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Title: **Great Voyages of Discovery, Circumnavigators and Scientists 1764-1843**

Author(s): **Jacques Brosse**

Published by: Facts on File Publications

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Jacques Brosse

# *Great Voyages of Discovery*

Circumnavigators and Scientists, 1764–1843

Translated by Stanley Hochman

Preface by Fernand Braudel

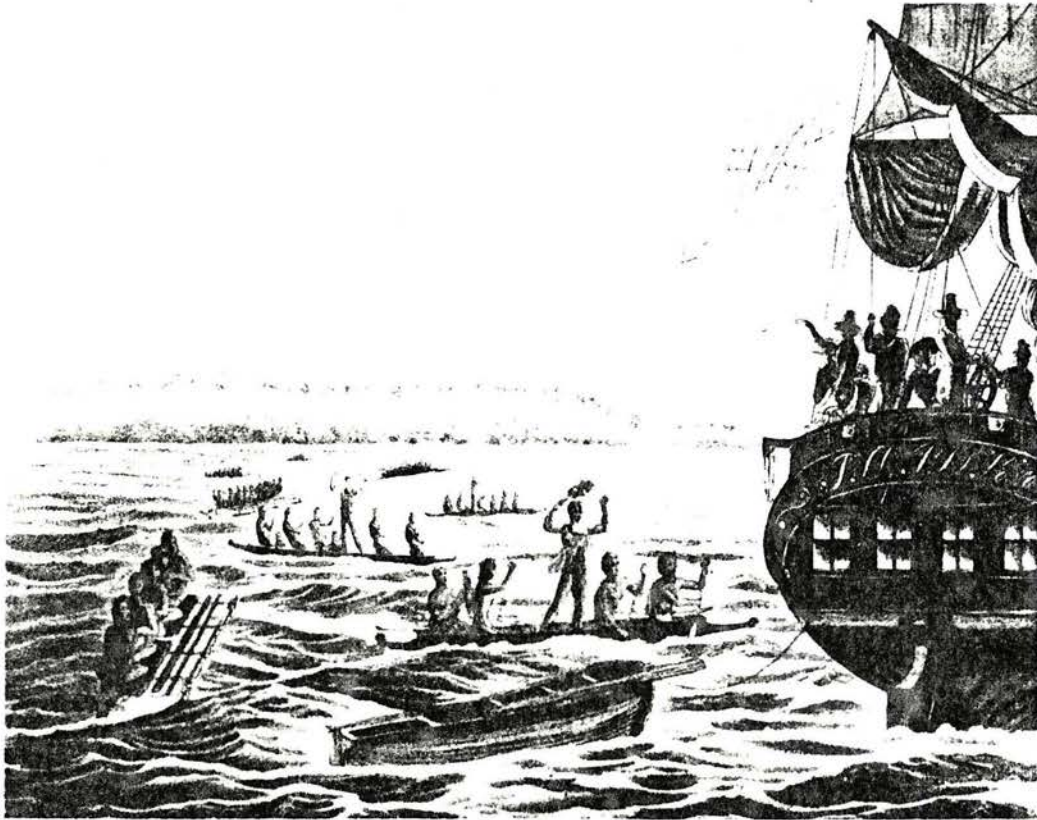
ISBN: 0-8160-1101-X

1983



**Facts On File Publications**  
New York, New York • Oxford, England

*The Russians  
in the Pacific,  
1803-1829*



# From Kamchatka to the Marquesas: Krusenstern's Voyage, 1803–1806

The principal preoccupation of Peter the Great had been to draw Russia from its secular isolation and make it into a modern power. Open to the outside world, it would be endowed with an army and especially a navy, corresponding to the role he wanted to see his country henceforth play. As early as 1696, he had wrested Azov from the Turks, and it served as an opening on the Black Sea. Having declared war on Sweden in order to gain access to the Baltic, he succeeded in establishing himself at the mouth of the Neva, where St. Petersburg was founded. In 1716, the tsar dispatched from Okhotsk, on the Siberian coast, a vessel that was to assure the first maritime liaison with the Kamchatka peninsula, discovered twenty years earlier, and to explore the Kuriles. In 1725, Peter I, who was to die that same year, decided to launch a great expedition charged with verifying if Siberia and North America were or were not separated by the sea, and if there was a passage near the pole linking the Atlantic and the Pacific. Commanded by Vitus Bering, the expedition did not leave until 1728; it fixed the position of the strait that separates Asia from America. On a second voyage, in 1740–1741, during which he was to die, Bering and his lieutenant, Aleksey Ilyich Chirkov, discovered Alaska and the Aleutian Islands. After 1739, two Russian ships landed at several points on the Japanese littoral; in 1743, Khmitevskoi reconnoitered the coast of Siberia from Okhotsk to the Kamchatka peninsula.

Afterward, Russian merchants organized voyages designed to bring back from the American northwest furs that they sold at substantial profits to the Chinese, who were particularly partial to sea otter skins. This commerce, initially unregulated, led to the loss of many ships and, eventually, to a rapid depredation of the fauna; it was finally regularized by the rich merchant Chelikov, who, with some difficulty, managed to unite all those who participated in this commerce in a "Russian-American Company" which established trading posts protected by small forts in almost all the Aleutian Islands. Nevertheless, things remained difficult. The completely isolated settlements could not exist without food and equipment sent overland from Russia and then shipped from Okhotsk to the Aleutians by sea. Two years passed before the collected furs were sold, as they first had to be shipped to Okhotsk; it took western sailors only a third of

this time to obtain furs on the American coast and sell them in Macao.

