



**Barry Lawrence Ruderman
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**[From the Library of Captain Louis Freycinet] Carte Hydrographique Des Parties
Connues De La Terre Dressee sur la Projection de Mercator, Poar C.LO. Gressier ,
Ingenieur Hydrographe de la Marine . . . 1835 (with extensive manuscript annotations)**

Stock#: 58604
Map Maker: Depot de la Marine / Lartigue
Date: 1840 circa
Place: Paris
Color: Uncolored
Condition: VG
Size: 34.5 x 23.5 inches
Price: \$ 4,500.00



Description:

Annotated Sea Chart of the World Presented To The Explorer Louis Freycinet In Support of A Report to the French Academy of Sciences on The Prevailing Winds At Sea.

Finely-detailed, sea chart of the world with extensive manuscript annotations, presented to Louis Freycinet by Captain Joseph Lartigue, in support of Lartigue's paper on the system of prevailing winds, which Freycinet in turn presented at the *Académie des Sciences*. The hundreds of annotations were added by hand by French naval officer, Monsieur Joseph Lartigue, about whom little is known. Much more is known about the man who presented Lartigue's work to the *Académie des Sciences* and to whose library this chart once belonged, the renowned circumnavigator Louis-Claude de Saulces de Freycinet.

The base map is a world chart first released by the *Dépôt de la Marine* in 1835 and prepared by C. L. Gressier. It is quite rare, even without the important annotations of this example. Unusually, the chart has the Pacific at its center, rather than the Atlantic. Portions of the earth are also repeated on either side of the chart, with Western Africa and Europe making two appearances.

By the 1830s, when this chart was engraved, the world that was then known was not so different than the one we know today. The major differences are the absences and dotted lines that still frequent the little-known polar regions. Most noticeable is the total lack of Antarctica, which had only been sighted for the first time fifteen years before this chart was made.

The manuscript annotations make this item significant to the history of oceanography and hydrography.



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Between 60 degrees north and south, hundreds of small arrows have been added which indicate the general direction of the winds in those areas. A handwritten advertisement in the upper right corner explains in French:

The arrows drawn on this map indicate the direction of the winds which, according to the researches and observations of Mr. Lartigue, Lieutenant Commander, dominate the most frequent parts of the Atlantic Ocean and the Grand Ocean [Pacific], with periods of Polar winds of the Southern hemisphere acquiring their greatest intensity; which occurs from the month of May to the month of October.

In addition to the wind arrows, there are many other handwritten annotations. There are numbers on practically all the arrows, perhaps indicating an average speed. In the Gulf of Guinea, a note explains that the sheltered nature of this geographic feature affects the general trend of the winds in those latitudes. The same hand has added a key to the arrows in the bottom left. It is almost certain that Lartigue himself added these annotations, as they indicate a high level of familiarity with his theories and research.

This chart was most likely a presentation copy of Lartigue's work on the winds given to Freycinet, in order to allow Freycinet to present Lartigue's findings to the French Academy of Sciences. Lartigue submitted this chart along with an essay to the *Académie*. Freycinet, as rapporteur of a committee of Academicians including himself, Keeper of the *Dépôt de la Marine* Charles-François Beautemps-Beaupré, and astronomer Félix Savary, found Lartigue's work of high quality. This annotated chart was probably then used by Freycinet when he made his report to the *Académie* in April 1840.

Having gained *Académie* approval, Lartigue published his research, *Exposition du Systeme des Vents*, in a pamphlet printed under the royal imprimatur in 1840. This chart, or one like it, served as the base for a printed version which was intended to be offered for sale along with the pamphlet. That printed version—which was also included in the *Annales Maritimes et Coloniales* of 1841—integrates the advertisement, key, and line in the Gulf of Guinea, but not the numbers and a triangle denoting a calm area near South America.

This chart, unique due to its manuscript additions, then became part of Freycinet's personal library. It was passed down within the Freycinet family until the twentieth century, when it was sold to a French bookdealer in the 1970s.

