The Villefranche Map for the Defense of the Delaware

The printed minutes of the Supreme Executive Council of Pennsylvania for Friday, May 14, 1779, contain four misspellings of French proper names. According to these minutes, President Joseph Reed laid “before the Board a very complete & elegant draught of the proposed Fortifications for the defence of the River Delaware & the City, made by the General De Portail & his Assistants, at the joint instance of Gen’l Washington & this Board.” Following this first entry in the minutes is a resolution of thanks to the said General De Portail, and one of compensation for their services in orders drawn on the treasurer for $2,000 to the general, $1,000 to “Col. La Radine, assistant Engineer to Gen’l De Portland,” and $600 to “—— Villetanche.”

If we refer to the holograph fair copy of the minutes of May 14, 1779, and beyond that to the rough copy, both of which are in the Division of Public Records of the Pennsylvania Historical and Museum Commission in Harrisburg, we find that the names De Portail and La Radine were misspelled in the original; we discover, however, the proper and correct spelling of the name of Monsr. Villefranche. American scribes may have had difficulty in 1779 in catching the sounds and spellings of the names of French officers in Washington’s army, but it was a modern printer who, making it once Vallepanche and once Villepanche, distorted the name of Major Jean Louis Ambroise de Genton, Chevalier de Villefranche, the gentleman most responsible for the fineness of drawing and the elegance of detail in the map of the “proposed Fortifications for the defence of the River Delaware & the City.” The Chevalier de Villefranche was a map maker par excellence.

For the completeness of the map, found in the late summer of 1959 in the Bureau of Land Records, Harrisburg, credit certainly belongs

1 Colonial Records, XI (Harrisburg, 1852), 776. Italics are the author’s.
to the prior reconnaissance of General Louis Le Bèque Duportail and his first assistant, Colonel Lewis de la Radière. These two officers, trained in Louis XVI’s Royal Corps of Engineers, had come to America in 1777 through arrangements made with Benjamin Franklin, and, under the secret sanction of their king, had been rendering valuable aid to Washington. On the eve of Valley Forge, Radière had been sent to New York State to busy himself with the defenses of the Hudson. Duportail, at Washington’s side for a period of several months, had given paramount service at Valley Forge by designating the positions for its fortifications and entrenchments, and by directing their construction early in 1778.

Few more interesting incidents can be narrated in the history of the American Revolution than those surrounding the coming to this country of Louis Le Bèque, Chevalier Duportail, and his three companion engineers: Lewis de la Radière, Jean Baptiste Joseph, Chevalier de Laumoy, and Jean Baptiste Gouvion. The four men left the seaport of Nantes in early March, 1777, under assumed names; they sailed to Santo Domingo in the Spanish West Indies, and transshipped from there to New River, North Carolina. In July, under their own aristocratic names, they were confirmed by the Continental Congress in commissions in the American army. Commissions in hand, they presented themselves on July 29, 1777, to General Washington on the New Jersey side of Coryell’s Ferry on the Delaware. On that same day, Washington sent Colonel Duportail back to Philadelphia with a letter to General Horatio Gates, informing Gates that the young Frenchman was to assist him and General Mifflin “in reviewing the grounds on the west side of Delaware, and fixing upon proper places to form Encampments or throw up Works should the Enemy make their approaches on that side.”

This was the sort of mission particularly esteemed by Duportail.

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2 For these arrangements, negotiated through the French Minister of War, see Elizabeth S. Kite, “General Washington and the French Engineers: Duportail and Companions,” Records of the American Catholic Historical Society, XLIII (1932), 20, hereinafter cited as Kite, with volume and page number from the Records.
3 Ibid., 194–195.
4 For Duportail’s map of Valley Forge, on the basis of which the modern restorations of the encampment have been effected, see The Pennsylvania Magazine of History and Biography (PMHB), LVI (1932), facing p. 344.
5 Kite, XLIII, 23, 24, 25, 28, 29.
From it he was to gather his first professional experience in America; the work on which he was to establish his reputation would come later.

Before the new works could be established below the mouth of the Schuylkill on the Delaware River, the American army had suffered the reverses at the Brandywine and at Germantown in September and early October, the British had occupied Philadelphia, and British ships were making their way up Delaware Bay and into the river. Duportail was with Washington at Whitemarsh during the week that the heroic defense of Fort Mifflin on Mud Island was being broken; he had been fatefully denied any real part in that defense. When the reduction of the fort by the British and its consequent surrender came in mid-November, Washington needed him elsewhere.