Adam Ivan (Johann) von Krusenstern understood this problem. Having served in the British navy, he had had the opportunity to sail aboard a merchant ship to India and China, where he spent several months in Canton. During his voyages, Krusenstern had become convinced that Russia had to be linked to her American colonies by sailing across the Pacific and rounding Cape Horn, and especially that the fur trade had to be carried out from the colonies directly to Canton. He wrote the Russian Minister of Trade, Saimonov, a memorandum showing how the obstacles to such trade could be overcome. He received no reply. But, in 1801, Alexander I ascended the throne, and he soon turned his attention to these questions, which had been neglected by his father. The following year, Krusenstern sent the new Minister of the Navy, Mord-

*Preceding page: Kotzebue's Rurik greeted by the inhabitants of Penthyon Island on April 30, 1816. Lithograph from a drawing by L. Choris in Voyage pittoresque autour du monde; the 1826 supplement. (Bibliothèque nationale, Paris. Photo © Bibl. nat./Photob.)*

*Facing page: King Kamchamcha I receives Kotzebue and some Rurik officers on the island of Owhyee, November 28, 1816. Lithograph by L. Choris. (Bibliothèque nationale, Paris. Photo © Bibl. nat./Photob.)*



*Man and woman of Kamchatka. Engraving by La Chaussée from a drawing from J. Grasset de Saint-Sauveur's Voyages pittoresques. (Bibliothèque nationale, Paris. Photo © Bibl. nat./Photob.)*

vinov, a second memorandum that was strongly supported by the Minister of Trade, Count Romanzof, a great patron of the sciences. The emperor named Krusenstern captain and asked him to carry out his plans himself.

Krusenstern had not foreseen this possibility. In fact, recently married and "awaiting the joy of being a father," he had even planned to leave the service and devote himself to his family. However, on August 7, 1802, he was "named the commander of two ships destined for the northwest coast of America." These ships were still to be found, since the Russian navy had no vessels capable of undertaking such a voyage. Krusenstern chose as his second in command a Captain Lisiansky, who had served with him in the British navy and been to America and the Indies, and sent him first to Hamburg in the company of the shipbuilder Kasumov and then to London, where he bought two vessels, one of 450 tons and the other of 370 tons. They were christened the *Nadezhda* (Hope) and the *Neva*. In London, Lisiansky had also obtained anti-scorbutics and a variety of medicines. During this time, Krusenstern had turned to the German universities in order to recruit scientists for the expedition, for in this matter Russia was still—and would long remain—dependent on Germany. The men selected were the astronomer J. K. Horner, from Zurich, and a Leipzig doctor, W. G. Tilesius von Tilenau, who was also a naturalist and a draftsman. A Göttingen naturalist, G. H. von Langsdorff, tardily asked to be taken along and caught up with the ships at Copenhagen, where he was accepted on board; he was to quit the expedition at Kamchatka. The German poet August von Kotzebue, who had official duties in St. Petersburg, persuaded Krusenstern to take along two of his sons who were navy cadets: Otto and Moritz, then fifteen and fourteen years old, respectively.

While he was preparing the expedition, Krusenstern was charged with a second responsibility: He was to transport to Japan an ambassadorial mission directed by N. P. Resanov, the son-in-law of Chelikov and a chamberlain of the emperor's. As imperial plenipotentiary, Resanov was to renew with the Nipponese empire relations originally established by a first mission in 1792, which had obtained permission for an unarmed Russian vessel to go to Nagasaki. In addition, five Japanese who had been shipwrecked in the Aleutians in 1796 were to be returned to their country. "It is difficult," Krusenstern wrote, "to imagine nastier men. They were dirty, lazy, always in a bad temper, and highly malicious."

Arriving in Kronstadt from London on June 5, 1803, the *Nadezhda* and the *Neva* set sail on August 7 and reached Copenhagen on the eighteenth, but it was a month before they were able to leave, because some of the salted foods that had been loaded had to be replaced. There was only a one-day stopover at Falmouth on the English coast before the *Nadezhda* and the *Neva* set sail for Tenerife, where they anchored from October 18 to 27.

## Krusenstern's Ships and Crews

The *NADEZHDA*: 450-ton English vessel; left from Kronstadt, 8/7/1803; returned to Kronstadt, 8/19/1806; crew: 85 men.

**Commander:** Adam Ivan (Johann) von Krusenstern, captain-lieutenant (captain).

**Lieutenants:** 1st, Chevalier Macary Ratmanov; 2nd, Fedor de Romberg; 3rd, Pierre Golovatchev; 4th, Hermann von Loewenstern; 5th, Baron von Bellingshausen.

**First doctor:** Dr. Carl Espenberg.

**Surgeon:** Johann Sydham.

**Naturalists:** Dr. Tilesius von Tilenau, Baron G. H. von Langsdorff.

**Astronomer:** J. K. Horner.

**Cadets:** Otto von Kotzebue, Moritz von Kotzebue.

**Russian embassy to Japan:** Resanov, chamberlain to the emperor, ambassador; Hermann de Friderici, chief of staff; Count Fedor Tolstoi, lieutenant of the guards; Dr. Brinkin, medical doctor and botanist; Etienne Kurlandtzov, Academy painter.

The *NEVA*: 370-ton English vessel; left from Kronstadt, 8/7/1803; returned to Kronstadt, 8/4/1806; crew: 54 men.

