vols.

³ See Franklin C. Bin, «Nutrition Research in the Age of Franklin», *Journal of the American Diabetic Association*, 68, January 1976, pp. 16-18.

Apparently Dr. Dubourg wished more information about these experiments for, in a letter dated May 4, 1773 at London, Franklin wrote that the young physician was dead and his notes lost. In 1788, however, the notes were published posthumously in a slim volume, with an introduction by the editor, James Carmichael Smyth. The deceased doctor's name was William Stark. One section of his book provides a description of the statistical experiments in which he weighed himself every hour during the day, on going to bed, and on arising in the morning, with the records of the quantities of his urine, feces, and perspiration¹.

The interesting thing about these reports is the diet which Stark says he consumed. From December 5 to December 23 (the year not stated but probably 1768), he ate daily one and one half pounds of flour, four pints of water, twelve drams of salt, and usually some oil of different kinds to with the flour.

Stark's low intake of ascorbic acid must have exhausted his tissue stores long before beginning additional experiments in June, 1769. These experiments were begun to determine if a diet restricted to very few foods might be conducive to health, and are described in another section of Smyth's book, *The Works of the Late William Stark, MD*.

Smyth mentioned in his introduction that, «Franklin informed me, that he himself, when a journeyman printer, lived a fortnight on bread and water, at the rate of ten pounds of bread per week, and that he found himself stout and hearty with this diet».

The term «stout» in this context means «well». At the time he began these experiments, Stark was twenty-nine years old, six feet tall and weighed one hundred and seventy one pounds avoirdupois. He started with a diet consisting only of thirty ounces (troy) of bread daily, plus water for thirty-six days; losing weight, he then increased his bread intake. In forty-three days he had dropped over fifteen pounds. Without a pause, he continued on this bizarre diet and made records until a few days before he died on February 23, 1770, at the age of thirty.

Stark certainly pushed Franklin's dietary advice to the limit — but it was a nutritional test which the scientific community discussed with much interest. Dr. John Pringle conducted the autopsy on Stark.

The botanical and agricultural interests of Franklin were nurtured by a host of collectors and scientists. In particular, John Bartram, who served as the Royal Botanist in America, exchanged information and seeds beginning in the latter part of the 1730's with Franklin. Access to the Library of the Junto greatly aided the naturalist's work.

¹ Benjamin Franklin, *The Papers of Benjamin Franklin*, Leonard W. Labaree *et al*, eds., New Haven, 1959, XX, p. 195.

Bartram's correspondence with the English Quaker, Peter Collinson, created a link between the leading naturalists on the continent and in America. It was Bartram who told Franklin of his desire to form an organization devoted to the study of «natural secrets arts and syances» (*Papers*, II, p. 379). Shortly thereafter, Franklin founded the American Philosophical Society for «Promoting useful knowledge among the British Plantations in America» in 1743.

The *Proposal* for the Society notes

that the Subjects of the Correspondence be, All new-discovered Plants Herbs, Trees, Roots, etc., their Virtues, uses etc., Methods of Propagating them, and making such as are useful... Improvements of vegetable Juices, as Cyders. Wines, etc... (*Papers*, II, p. 381).

Foreign plants and grains that could be cultivated in America were of interest to the Philosophical Society members. Franklin is credited with the introduction of Scotch kale, kohlrabi and Swiss barley into the colonies¹. He sent Bartram seeds of the rhubarb plant (there are about twenty-five species native to Asia), which has medicinal qualities. This plant should not be confused with the common garden variety, known as pie-plant, and already found in America.

Another naturalist with whom Franklin corresponded was John Ellis. An active member of both the Royal Society and the Royal Society of Arts, Ellis submitted seeds for shipment by Franklin to gardeners in North America as early as 1761. By 1770, his appointment as Royal agent for West Florida and Dominica facilitated the shipment of American seeds abroad².