There is no need to recount at any length the numerous experiences of Duportail and his aides during the long years of the American Revolution. That story was capably told thirty years ago by Elizabeth S. Kite in the several installments of her monograph "General Washington and the French Engineers: Duportail and Companions," published in the Records of the American Catholic Historical Society for 1932 and 1933. Further details can be found in the many volumes of The Writings of George Washington, edited by John C. Fitzpatrick.

From Miss Kite we learn that Duportail had not only served Washington at Valley Forge, but, on instructions from the general dated August 27, 1778, had made an "intense examination" of the several fortifications in the Highlands of New York which had been designed and erected in 1778 for the defense of the Hudson River. Moreover, on May 11, 1779, just three days before the "elegant draught" for the defense of the Delaware was presented to the Supreme Executive Council, the now Brigadier General Duportail had so won the approval of Congress that he was appointed to the position in the Continental Army which both he and Washington had long thought should be created—Commandant of the Corps of Engineers.

During these two years, Colonel Radière had also achieved some eminence. As early as October 8, 1777, Washington, from Skippack

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6 Ibid., 98-104.
7 Ibid., 210-211. Duportail prepared a memorial on these fortifications for Washington on Sept. 13. Ibid., 211-216.
8 Ibid., 315.
Camp in Pennsylvania, ordered the French engineer to Fort Montgomery on the Hudson where he was to take over the direction of such "Works as might be deemed necessary by the commanding officer in the Highlands." Washington notified General Putnam that Radière was "the second in command of four gentlemen sent out by Dr. Franklin and Mr. Deane." If compliance with his orders and adherence to his concepts as a trained army engineer led to differences of opinion between Radière and Putnam over the best locations for forts in the Highlands, and if the appointment by Congress of the Polish patriot Thaddeus Kosciuszko to similar duties led to further complications at the fortifications at West Point, it is nevertheless true that Radière performed major services on this assignment in 1778 before becoming General Duportail's first assistant in Philadelphia in the late months of that year. In 1779, Radière returned to New York State, where he was again working on the defenses at West Point and in the Highlands at the time of his death on October 30.

The career of Duportail's third companion, the Chevalier de Laumoy, was checkered with misfortune. In Philadelphia, in late October, 1778, Duportail assigned him "to prepare the way, by taking plans of the River and the Adjacent Country." But it became necessary that one of the French engineers be sent to the aid of the American forces embattled in the South; in February, 1779, Laumoy was ordered by Duportail to report to General Benjamin Lincoln in South Carolina. In June of that year, Laumoy was wounded in action at Stono Ferry; in early October, he was in charge of batteries of thirty-eight heavy cannon and eight mortars when Count D'Estaing's French forces and General Lincoln's Americans were attempting to take British-held Savannah, and later that month he suffered their catastrophic defeat. In May, 1780, Laumoy was taken prisoner at the fall of Charleston, South Carolina, together with

9 Ibid., 194-195.
10 Ibid., 195-196, 205-207.
12 Ibid., XIII, 133.
13 Ibid., XIV, 78 and 78 (note).
14 Ibid., 78 (note).
15 Ibid., XVII, 39.
Duportail, who had arrived during the last desperate days of Lincoln's refusal to surrender.\textsuperscript{16} In due course, both men were exchanged. Although he did not share the honors which Duportail received for his brilliant work at Yorktown, Laumoy so far retained the regard of Washington that in 1782, after Duportail had returned to France, he was made his successor as Commandant of the Corps of Engineers.\textsuperscript{17}

Less prominent was the career of Jean Baptiste Gouvion. Yet he, too, won the high respect of Washington for his services under Duportail and Lafayette. Although Washington himself could not do so, he hinted to Lafayette that he would warmly approve any commendation of Gouvion the Marquis might make to the French Minister of War.\textsuperscript{18} In his certificate of service, Washington paid Colonel Gouvion full praise. There he recounted how Franklin contracted with the French engineer in 1777, told of his succeeding promotions in the army, and reported how many of Gouvion's activities had been under his own "immediate inspection." "Particularly," the certificate stated, did Gouvion "exhibit such unquestionable proofs of bravery, activity, intelligence and skill in his profession at the successful Siege of the British Post of York in Virginia" that Congress had promoted him from the rank of lieutenant colonel to full colonel.\textsuperscript{19} In brief, Gouvion's citation for loyalty and competency might well be applied to all that General Duportail and his three companions of 1777 had achieved for the American cause.