**Commander:** Yuri Lisiansky, captain.

**Lieutenants:** 1st, Pavel Arbusov; 2nd, Povalchkin; 3rd, Fedor Kovdaev; 4th, Vasilii Berg.

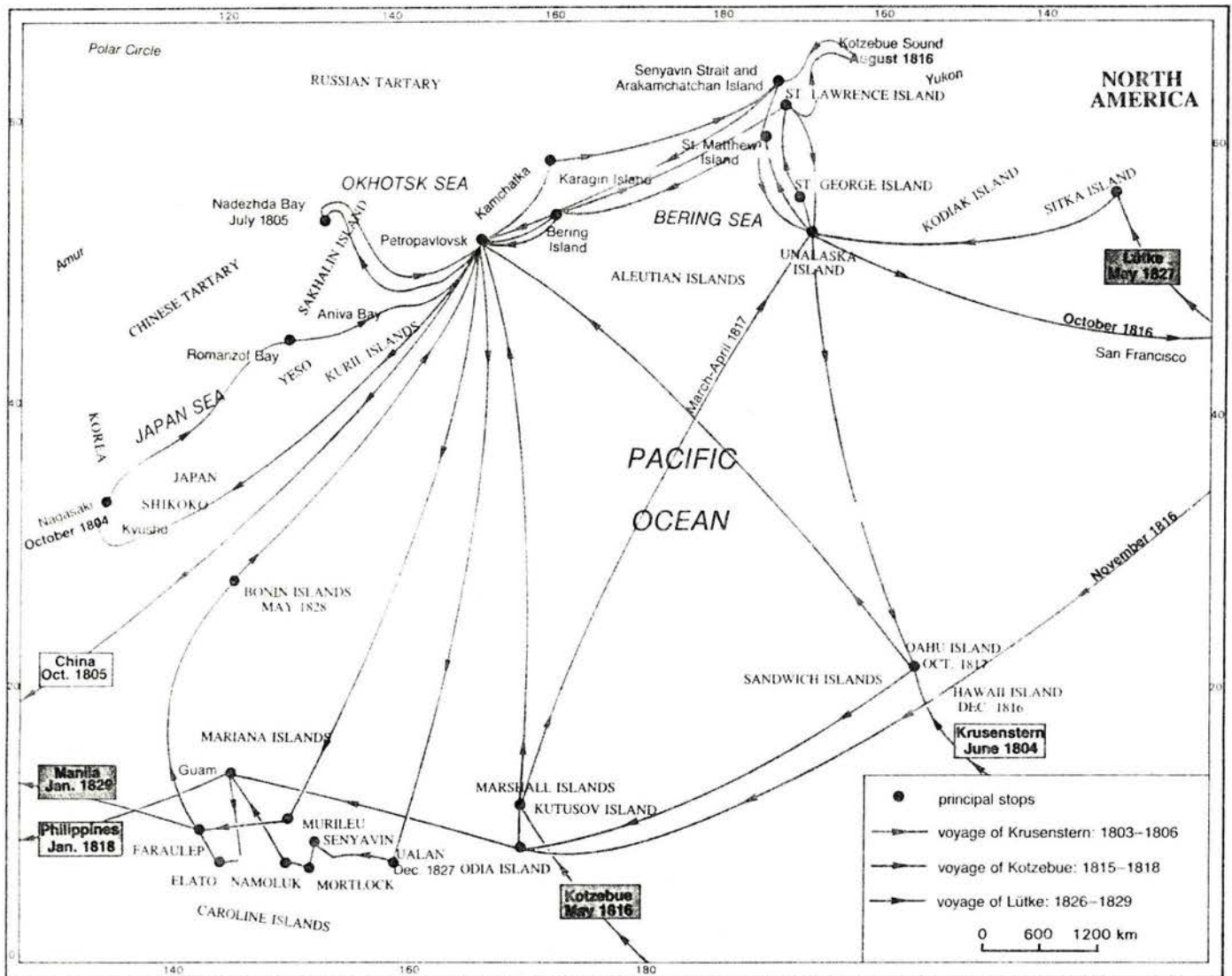
**Doctor:** Dr. Labaud.



Brazilian horned frog discovered by Tilesius, naturalist of the Krusenstern expedition. (Bibliothèque nationale, Paris. Photo by Jeanbor © Photob.)

The sailors strolled through the streets of Santa Cruz, a city, Krusenstern wrote, "in which one encounters more disgusting objects than anywhere else in the world: all that is to be seen are ragged and disgustingly diseased beggars of both sexes and all ages, prostitutes, drunken sailors, and shameless thieves." The Russian officers were hospitably received by the governor, the Marquis de la Casa Cahigal. Krusenstern proudly noted: "The strange ideas that are current about Russia and Russians in distant lands contributed more than a little to the surprise of our hosts when they saw that these Hyperboreans lost nothing when compared with the cleverest peoples of southern Europe."

In a month, the ships reached the Brazilian coast. At sea, Langsdorff made microscope studies of the marine animalcules that in some places made the sea phosphorescent. Tilesius also did research on the marine microfauna; during the voyage, he began studying diphyes—animals native to warm seas—which floated by means of two swimming



bells. The scientists who worked on shipboard during these very long voyages were fortunate in this regard; they had available an abundant and constantly renewed supply of material, and were thus able to make considerable progress in a field that science had only just begun to study.