The Philosophical Society reprinted Ellis' *Catalogue of such Foreign Plants, as are worthy of being encouraged in our American Colonies...* in Volume 1 of its *Transactions* (1769). Among the comestible plants recommended for cultivation in the Colonies were olives, pistachios, carob, soya, almonds, figs, capers, mangos and lychees. A number of spices including pepper, cinnamon, cardamom, tumeric, nutmeg, cloves and anise were suggested. Instructions for safely packing seeds and plants for long sea voyages were outlined as well.

Ellis' promotional literature on the merits of the coffee plant, which Franklin read and found very interesting in 1773, and tracts on the mangostan and the breadfruit, were done with the utmost concern for botanical detail.

Ellis was elected to the Philosophical Society in 1774 and hailed by Linnaeus as «the main support of natural history in England»³.

¹ Carl Van Doren, *Benjamin Franklin*, New York, 1938, p. 429.

² See Roy A. Rauschenberg, «John Ellis, F.R.S.: Eighteenth Century Naturalist and Royal Agent to West Florida», *Royal Society of London, Notes and Records*, 32, 1978, pp. 149-164.

³ «John Ellis», *Dictionary of National Biography*, VI, 1967-68, p. 703.

Plants from America were also introduced abroad. The «Newtown Pippin» was the first American apple which attracted attention in Europe. After the receipt of specimens by Franklin in London in 1759, and the subsequent sending of grafts to Collinson, by Bartram, numerous attempts were made to grow the variety in England.

In 1773, Michael Collinson, son of Peter, wrote to John Bartram, «Your American apples have been an admirable substitute this season, many of our merchants have imported great quantities of them».

The Newtown Pippin was generally distributed throughout the apple-growing districts of the Atlantic slope¹.

Franklin brought knowledge of various American plants to France, including nutbearing trees like the hickory and walnut².

In the same 1770 letter to Bartram about rhubarb, Franklin mentions an account of a Father Navaretta, a Jesuit missionary to China, who describes torn (bean curd — tau-fu) as a cheese-like product made from garbanzos beans. «This,» Franklin says, «so excited my curiosity, that I caused inquiry to be made of Mr. Flint who lived many years there, in what manner the cheese was made; and I send you his answer. I have since learnt, that some runnings of salt (I suppose runnet) is put into water when the meal is in it, to turn it to curds» (*Papers*, XVII, pp. 22-23).

The composition of the tofu from soybeans was of much interest to Franklin. Samples of Chinese Vetches, six bottles of Soy and six pounds of powdered sago were presented in 1769 to the Philosophical Society by a Mr. Bowen of Charleston, South Carolina. Franklin, appointed Colonial Agent for Georgia in April 1768, must have played a role in the introduction of soybeans as a crop near Savannah at about this time.

Franklin, the economist, placed agriculture first among the industries. He believed, with the Physiocrats of France, that agriculture is the chief source of wealth.

In 1768 he wrote to a friend, «Agriculture is truly productive of new wealth; manufacturers only change forms, and whatever value they give to the materials they work upon, they in the meantime consume an equal value in provisions. So that riches are not increased by manufacturing...» (*Papers*, XV, p. 52).

As late as 1784, Franklin was still of the opinion that the «first Elements of wealth are obtained by Labour, from the Earth and Waters... He that puts a Seed

¹ See S.A. Beach *et al*, State of New York, *Department of Agriculture Report of New York Agricultural Experimental Stations*, 1905, pp. 147-148.

² Franklin Institute. National Franklin Committee. «Benjamin Franklin and Agriculture», 1948, p. 3.

into the Earth is recompens'd perhaps, by receiving twenty out of it; and he who draws a Fish out of the Waters, draws up a Piece of Silver»¹.

In a letter to John Bartram dated July 9, 1769, Franklin writes, «...and for one I confess that if I could find in any Italian travels a Receipt for making Parmesean Cheese, it would give me more Satisfaction than a Transcript of any Inscription from any old Stone whatever» (*Papers*, XVI, pp. 172-173).