The cartographer Jean Louis Ambroise de Genton, Chevalier de Villefranche, did not come to America with Duportail, but was discovered by Duportail in York, Pennsylvania, during the bitter winter of 1777-1778 when the Continental Congress was meeting there. On January 18, 1778, in a memorial to Washington on the theory of fortifications and on plans for a corps of engineers, Duportail wrote that Villefranche was a French officer who was brought to America by Mr. Du Coudray and introduced by him as "Engineer." "For my part," Duportail commented, "I do not give him out as such, because he was not in that character in France and has no such pretensions himself—but he studies with a view to becoming a mem-

\textsuperscript{16} For Duportail's account of the surrender, see Kite, XLIV (1933), 37-40.
\textsuperscript{17} \textit{Writings of Washington}, XXV, 75.
\textsuperscript{18} \textit{Ibid.}, XXVII, 13-14.
\textsuperscript{19} \textit{Ibid.}, 40-41.
ber of the Corps—he has studied Geometry, understands surveying and Drawing, and therefore ought to be very useful to us.”

Being identified with Philippe Du Coudray may not have been much to the advantage of Villefranche, but he had served with that haughty and controversial French major general in August and September, 1777; it is quite possible that he had assisted him during those months when Du Coudray was working on the defenses of the Delaware River on the east shore from Red Bank to Billingsport. The British seizure of those points several months later, their reduction of Fort Mifflin in November, and the death of Du Coudray by drowning in the Schuylkill River on September 17, 1777, had left the aristocratic and wealthy young Villefranche without either a job or a sponsor. His meeting with Duportail in York was thus a fortunate one. Duportail secured him a commission as major in the Corps of Engineers, and during the late winter of 1777–1778 Villefranche was stationed at Valley Forge.

We next hear of Villefranche in connection with his map for the defenses of the Delaware in 1779. On May 14, 1779, in accordance with the instructions of the Supreme Executive Council, President Joseph Reed unquestionably wrote to General Duportail, complimenting him on his defense proposals and assuring him of that “proper sense” of his and his engineers’ service which the state of Pennsylvania would always have. As one of Duportail’s engineers, Villefranche had drawn the map which won such commendation. It must have been equally satisfying to learn that the Council had, at that same meeting, instructed Colonel John Bull to reconstruct the fortifications on the Delaware exactly as recommended by Duportail in the “elegant draught.”

Villefranche’s map—the “very complete & elegant draught”—is drawn on sturdy, unbacked paper and has over-all dimensions of forty-four by sixty-seven inches; at its upper right hand corner is an extension, fourteen by eighteen inches, which pictures the south-eastern corner of Philadelphia. The scale for river depth is one

20 Kite, XLIII, 112.
21 See under Villefranche in Francis B. Heitman, Historical Register of Officers of the Continental Army during the War of the Revolution (Washington, D. C., 1914).
22 Kite, XLIII, 6.
23 Rough draft of minutes, Division of Public Records, Harrisburg.
24 It is regrettable that the size of the Villefranche map precludes its reproduction.
hundred fathoms to an inch, or, as identified and centered above its “Observations,” six hundred fathoms to six inches. Although the purpose of the map was to picture the Delaware River and the mouth of the Schuylkill strictly in relation to modes of defense, it is highly detailed rather than comprehensive. At most, it presents only ten miles of the current of the Delaware, the islands in the Delaware above and below the mouth of the Schuylkill, but little of the Schuylkill river beyond this point; it depicts more of the New Jersey than of the Pennsylvania shore.

Woodlands, swamps, and orchards are set down with faithful accuracy. On the east bank of the Delaware, broad acreages indicate hundreds of individual trees, each outlined with gemlike precision and filled in with delicate green; buildings are in rose; roads intersecting fields and woods are everywhere deftly lined; boundaries between properties are as slender as filaments, but always clear and exact. Yet, as Villefranche labored with the French taste, as it were, of a Fragonard or a Watteau, he did not for a moment forget that his main task was cartography for defense purposes, the defense of a river and a city.

Most expertly, then, Villefranche drew all his shore lines. These he formed with two fine, sharp parallel lines, edging them with clean, lavender sidings to throw the middle space into fair relief. Thus, Hog Island, Mud Island (site of Fort Mifflin), and Province Island are clearly pictured. Beaches and foreshores were also given careful attention: the beaches were left white, the foreshores rendered in wash shadings of pale green.