In Brazil, Krusenstern chose as the site of his stopover Santa Catarina Island, south of Rio, and thus was able to avoid the port "in which foreigners, especially if they arrive aboard merchant vessels, are subjected to all sorts of humiliating formalities." Since the *Neva* was in need of repairs, he remained at Santa Catarina five weeks, and an observatory was set up in Fort Santa Cruz. Delays having accumulated since the departure from Kronstadt, Krusenstern was afraid that at this time of year he would run into storms at Cape Horn. "We were assailed by cold, fog, and contrary winds. . . . Extremely violent blasts of wind accompanied by hail and snow followed one another cease-

lessly." The Cape was rounded on March 3. Luckily, there were no sick men aboard the two ships, which, on March 24, were separated sooner than had been foreseen. According to plan, if this happened, they were to rendezvous at the Marquesas, toward which the *Nadezhda*, having given up the idea of visiting Easter Island, immediately set sail.

### Deserters and Marquesans

As they were about to anchor at Nuka Hiva on May 7, 1804, the Russians were surprised to see a European approach in a canoe flying a white flag. It was an Englishman named Roberts, who, like the natives, was naked and wore only a belt around his waist. Roberts had been set down in the Marquesas by the crew of a merchant vessel for having refused to participate in a plot against the captain. For two years, he had lived on Santa Cristina Island and, for

*The Russians in the Pacific, 1803-1829.*  
*Voyage of Krusenstern, 1803-1806.*  
*Voyage of Kotzebue, 1815-1818.*  
*Voyage of Lütke, 1826-1829.*

*Distinguished inhabitant of Nuka Hiva, armed and tattooed. Engraving from Voyage autour du monde sur la Nadzdeda et la Neva, 1813 (Bibliothèque nationale, Paris. Photo by Jeanbor © Photoviv)*



*Tattoo artist's model from the Marquesas. Piece of wood covered with painted bark, probably from a temple. (Musée de l'Homme, Paris. Photo from the collection of the museum.)*

the past seven, at Nuka Hiva, where he had married a relative of the island's king. He informed them that there was also on the island a French deserter, a mortal enemy of his whom he warned the Russians against.

On these distant islands, it was already possible to encounter isolated Europeans who were more or less voluntarily living among the natives. They had adopted the local life-style and were most often well treated. They were escaped English convicts or deserters, or sometimes adventurers of every nationality who had deliberately chosen to live in exile. In the decades that followed, there were more and more of them. In 1842, an American sailor was to desert at Nuka Hiva and live for several months with a tribe of cannibals. His name was Herman Melville, and he gave an account of his adventures in two books, *Typee* and *Omoo*.

The Nuka Hivans welcomed the Russians, and the barter began. "At the sight of a piece of iron, they demonstrated a childish joy expressed in bursts of laughter. With an air of triumph, they showed this treasure to their less fortunate companions." Women, eager to seduce the sailors, "swam around the ship for more than five hours." Krusenstern having forbidden them to come aboard. "At nightfall, these poor creatures asked so piteously to be taken on board that I could no longer refuse"—but two days later the commander had to reinstate his interdiction. As he saw it, the women did not come of their own free will but in deference to their fathers or their brutal and tyrannical husbands. To obtain

a few bits of iron, the men would offer little girls of ten and twelve. One girl who was not even eight offered herself "without the least shame."

### *The most beautiful tattoos in the world*

The Russians were charmed by these people. According to Krusenstern, the Marquesans were the handsomest men he had seen, but he reproached them for their indifference and apathy. He noticed with astonishment that in its natural state their skin was white; only the tattoos and the oil with which they coated themselves made it appear blackish. All seemed in excellent health. The women had harmonious features, but they were small, short, and walked awkwardly.

On the very first day, the king of Nuka Hiva, Tapeya Kettenovie, had come on board. He was "tattooed everywhere, even on his head, several areas of which had been expressly shaved for this purpose." He returned the next morning accompanied by his family. They were astounded by the mirrors in the commander's cabin and "examined the backs of them for some explanation of the marvelous effect." Afterward, every time Tapeya entered Krusenstern's cabin, he would rush to the standing mirror and remain looking at himself, "often for hours."

Krusenstern took advantage of this opportunity to examine the extraordinary Marquesan tattoos. "When they reached the age of manhood, the Nuka Hivans tattoo their entire bodies with a perfection achieved nowhere else. It is a true painting made up of different elements. . . ordinarily they choose black, which gradually changes into a dark blue." However, only the king, his father, and the high priest were tattooed from head to foot; the lower in the social scale an individual was, the fewer his tattoos, and some had none at all. These paintings were done by true professional artists, one of whom established himself on board and tattooed most of the Russian sailors.

On shore, the Nuka Hivans surrounded the seamen, but politely and respectfully. Nevertheless, the two Europeans living on the island described them as being depraved, barbarous, and cannibalistic. Krusenstern wrote that this contrasting judgment was explained by the fact that the islanders believed the navigators were spirits. "Foreign ships fall from the skies, and they believed that thunder could be explained by the cannonades exchanged by the ships in the clouds, where they sailed with the greatest of ease. That is why these islanders are so afraid of our cannon."

A serious incident disturbed the stay in this apparent paradise. A rumor having spread that the king was being detained on board the *Nadezhda*, the inhabitants ran for their arms. The misunderstanding was cleared up, but it was evident that the king himself had provoked it at the instigation of the

Frenchman, Joseph Cabri, whom the Russians were later to make an ally and take to Kamchatka. From there, Cabri managed to return to France; in Paris (1817) he displayed himself as a "savage" in a circus at the Saint-Germain fair.

Thanks to Roberts, Krusenstern was able to visit a morai, access to which was usually forbidden to foreigners. Each family had its own. Only the men attended funeral rites; a pig would be beheaded and offered to the gods, then its flesh would be eaten by those present. (Pigs were generally eaten only under these circumstances.) The dead man's body would then be rubbed with coconut oil to preserve it from putrefaction, after which it would become as hard as a rock. At the end of twelve months, the corpse was cut to pieces in a new ceremony and the bones placed in the morai.