The recipe appeared in *Lloyd's Evening Post*, December 20-23, 1773 (a fitting Christmas present for Franklin). Entitled, «Manner of making the Parmesan Cheese, as observed by Dr. Leith, and by him communicated to B. Franklin, Esq». Leith, a Scottish physician and Fellow of the Royal Society, describes Italian cheesemaking, with specifics regarding the technical aspects of the process. The chemistry of rennet, a curdling agent, that Franklin alludes to in his tofu letter, is noted by Leith. He adds that «Parmesan is not made at present in the neighborhood of Parma, but is solely the produce of the State of Milan... and that made near Lodi is the most esteemed». Franklin had sent Parmesan recipes to a number of friends prior to 1773, so it is likely he received Leith's information earlier (*Papers*, XX, pp. 506-509).

In a volume of the *Histoire naturelle* published in Paris in 1761, the French naturalist Georges Louis Buffon argued that animal species in America were less varied, smaller and less vigorous than those of the Old World because of the unfavorable cooler and more humid climate, natural to a continent which remained underwater longer than the rest of the world².

However, Buffon believed in man's power to overcome an unfavorable environment, and that the American settlers would succeed in clearing and draining the land and making it fertile and healthy.

The idea that the climate and soil of places on the same latitude could accommodate similar crops is set forth in the «Preface» of the Philosophical Society's *Transactions*, Volume 1, of 1769.

Since Philadelphia, Peking, Madrid and California (around the San Francisco area today) are all at forty degrees latitude, plants from one locale will thrive at any of the other sites. This universalist idea was quite evident in John Ellis' *List of Plants for America*, published in the same volume of *The Transactions*. If the nutritive qualities of soil in America were as rich as the other continents, then there could be no scientific justification for the theory of American degeneracy.

¹ See Benjamin Franklin, *The Writings of Benjamin Franklin*, ed. Albert H. Smyth, 10 vols. New York, 1905-1907, IX, p. 246 and X, p. 122.

² See Durand Echeverria, *Mirage in the West: A History of the French Image of American Society to 1815*, Princeton, 1957, esp. pp. 8-15.

The cause-and-effect relation between climate and the inferiority of colonials to Europeans was the theory of Cornelius De Pauw. His controversial *Recherches philosophiques sur les Americains*, published in Berlin in 1768, claimed that not only were the American Indians physically, morally, and intellectually inferior to the Europeans, but that the colonials were degenerate, as well.

De Pauw, a minion of Frederick the Great, in part opposed the flow of emigrants preparing to sail for America. He claimed that England had taken more than five hundred thousand men and women from the various German states to send them to die as slaves in Pennsylvania.

Although De Pauw's arguments on America were lost in the triumph of Rousseau and the pro-Americanists in the 1770's and 1780's, the degeneracy theory became widely diffused in the fabric of French thought¹.

Jefferson, Franklin's co-defender of America in this dispute, recalled an anecdote that Franklin had told him about Abbe Raynal at a dinner party held at Passy, in which half the guests were French and the other half American. During the dinner, Raynal got on his favorite theory of the degeneracy of animals and even of man, in America, and urged it with his usual eloquence. The Doctor at length noticing the accidental stature and positions of his guests at the table suggested that both parties rise and «we will see on which side nature has degenerated». The Americans towered over the Frenchmen, who were «remarkably diminutive, and the Abbe himself particularly was a mere shrimp»².

Franklin's appointment as Commissioner to France with Silas Deane and Arthur Lee in 1776 introduced him into the Paris scientific circles. Among the savants he met was Antoine-Augustin Parmentier. Trained as a pharmacist, Parmentier's actual work as a chemist opened new horizons in agricultural research. Unlike most of the agronomists at the time whose work was primarily in the fields, Parmentier conducted laboratory experiments. His first paper examined edible produce that could substitute for ordinary food items during unproductive periods of cultivation. It was submitted to the Academy of Besançon as part of a competition, a standard procedure for the eighteenth century learned societies.