These features were, however, but an introduction to the shoals and channels, and to the positions of the chevaux de frise in the river and of the forts on shore or on the islands; in the depiction of these, Villefranche is, perhaps, at his best. General Duportail and Colonel Radière, with the aid of Captain Roach,25 had determined by their soundings the location of shoals in the Delaware, and by similar means had traced the courses of the channels. Based on their findings, they had agreed on the usefulness of certain of the old positions of chevaux de frise and on the necessity for new positions of others to

25 This was probably Capt. Isaac Roach, long a pilot and lieutenant of boats on the Delaware, who reported to the Supreme Executive Council on Aug. 3, 1784, on the condition of the chevaux de frise opposite Hog Island. Pennsylvania Archives, Second Series, I, 761.
carry out their own plan of defense. The "Observations" on the map were, of course, prepared by these engineers; the cartographer's task was to translate them accurately into graphic form.

The river shoals were marked by Villefranche as H, I, K and L in lightly punctuated lines. The channels E, F, and G were marked with double lines, carrying their identifying letters at intervals along their courses. The direction of the current downstream was indicated by two seven-inch-long arrows, the points, shafts, and plumes of which were drawn in separate colors, the plumes in a soft and feathery lavender. The existing chevaux de frise were sketched in black; those proposed by Duportail northeast of Mud Island were sketched in red. Each was a diminutive rake-like symbol with slanted tines, and was marked with the depth of water at its position.

It is in his treatment of Fort Mifflin's strategic position in the defense of the river, however, that Villefranche's exactitude reaches its greatest perfection. He provided two outlines: the first, drawn on the map itself, showed the position of the fortifications on Mud Island which the British had destroyed by fire from their battleships and from batteries on two nearby islands; the second outline was cleverly drawn as an overlay so attached to the map that it folded down to cover the old works just to the eastern tip of Mud Island. Not only were the new works, outer battlements, and inner fort outlined on the overlay, but they were executed so exactly that they showed the positions of the gun emplacements, indicated by minute white circles within lavender lines a sixteenth of an inch thick which depicted the bastions and circuits. From each tiny circle an infinitesimally narrow lavender line ran across the overlay, across the beach of Mud Island, and onto the map of the river, terminating in a fine lavender dot. Each line was carried beyond a cheval de frise, either an old or a proposed one; together they pictured the range of gunfire from Fort Mifflin. These fanning lavender lines mark the high point of Villefranche's skill as a cartographer. Moreover, they represent probably the acme of Duportail's engineering ability and the core of his proposed plan for artillery defense of the Delaware River.26

26 It is interesting to note that Duportail's proposed auxiliary redoubts on Province Island and on Carpenter's Island, and the old forts at Billingsport (the English spelling of which eluded Villefranche who marked it "Bilingspor") and at Red Bank on the Jersey shore, have no suggestion of their armaments or range of fire.
The creation of this magnificent map stems from an order issued by Washington several weeks after the British had evacuated Philadelphia. On June 30, 1778, the Commander in Chief instructed Duportail to go to Philadelphia "with such of your assistants as you shall think necessary to take a full and complete Survey of the City, the River Delaware, and the environs in order from a collective view of the whole to form a well-digested plan for the defense of the River and consequently the City." Although it was not practicable to surround the city with sufficient fortifications to withstand every possible land attack, experience had proved that Philadelphia could not be held by the enemy without possession of the Delaware and "a free communication with their shipping." "Your principal attention," Washington told Duportail, "should be directed to the defences of the River. . . . You will therefore have every part of it accurately measured & sounded, the Land on the opposite sides and the Islands in it carefully examined that you may be able to determine the best and most effectual means of obstructing the several Channels, and raising works to cover & protect the obstructions."

He then cited significant particulars from the events of the fall of 1777: "The experiment of last Campaign points out Mud Island as a very interesting spot. The trouble it occasioned the Enemy in so imperfect a State as it was then is an argument of its being capable of the most effectual Defense if judiciously fortified. . . . The Fort on Mud Island was reduced by Batteries erected on Province Island and by the Enemies Shipping which had found out a new Channel by way of Hog Island. Province Island is susceptible of being laid almost entirely under Water, and this new Channel as well as the others may be obstructed by Chevaux de Frise." 27

Villefranche's map, therefore, is not merely a superb exercise in cartography; 28 it is witness to the industry of Brigadier General

27 The copy of Washington's letter here used is apparently in the hand of Timothy Matlack, secretary to the Supreme Executive Council, and is in the Division of Public Records, Harrisburg. Actually, the "Batteries" on Province Island consisted of one heavy gun.