On May 11 the *Neva* reached Nuka Hiva, and the two ships sailed at the end of the month for the Sandwich Islands, where Krusenstern planned to reprovision the expedition. But the Hawaiians had become exigent and would exchange pigs only for pieces of cloth. Though they struck the Russians as being considerably less handsome than the Marquesans, they seemed "very superior as to intelligence and industry." Unable to get the provisions he wanted, Krusenstern decided to head for Kamchatka immediately. Lisiansky chose to remain in the Sandwich Islands for some time before going to Kodiak Island near the American coast.

It took the *Nadezhda* thirty-five days, but, on July 15, she reached Petropavlovsk in Avacha Bay. Count Romanzof had asked that they look for a land that the Spaniards believed was rich in gold and silver and which was to be found to the east of Japan. Neither the Dutchman De Vries in 1643 nor La Perouse in 1787 had been able to find it. Krusenstern was convinced that this island did not exist. At Petropavlovsk, Langsdorff left the expedition and went overland to return to Europe by way of Siberia. The entire cargo having been turned over to the Russian colonists, a considerable supply of food was loaded onto the *Nadezhda*, which had been refitted. In the waters of Avacha Bay, which had not as yet been prospected, Tilesius discovered many new species of fish such as the Pacific cod and the blenny; polyparia, for which he created the genus *Krusensternia*; and holothurians, of which he made an anatomical study.

Krusenstern hoped to reach Nagasaki on Kyūshū Island, the southernmost island of the Japanese archipelago, before the northeast monsoon; but rain and fog kept him in Kamchatka until September 6. At sea, the weather was constantly bad, and a storm off the Kuriles caused the ship to spring a leak. Nevertheless, Krusenstern carefully charted the Japanese coasts, but he did not find the four islands that figured on La Pérouse's itinerary. Clearing Cape Van Diemen to the south of Kyūshū, he noted that it was incorrectly marked on earlier maps. The good weather had returned, and from a distance one could admire the mountainous landscapes topped by high peaks and also get indica-

tions of the "industry of Japan, the richness of whose cultivations is unequalled."

### Japanese suspicion

In October 1804, the *Nadezhda* entered the vast bay of Nagasaki, the only port open to European ships. Following widespread conversions made in the sixteenth century by St. Francis Xavier and his companions—conversions that had resulted in violent persecution—the Nipponese empire had closed in on itself. The Dutch had been permitted to found a small permanent settlement, relegated to the artificial islet of Deshima in the Nagasaki roads; but they were carefully watched and subjected to innumerable vexations. Their trading post, however, was the only channel for relations between Japan and Europe.

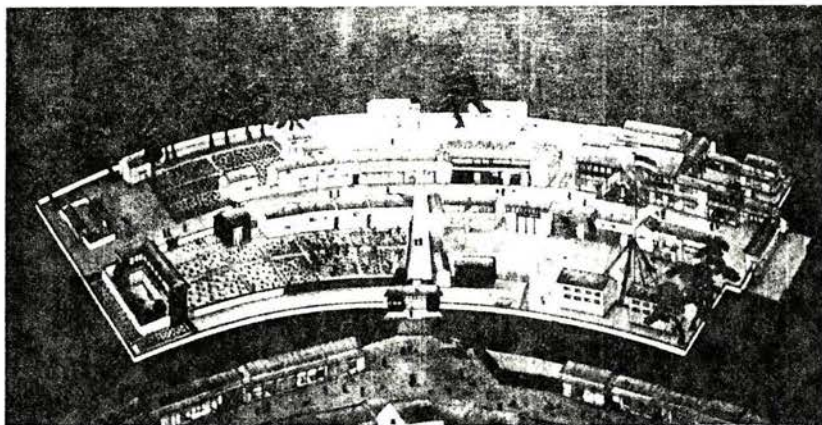
The arrival of a Russian ship brought about a new wave of severity. "From the first to the last moment of our stay . . . we have been prisoners aboard our ship. . . . We are not only forbidden to go on shore, but even to take a longboat any distance from the ship. . . ." If the Japanese consented to repair the *Nadezhda* at their expense, it was because they hoped to see her leave that much faster. No sooner had the ship arrived than some magistrates, or *banios*, had come on board. They inquired after the route taken by the ship, pointed out where she was to anchor, and confiscated all powder and weapons, including the hunting rifles of the officers. Only the soldiers in the ambassador's guard remained armed, at the express request of the latter, who finally obtained permission to live on shore; however, by a typically Japanese paradox, the prince of Fisen insisted on sending his own boat for him. "She was enormously large and magnificent—her length being 120 feet—and the sides shone with the most dazzling lacquer; matting and precious rugs covered all the planks. . . ."