Jacopo Beccari, a physician and president of the Academy of Bologna, first analyzed the components of flour, gluten and starch in the mid-century. However, Parmentier believed, unlike Beccari and most scientists of the day that starch contained the nutritional value in flour. The darker the flour, the greater the amount of bran and of glutinous matter. He concluded that white bread was

¹ For a detailed account of De Pauw's view, see Antonello Gerbi, *The Dispute of the New World: The History of a Polemic, 1750-1900*, Pittsburgh, 1973, esp. pp. 52-79.

² P.M. Zall, ed., *Ben Franklin Laughing: Anecdotes from Original Sources by and about Benjamin Franklin*, Berkeley, 1980, p. 138.

less nutritious than black, again an idea not commonly held by the scientific community. His search for a vegetable yielding starch now seemed clear. The potato would be the vegetable with which to experiment. Parmentier's *Ouvrage économique sur les pommes de terre* (1778) relates far more than the experiments on the potato: descriptions of different kinds of potato, cultivating and planting, advice on preparation, cooking and seasoning as well as recipes for making bread with potato flour instead of wheaten flour. Potatoes were recommended as a supplement to grain because they flourished in conditions of soil and climate that are deleterious to grain. They would also be preferable in various forms rather than as a bread¹.

The French government supported his research providing poor quality lands where Parmentier cultivated potatoes. The theft of part of the crop served to bring the kind of notoriety to the vegetable its promoter could only hope for.

In November 1778, Franklin attended a fashionable dinner at which Parmentier served his potato bread. A guest described it «as beautiful, as fluffy, as white as the best rolls»².

Franklin and his friend, Antoine Lavoisier, attended another Parmentier banquet where each course served was made from potatoes, including a potent liquor.

Michel Morineau's detailed study of the nutritional importance of potato in eighteenth century Europe also reveals the stigma associated with eating the potato in France because it had served as animal feed, especially for hogs³.

Approximately three thousand five hundred to four thousand calories per day is the average requirement for a man in a prosperous country today.

The level for the urban masses of Paris prior to the French Revolution was about two thousand calories per day. However, one must consider in arriving at this figure that there are limited records available, and that there is disagreement regarding the reliability of calories as an index of a healthy diet. By a healthy diet, I mean a balance between carbohydrates, fats and protein. Wine and alcohol are never calculated above ten percent of caloric consumption.

Cereals accounted for fifty percent of the sum or nearly a pound of bread a day in 1780 Paris. In 1782, a French peasant or working man consumed two or three pounds of bread a day, «but people who have anything else to eat do not consume this quantity», according to a contemporary account⁴.

¹ See Charles C Gillispie, *Science and Polity in France at the End of the Old Regime*, Princeton, 1980, esp. pp. 370-375.

² Claude-Anne Lopez, *Mon Cher Papa: Franklin and the Ladies of Paris*, New Haven, 1990, p. 161.

³ See Robert Forster, ed., *Food and Drink in History*, Baltimore, 1979, esp. pp. 17-36.

⁴ Fernand Braudel, *Capitalism and Material Life, 1400-1800*, New York, 1973, p. 90. Le Grand d'Aussy made these observations.

This was the Paris of Antoine-Alexis Cadet de Vaux, who practiced pharmacy on the Rue St. Antoine, from 1769 to 1781. He championed the disinfection of cesspools and wells, the reform of sanitary conditions in prisons, industrial hygiene, and the removal of cemeteries from the center of Paris¹.

The Franklin-Cadet de Vaux correspondence at the American Philosophical Society runs from 1778 through 1785. The letters, mainly from Cadet, touch on Parmentier's research on potatoes and bread, observations on bread in America, the Franklin stove, experiments for the preservation of wheat and flour, and an invitation to the opening of l'Ecole de Boulangerie (1780), founded by Parmentier and Cadet, where the latter held the official title of Professor of Baking. One letter proposes establishing ties between the Ecole and the Philosophical Society².