M. Joseph Lartigue



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The elusive author of the *Exposition du Systeme des Vents* has a tantalizing biography, if only because little is known about him beyond his many publications. Joseph Lartigue was born in 1791 and died in 1876. In 1827, he published his first known work, *Description de la côte du Pérou, entre 19° et 16° 20' de latitude* (Paris: Imprimerie Royal, 1827). He drew several charts of western South American coast, dating from the 1820s. Also in 1827, he published *Instruction nautique sur les côtes de la Guiane française* on behalf of the *Ministre de la Marine et des Colonies* (second edition in 1860). Both of these works identify him as a *Lieutenant de Vaisseau*, or a Lieutenant in the French Navy.

He was already known to the *Académie* when he submitted his wind theory and this chart, for he had published "*Observations sur les divers changements de temps et de vents, occasionnés par les courants des marées*" in the *Memoire lu a l'Académie des Sciences* in October 1836. His next publication is the *Exposition du Systeme des Vents*, in 1840, and on that title page he is identified as a *Capitaine de Corvette*, or Lieutenant Commander. He now also is *Commander de la Légion d'Honneur*, the third degree (of five) of the highest military honor in France—an award first created by Napoleon in 1804. The *Exposition du Systeme des Vents* was published in a second edition in 1855.

In 1842 he released a short bulletin, *Notice sur les travaux et les ouvrages d'hydrographie et de météorologie de M. Lartigue, capitaine de corvette* (Paris: impr. de Vve Bouchard-Huzard). A year later, he published *Observations sur les brises de jour et de nuit: faites dans quelques parties des Pyrénées, pendant les mois de juillet, août et septembre 1842* (Paris: Imprimerie Royal, 1843).

His interests in weather and winds seems to have endured for, in 1855, he published "*Observations sur les orages dans les montagnes des Pyrénées et de leur analogie avec les ouragans des régions intertropicales*" as part of the *Comptes rendus des séances de l'Académie des sciences* (December 1855). Not only did he keep in touch with the *Académie*, but he also read internationally, as evidenced by his *Observations sur les données qui ont servi de base aux diverses théories des vents, et principalement sur le système de circulation atmosphérique de Maury* (Paris: Robiquet, 1860), which discussed the wind theories of US naval officer and pioneering oceanographer Matthew Fontaine Maury.

Later, with the rank of *Capitaine de Vaisseau*, or Captain, he continued to produce works on his scientific theories about the winds and atmosphere. In 1858 he published *Essai sur les Ouragans et les Tempêtes* (Paris: Librairie Hydrographique de Robiquet). A decade later, he released *Du mouvement de la mer et autres veritez naturelles dont les causes sont les plus inconnuës* (Paris: E. Couterot et al, 1867) and *Études sur les mouvements de l'air a la surface terrestre et dans les régions superieures de l'atmosphere* (Paris: Arthus Bertrand, Éditeur, Librairie Maritime et Scientifique, 1868).



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Lartigue's final known publication was *Note au sujet du rapport de MM. Crocé-Spinelli et Sivel, sur leur ascension du 22 mars 1874* (Paris: Impr. de Dupont, ca. 1874). This was on the subject, again, of the winds and the air. Joseph Crocé-Spinelli and Théodore Sivel were balloonists studying high altitudes and flight. They went on higher and higher flights in the early 1870s, when Lartigue wrote about them. They died on an attempt to break the altitude record on April 15, 1875 and were hailed as martyrs to science.

Although quite prolific, less is certain of Lartigue's personal life. It is probably that he is related to Pierre Lartigue (1745-1826), the French hydrographic engineer.

Louis Freycinet

Besides being an important document in the history of early oceanography and anemology, this chart was also owned by an important scientist, the explorer and hydrographer Louis Freycinet. He was born in 1779 at Montélimar, Drôme and joined the French Navy in 1793 at the age of fourteen.

When Nicolas Baudin left Le Havre in the *Geographe* and the *Naturaliste* in October 1800, he was embarking on a voyage meant to survey the shores of Australia. In the *Naturaliste* was Louis Freycinet, then only 21 years old. He was accompanied by his brother, Louis-Henri, who would go on to become an admiral.