The house placed at the ambassador's disposition was behind a great door with two locks—one on the outside and the other inside—the keys to which were retained by two Japanese officers. Re-

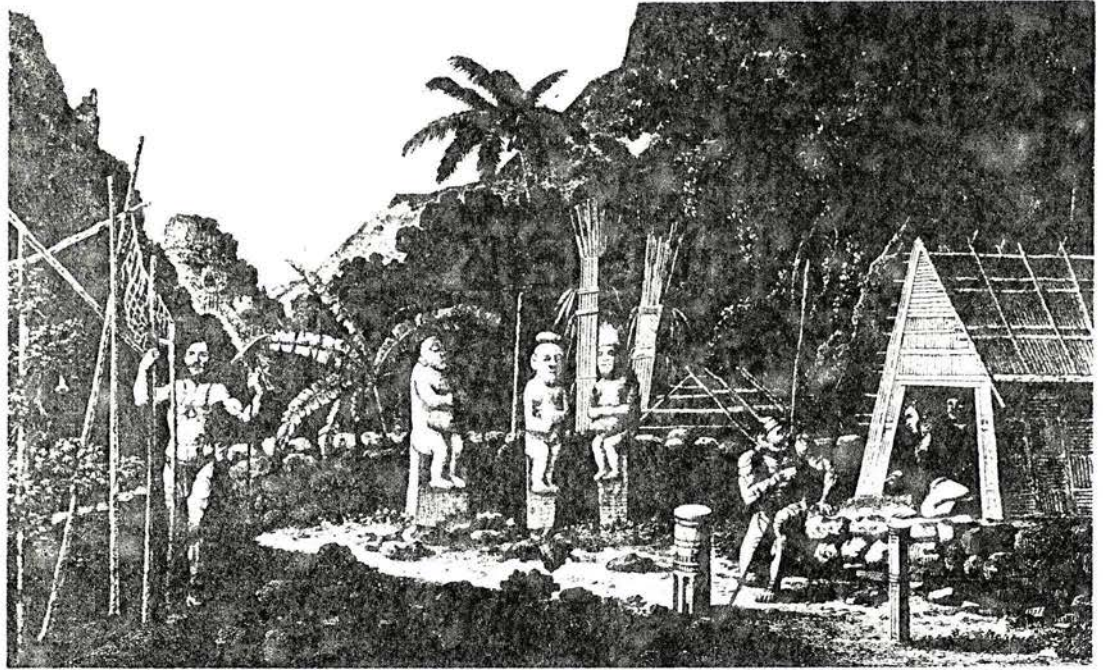


Drawings of tattoos on inhabitants of Nuka Hiva. Voyage Around the World by G. H. Langsdorff, 1812. Engraving by J. C. Bock. (Bibliothèque du Muséum d'histoire naturelle, Paris. Photo © Bibl. du Muséum/Photo.)

Artificial islet of Deshima in the Nagasaki roads, site of the Dutch trading post—the only authorized European establishment in Japan. Anonymous watercolor. (Musée de la Marine, Paris. Photo by Michel Didier © Photo.)







*Kon-cu-tem-ris, a mountain isolated in the Naka-Hira mountains in May 1804. (Bibliothèque nationale, Paris. Photo by Jeanbor S. Plutch.)*

sanov was not permitted to go to Edo, the imperial residence. After a five-month wait, on April 3, 1805, an official brought a response to his request: The emperor refused to receive him and returned all his gifts, for he had no intention of sending any himself. Henceforth, all Russian ships were forbidden in Japanese ports. In the end, as a result of this embassy, the Russians lost even the "privilege they had of entering Nagasaki."

After having obtained the necessary provisions, there was nothing for the commander to do but quit the port. For the return to Kamchatka, Krusenstern chose the longest route so that he might explore the western coast of the Nipponese archipelago—the coast facing China—from south to north right up to the large island, Saghalien (Sakhalin), discovered by La Pérouse. Along the way he gave Russian names to the newly discovered capes and bays. Having passed Tsugaru Strait, the *Nadezhda* reconnoitered the coasts of Yeso (Hokkaido), whose name in Japanese means "land of the barbarians." Its savage aspect contrasted with that of intensely cultivated Japan proper.

### *The Ainus and the Tartars*

Having dropped anchor at the northern part of the island in Soya Bay, which was given Romanzof's name, the Russians entered into contact with the indigenous non-Japanese population. "The inhabitants of Yeso call themselves Ainus; they also live in the southern part of Sakhalin. . . . They are dark-skinned, almost black, and have thick and bushy beards and black hair. . . . Their women are ugly. . . . The principal characteristic [of the Ainus]

is kindness. . . . They brought us fish without asking anything in return. . . ." Though relations between the navigators and the peaceful Ainus were excellent, the Japanese who controlled the ports of Yeso demanded that the Russians leave immediately. Once the La Pérouse Strait had been crossed, they anchored in Aniva Bay at the southern end of Sakhalin; but the Japanese were settled there too, and Ambassador Resanov was in a hurry to reach Kamchatka. After having reconnoitered the gulf, which he called Patience and which is La Pérouse's De Langle Bay, Krusenstern therefore cut east toward the Kuriles, which he traversed.

On June 6, the *Nadezhda* was back in Petropavlovsk. The unfruitful mission embarked several weeks later on the *Maria* and returned to St. Petersburg in October. Krusenstern now had only to attend to the affairs of the Russian-American Company, and he made a detailed on-site investigation of its functioning. The status of its sailors and employees was extremely precarious. Having come there in hopes of making their fortunes, they were stagnating under extremely primitive conditions in this frozen land, and they were subjected to cruel and tyrannical leaders. Exhausted by sickness, by insufficient and irregularly available food, and by bad treatment, few of them saw their homes again. The fate of the colonists established on the American coast was no more enviable.

On July 9, Krusenstern left to complete the exploration of Sakhalin. This time he followed its northern coast in search of the channel which, according to La Pérouse, separated this island from the Asiatic continent; he failed to find it. The crops that could be seen on the island "suggested a population more civilized than the Ainus." The Rus-



*Ainu men from the northern coast of Yeso. The one smoking the pipe is dressed in sealskins. (Bibliothèque nationale, Paris. Photo by Jeanbor S. Plutch.)*

sians were greeted by the Tartars with "sweeping gestures and embraces," but their greed was in painful contrast with the friendly disinterest of the Amus, whom they had driven from this part of the island. Krusenstern did not continue his exploration to the coasts of Tartary because he was fearful of confrontation with the armed ships the Chinese maintained in their ports.