28 Villefranche's map of the river was not, of course, the first map of the area. The Nicholas Scull "Map of the Improved Part of the Province of Pennsylvania" (1759) presents the Delaware River, although in far smaller scale, in much the same manner as the Villefranche map, with the islands on the west shore below the mouth of the Schuylkill, including the first (which is the here unnamed Mud Island). The London printer William Faden published between 1778 and 1785 several maps of the same river area to show just how British battleships and the batteries erected on Carpenter's Island succeeded in reducing Fort Mifflin. The earliest of these maps (printed in 1778) could have been seen by Villefranche before May, 1779, and may have
Duportail in planning for Washington the best possible defense of the Delaware, concentrating that defense in a new fort on Mud Island.29

We need not resume in detail the further career of Duportail. Suffice it to say that following his capture at Charleston in 1780, he was exchanged in time to serve both Washington and Rochambeau at Yorktown. He left America in late 1781, and some years later served as Minister of War in Revolutionary France. During the Reign of Terror, he returned to America as an emigré, and lived for five years as a farm owner in the Valley Forge area.30 Finally, in 1802, after assurance that he could safely return to the France of Napoleon, he sailed for home but died on the way.

Although Villefranche never achieved Duportail’s distinction, his career in America continued to be an interesting one. He traveled about a great deal after May, 1779, engaged in one task or another as a major of Duportail’s engineers. In May, 1781, on Washington’s instructions, Duportail directed him to superintend the erection of the defenses at Fort Herkimer in the Mohawk Valley.31 On August 28, 1782, David Humphreys, Washington’s aide, wrote Villefranche that His Excellency believed the engineer was “so perfectly acquainted with the plan of the Works now carrying on at West Point and its dependencies” that “he would have [him] at present continue to superintend them.” At the same time, Washington promised that, in the event of new major operations in the field, he would not be unmindful of Villefranche’s talents but would employ him as an engineer “in such a manner as will be useful to the Public and reputable to yourself.”32

Faden’s map, except for its inset picturing Mud Island, is done on a far smaller scale than Villefranche’s work and otherwise resembles the latter only in the general elliptical shape of Mud Island.

After this paper on the Villefranche map had been prepared, the Pennsylvania Bureau of Land Records by happy chance discovered two small auxiliary drafts, also by Duportail and Villefranche, to the Villefranche map. For an account of these detail maps, see Hubertis M. Cummings, “Draughts by Two of Washington’s French Engineers,” Commonwealth of Pennsylvania, Department of Internal Affairs Bulletin, XXVIII (January–February, 1960), 24–28.

29 For the history of Fort Mifflin on Mud Island, see the military correspondence brought together by Worthington C. Ford in Defences of Philadelphia in 1777 (Brooklyn, N. Y., 1897), and G. Edwin Brumbaugh, Fort Mifflin on historic Mud Island in the Delaware River (Philadelphia, 1959).


31 Kite, XLIV, 132; see also Writings of Washington, XX, 378, 379.

32 Ibid., XXV, 74–75.
After the Peace of Paris on July 17, 1783, Washington ordered Villefranche, now a lieutenant colonel, to accompany Baron von Steuben on his frontier mission into Canada to "concert with Genl. Haldimand, or other British Commander in Chief, in that Province, upon all such measures . . . for receiving possession of the posts now under his Command within the Territory ceded to the United States." Two months later, on September 22, at Princeton, New Jersey, Washington drafted Villefranche's certificate of service. He began, said Washington, in 1776 "as Captain of the Corps of Engineers, in 1777 was promoted to a Majority, and in May 1783 to a Lieut. Colo. in that Corps." From Major Generals Heath, Howe, McDougall and Knox, under whom he had served, came testimony to his "zeal, activity, and knowledge of his profession"; he was entitled to their "highest approbation." Moreover, added Washington, "during great part of the above mentioned time, Lieut. Colo. Villefranche has served in the Army under my immediate Command, and it affords me great pleasure to give this testimony of my entire satisfaction at every part of his conduct that has fallen under my notice, which has been such as justly entitles him to the Character of a brave and deserving Officer."

Duportail would surely have echoed Washington's commendation of Villefranche. In that autumn of 1783, five years after their first meeting in York, he would no longer have hesitated to call his former aide "Engineer."

Pennsylvania Bureau of
Land Records

Hubertis M. Cummings

33 Ibid., XXVII, 61 and 63 (note).
34 Ibid., 159.