Initially the ships, sometimes separated, made their way north up the western coast of Australia from Cape Leeuwin to Timor. They then went south again, but were separated a second time. They were reunited in Sydney, where both ships had come to recuperate in late 1801. While there, Baudin purchased a 29-foot vessel. He named it *Casuarina* and placed Freycinet, who had proved himself an adroit hydrographer, in command. With his new charge, Freycinet was to perform inshore surveys.

During the course of 1802, the *Naturaliste* and the *Casuarina* surveyed the southern coast of Australia (the *Naturaliste* had been sent back to France). They then sailed round the west coast to Timor, then back to Mauritius, where Baudin died. It was also where the *Casuarina's* career ended, as the ship was abandoned in favor of consolidating the crews on the *Geographe*. The ship returned home on March 25, 1804.

Since Baudin had died in Mauritius, the naturalist Francois Peron and Freycinet were directed to prepare for publication the official account of the voyage, with an accompanying atlas. The official account appeared over ten years and in four volumes. The first narrative of the voyage, primarily by Peron, was published in 1807. The second narrative volume was published in 1816 and was written primarily by Freycinet. Peron had died in 1810. The first part of the Atlas appeared in 1807. The second atlas was



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published in 1811. In the latter is a map of the Australian continent, the first to show the continent in its entirety and made partially from British explorer Matthew Flinders' papers.

The publications stemming from the Baudin expedition would have been enough to secure the fame of Louis Freycinet. However, he is perhaps best-known today for his second voyage to the Pacific, one he commanded in the *Uranie*. From 1817 to 1820, Freycinet cruised the Pacific studying the shape of the earth, meteorology, terrestrial magnetism, and, of course, hydrography. He was accompanied, unusually and, at first, secretly, by his wife Rose; she is now famous in her own right for her detailed journal kept while on the voyage.

An influential event of this voyage was Freycinet's removal of the pewter plate left on the western coast of Australia by Willem de Vlamingh in 1697. Freycinet had encountered this plate—itsself a replacement for an earlier plate posted by Dirk Hartog, the earliest physical evidence of European encounter with the continent of Australia—on his first visit to the area in 1801. Freycinet had disagreed then with his captain that the plate should be left in place; Freycinet thought it sacrilege to continue to expose such a historical item to the elements. Freycinet took it back to France with him, where it was lost. Only in 1940 did the dish reappear, in a store cupboard in the *Académie*. It was presented as a gift to Australia in 1947. Today, it is on display at the Western Australia Museum. The original Hartog plate is at the Rijksmuseum in Amsterdam.

The voyage sailed on from western Australia to Timor, where Freycinet and his fellow scientists recorded descriptions of the people there. They recoded their adventures and findings as the voyage travelled to the Moluccas, Carolines, Marianas, and Hawai'i. They docked at Port Jackson in eastern Australia before sailing across the Pacific toward Cape Horn. Although the *Uranie* was wrecked in the Falklands on the return journey, the natural historical specimens and geographical notes were saved, as was de Vlamingh's pewter plate.

Freycinet spent two decades overseeing the publication of the results of this voyage. *Voyage autour du monde fait par ordre du Roi sur les corvettes de S. M. l'Uranie et la Physicienne, pendant les années 1817, 1818, 1819 et 1820* stretched to thirteen quarto volumes with four folio volumes of plates and charts.

The second voyage secured Freycinet a place in the *Académie*; he was admitted in 1825. He also went on to help found the Paris Geographical Society, the first such group of its kind. Louis Freycinet died in 1841.

The review and reception of the *Systeme des Vents*



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Lartigue seems to have submitted his report for review by the *Académie des Sciences* after he annotated this chart, dated 1835, and before 1840, when his pamphlet was published. As mentioned above, a committee was set up to perform the review, with three Academicians appointed. These were Freycinet, whose expertise in this area was well known, the head of the French charting body, Beautemps-Beaupré, and the astronomer Savary. Interestingly, both Savary and Freycinet died in summer 1841, only a year after this work was reviewed—this report was one of their last acts.

The committee took its time in reviewing the essay and this chart, as Lartigue had to request that they pass judgement on what they had examined so far, before he was recalled to duty at sea. The committee approved of his work. Their report, which was accepted by the *Académie* in spring 1840, according to the *l'Institut* periodical, was favorable and encouraged Lartigue to extend his work to the polar seas.