Back in Petropavlovsk on August 29, he sent to St. Petersburg a courier carrying a résumé of his voyage, as well as maps, drawings, and natural history collections so that this material might not be lost in case of shipwreck. On September 9 he set out for China, where he was to join up with the *Neva*. The *Nadezhda* reached Macao on November 20, the *Neva* on December 3. The two ships had been separated for eighteen months.

In the meantime, Lisiansky had visited the company's settlements on Kodiak and Sitka Islands to the south of the Alaskan peninsula. He had brought with him a large cargo that was to be exchanged for Chinese goods. But at Canton the sale of the furs was hindered by the bad will of the authorities, and it took interminable negotiations to bring it off. The Russians were not able to leave Canton until February 6, 1806—twenty-four hours before orders for the seizure of the two vessels arrived from the Peking court. The ships traversed Sunda Strait in March, and after a four-day stay at St. Helena and another stop at Copenhagen, were back in Kronstadt in August 1806.

In three years and twelve days of navigation in all but unknown seas, Krusenstern had not lost a single man and he had brought his crew back in good health. The Russian navy had demonstrated that it was capable of competing with its powerful British and French partners, and drew legitimate pride from this. True, it had still been necessary to turn to Great Britain to procure the ships capable of making so long a voyage, but the following expeditions left in Russian-built ships.

As for the immediate goal he had set himself, Krusenstern had met it by creating a maritime link between Russia proper, Kamchatka, and the Russian colonies in North America; and between the latter and the Chinese market. Upon his return, Krusenstern made a report severely critical of the



Russian-American Company's administration—a criticism to which he returned in his *Journey Around the World* published in 1810–1814; it led to the elimination of some abuses and considerably improved the situation of those dependent on the company. As for Lisiansky, he published an account of the journey of the *Neva*, which had in great part been different from that of the *Nadezhda*.

The naturalists had brought back a harvest of precious information about the flora and fauna of the countries visited, and they made a new contribution to the study of life in the then largely unknown seas. The results were contained in three works published by Tilesius and Langsdorff.

After having completed the account of his voyage, Krusenstern left again in 1815 to explore the Bering Strait and seek out the Northwest Passage. He later published important hydrographic studies, including the excellent *Atlas of the Pacific Ocean*. Promoted in 1826 to rear admiral and director of the Naval Academy, he was a member of the scientific committee of the Ministry of the Navy and was thus able to help prepare the great expeditions that followed. In 1829, he was made a vice admiral, and, in 1841, an admiral.

Breadfruit. Lithograph by Langlumé, from a drawing by L. Choris at the Ratak Islands. (Bibliothèque nationale, Paris. Photo © Bibl. nat./Photoch.)

## The poet Chamisso goes around the world: Kotzebue's voyages 1815–1826

The Russians had to wait until the end of the Napoleonic Wars before being able to organize another voyage around the world. Though a private individual took the initiative for this voyage, he was a man who was as rich as he was powerful. Nicholas Petrovitch Romanzof, who had been Minister of Trade when Krusenstern left, had, in 1807, become Minister of Foreign Affairs and then Grand Chancellor. Strongly interested in the arts and sciences, he willingly played the role of Maecenas. In 1815, Romanzof gave Krusenstern the responsibility for preparing a new expedition that would be charged with reconnoitering several Pacific islands and with once more exploring the northwest coast of America south of the Bering Strait to see if a passage to Baffin Bay could finally be found.

Krusenstern had a small brig built, christened it the *Rurik*, and turned its command over to the man who at fifteen had been his clerk aboard the *Nadezhda*—Otto von Kotzebue, who for this purpose was made lieutenant commander. A young Estonian doctor, J. F. Eschscholtz, and the botanist C. F. von Ledebour were designated as naturalists, but Ledebour had to resign for reasons of health. The poet Chamisso—who had, a year earlier, been made famous by the publication of one of the masterpieces of German Romantic literature, *The Marvelous History of Peter Schlemihl*—offered to replace him.

Born in 1781 at the Château de Boncourt in Champagne, Louis Charles Adelaide de Chamisso, who afterward chose the German name Adelbert von Chamisso, had while still young immigrated to Prussia with his family. In 1812, he registered at the University of Berlin, where he studied botany, anatomy, and zoology. "In my childhood," he was to write, "Cook had raised the curtain hiding a world that was still as seductive as a fairy tale." As an adult, Chamisso had decided to find that world.

Come from Abo (Turku), Finland, where she had been equipped, the *Rurik* left Kronstadt on July 30, 1815. On August 9, she was in Copenhagen, where Chamisso came on board in the company of Lieutenant Morten Wormskjöld, who, on his return from a voyage to Greenland and Kamchatka, had asked permission to assist him as a volunteer naturalist.