Franklin designed in 1783 a special stove at Cadet's request, substituting coal for wood to fuel it. The next year Franklin sent his colleague some bread baked on his stove³.

At Franklin's urging, Cadet acquired «Indian Flour» (cornmeal) from America and assayed its qualities. The importance of corn or maize in Europe has not been fully appreciated. It was the least expensive foodstuff in relation to its caloric content. In France circa 1780 corn «cost about eleven times less than meat, sixty-five times less than fresh sea fish, nine times less than fresh-water fish, and three times less than butter and oil. Corn, the primary source of energy, was third in the expenditure after meat and wine in budgets calculated for the average Parisian in 1788, seventeen percent of the total expenditure»⁴. It was the manna of the poor.

Franklin's essay, *Observations on Maize, or Indian Corn* was sent to Cadet in April of 1785 and subsequently published in the *Journal de Paris* under the heading «Economie», on February 17, 1786⁵. This last piece Franklin wrote in Europe besides letters, revealed all that was then known about the use of corn as food for men and animals. Green corn roasted, boiled, or dried, lye hominy, corn meal, coarse or fine, hasty pudding, hoecake, cornbread, popcorn, corn syrup, corn liquor and corn fodder were included in much the same way that Parmentier praised the potato.

The merits of corn in the American diet had been noted earlier by Franklin in two pieces concerning the Stamp Act in 1766 (*Papers*, XIII, pp. 7-8, pp. 44-49).

¹ «Cadet de Vaux», *Dictionary of Scientific Biography*, 3, 1971, pp. 6-7.

² Cadet de Vaux to Franklin, March 19, 1783.

³ Alfred Owen Aldridge, *Franklin and his French Contemporaries*, New York, 1957, pp. 176-177.

⁴ Braudel, p. 90.

⁵ Aldridge p. 177.

To suggest that Franklin scorned the refinements of the French table would be an insult to his universal curiosity. He never demonstrated the interest in compiling a regular cookbook giving long lists of French dishes and detailed recipes as Jefferson had done. He was willing to learn from them, but he was equally eager to introduce them to what was best in Anglo-American cooking.

A collection of recipes in the *Franklin Papers*, consisting of sixteen pages in French, followed by English translations, further illuminates the culinary Franklin. It is an unsystematic collection, probably not arranged in its original order with texts written in different hands by persons whose French was fairly good, but whose spelling was uncertain.

While Franklin did not invent the dishes, he suggested delicate improvements and refinements based on Hannah Glasse's book, *The Art of Cookery made plain and easy...*, anonymously published in London in 1760. It served as the main source of Franklin's gastronomic inspiration while he was in France.

Before the end of the eighteenth century, the French always served beef with very complicated sauces. Franklin's simple «boeuf grille» (grilled beef) is the most important of the recipes. There are others for oyster sauce with boiled turkey; sauce for boiled ducks or rabbits; instructions for roasting a pig; making mince pies; apple pudding and baked rice pudding.

A beverage concocted from rum, orange juice and sugar (Orange Shrub) and a spruce beer are described¹.

If the gout taunts Franklin for his gastronomic excesses, the good Doctor need only mention the «Water-American» — a robust and hardy New World being created through experiments in nutrition. He could out perform his Old World beer-guzzling colleagues at the London printing shop. The impact in the scientific community was most impressive. Dr. Stark gave his life trying to become the Water-American.

Cadet de Vaux in the *Journal de Paris* (March 27, 1786) still pays homage to him. The spirit of the Water American prevails to promote the fertile qualities of physical, moral and intellectual excellence that Franklin ardently believed resides in the New World.

¹ See Gilbert Chinard, ed., *Benjamin Franklin on the Art of Eating...*, Philadelphia, 1958, esp. pp. 5-39.