The committee's report was included in a forward to Lartigue's printed pamphlet and translates as follows:

MM. Beautemps-Beaupré, Savary and myself, have been charged by the Académie to examine a work by M. Lartigue, Lieutenant Commander, relating to an exposition of a new system of winds, to the 60th parallel. We have already been busy with this work for a long time; but, to continue it with all the care which its importance requires, we still have many facts to examine and to co-ordinate.

The author has appeared to us to have met and discussed all that, within the limits announced, the most skillful navigators have published in their observations and their journals. The discussion of such a mass of facts is immense, especially when we want to examine the new theory of which the principles themselves need to be verified and confronted with experience.

We were taking care of the rest of this work, when this officer told us that the exigency of his service obliged him to return to the sea soon, and that he would be satisfied to learn, from that moment, the opinion that the Academy had made its work.

Desiring to reconcile M. Lartigue's wishes with the laborious task which we have undertaken, we are happy to announce, in this way, that the work of this officer is of a high standard; that what we have already seen is the basis of all systems, and that this work has become, for us, the pledge of the sagacity and the instruction of the author. We propose, therefore, to the Academy to thank Mr. Lartigue for the communication he has made, and to urge him to complete his theory, as far as possible, in the polar seas; this book may later become the object of a larger and more complete report.



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The conclusions of this report are adopted.

There is some indication that Lartigue did try to continue his work. A [map](#) published ca. 1855 shows the wind arrows extending farther north towards Alaska and well into Antarctic waters. This chart shows the winds for July, August, and September. Another chart in the *Bibliothèque Nationale* in Paris shows January, February, and March. The *Statbibliothek zu Berlin* has both of these listed in their catalog, but we have located no other examples. The other two maps that supposedly would have finished out the year have not been found at the time of publication of this description.

Lartigue's work was well-known in the mid-nineteenth century. For example, in a translation of *A Complete Course on Meteorology* by C. V. Walker with notes by Ch. Martins published in London in 1845, Martins had the following to say about Lartigue's theory and chart (footnote, pp. 49-50):

M. Lartigue, captain of a brig, published in 1840 an important work, entitled *Exposition du Systeme des Vents*.

*The author regards the two polar currents, and the trade-winds which result from them, as the base of the system of winds; he names them primitive winds. He lays down the variation of the trade-winds according to their distance from the polar currents, the effects which result from their junction, and the formation of the variable winds of the torrid zone. Then he passes on to the history of secondary winds, and shews that the intensity of the variable winds of the torrid zone depends on that of the trade-winds. He then examines the manner in which the winds displace each other. The author attributes to the rotation of the earth very little influence over the direction of the trade-winds; the diurnal motion of the sun, and the configuration of countries, appear to him to have a much greater action. Finally, he gives some very curious details on the circular currents of air which are met with between Malaga and Gibraltar, and near the channels that separate the Antilles. **A more-detailed analysis of this work would be unintelligible without having before us the large hydrographic chart which accompanies it.** [emphasis added].*

The essay on his wind system was also published in German as *Das Windsystem, oder Die Luftbewegung an der Erdoberfläche und in den höheren Regionen der Atmosphäre* (trans. Christian Gottlob Tröbst, Weimar: Voigt, 1856).

However, the chart does not seem to have been translated into German as well, leaving the French as the only version extant.



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Rarity

The original 1835 sea chart used by Lartigue is quite rare, with no other surviving examples bearing the manuscript annotations by Lartigue.

The printed version of this chart is also extremely scarce. We locate two 1841 examples at the British Library.

This is in an important document in that it shows a combination of print and manuscript, a work in progress, and a part of a scientific discussion that was important at the time. Luminaries of ocean science like Freycinet lent their support to Lartigue's fledgling research, which survives mainly through charts and publications which bear his name. Additionally, this chart was once in Freycinet's own library, increasing its significance. It is a singular item important to the history of navigation, oceanography, hydrography, and exploration.

Detailed Condition:

Several repaired tears and some minor soiling.