From the beginning, the poet was struck by the limited space to which he would have to ac-

commodate himself for the next three years. "The cabin is about twelve feet square. . . . On either side were two bunks, two wall cupboards installed for sleeping purposes. . . . My bunk and the three drawers underneath are the only space on this ship that belongs to me. . . . In the cabin, four men sleep, six men live, and seven men eat. . . . Between meals, the painter and his drawing board take up two sides of the table, and the third side belongs to the officers. . . . If anybody wants to write or in any way make use of the table, he has to wait to take it over for a few fleeting moments that are parsimoniously counted and avariciously employed; as for me, I cannot work this way." To this confinement was soon added seasickness, "against which I ceaselessly struggle, but in vain"—all of which made "this phase of the voyage a time of difficult apprenticeship" for the unfortunate poet. Soon Chamisso was at odds with the captain, who constantly "complained about the natural history collections piling up" on the deck or between-decks; with the second lieutenant, who was "sickly and irritable"; and even with the sailors, who expressed enormous contempt for his research and unhesitatingly threw his harvests overboard. Though Eschscholtz became his friend, his relations with the painter Choris and particularly with Wormskjöld

South Seas jellyfish drawn by A. von Chamisso. Lithograph by L. Choris and Langlume (Bibliothèque nationale, Paris. Photo © Bibl. nat./Photob.)



## Kotzebue's Ship and Crew

The *RURIK*, very small 2-masted brig, 180 tons and 8 small cannon,  
left from Kronstadt, 7/30 1815;  
returned to St. Petersburg, 8/3 1818,  
crew: 32 men,  
deaths: 1 (of tuberculosis).

**Commander:** Otto von Kotzebue, lieutenant commander.

**Lieutenants:** 1st, Gleb Simonovitch Chichmarev; 2nd, Ivan Iacovlevitch Sakharin, left sick in Petropavlovsk, July 1816.

**Doctor and naturalist:** Dr. Johann Friedrich Eschscholtz.

**Naturalist:** Adelbert von Chamisso.

**Assistant naturalist:** Lieutenant Morten Wormskjöld, left the expedition at Petropavlovsk, July 1816.

**Painter:** Louis Choris.

were badly strained. Wormskjöld got along with no one and very soon made known his intention to disembark. He was to quit the *Rurik* at Petropavlovsk in June 1816.

The first stages were the same as had been followed by Krusenstern twelve years earlier. After stopping at Plymouth from September 7 to 25, the *Rurik* anchored at Santa Cruz de Tenerife and reached Santa Catarina Island on the Brazilian coast on December 10, 1815. On board, when not on duty the men amused themselves as best they could. Every Sunday there was a concert. "A chorus formed by the sailors had band instruments available, and our Bengali cook played the violin." Chamisso and Eschscholtz devoted themselves to observations of marine animals that were fished for from the deck with the help of a cloth net attached to a pole. The two naturalists made an important discovery about mollusks known as salps: "The same species has two very different basic forms according to the alternation of generations." They also studied jellyfish and found several new species, the aclephae—about which Eschscholtz was later to publish a basic study—being of particular interest.

Chamisso was less and less sorry about having joined the expedition, and the sight of the natural splendors of Brazil completely restored his enthusiasm. Here "the animal world is in harmony with the vegetable world. The creeper form of the vegetation corresponds to the climbing grip of the birds and the corkscrew tail of the mammals, found even in beasts of prey. . . . In the insect world, richness and splendor reign, and the butterfly rivals the humming bird. . . . When night falls on this green world, the animal world shines around its fires. The air, the thicket, and the earth are filled with flashes and illuminate the sea." Here, "all is new for science." Indeed, Chamisso discovered many new plants, among them an extremely beau-

tiful palm tree with feathery foliage which he baptized *Cocos romanzoffiana*.

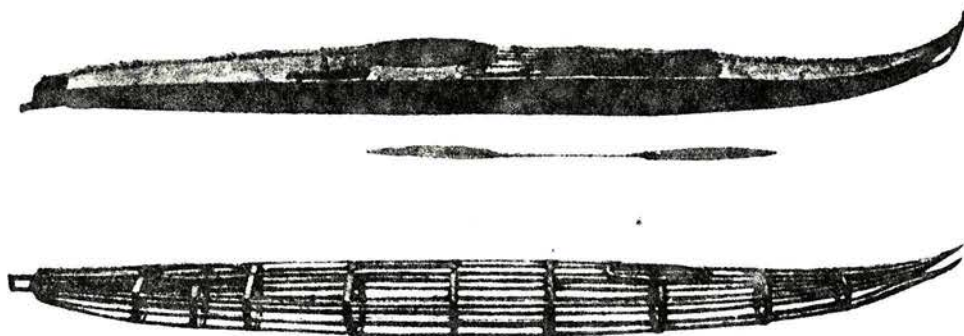
The *Rurik* left Santa Catarina carrying young chattering toucans and a capuchin monkey. She followed a very different route from the one taken by Krusenstern; Cape Horn was rounded amid storms, and, ascending the coast of Chile, the ship reached Talcahuano in Concepción Bay on February 13, 1816. On the way, the naturalists observed whales and dolphins, and collected the gigantic austral algae that were characteristic of the region. The arrival of the *Rurik* initially provoked both surprise and fear, for its flag was unknown, but the Russians were nevertheless well received by the Spaniards, who gave balls and banquets in their honor.

On March 8, the *Rurik* left Concepción Bay. On that date, Chamisso noted: "The voyage of discovery . . . begins here." Until his arrival in Avacha Bay on June 19, Kotzebue sailed through vast ocean spaces that had scarcely been entered since the heroic times of Le Maire and Schouten. On March 28, at Easter Island, the poet finally touched on the unknown. Thus was realized "the first great promise of this voyage."

"A large number of people awaited us peacefully, noisily, and impatiently on the shore, demonstrating their childlike joy by agitated movements on the beach." However, an atmosphere of suspicion and menace seemed to reign over the island, and it was not to be explained until much later. In 1805, the American schooner *Nancy* had come to the island in search of laborers; despite energetic resistance by the Easter Islanders, the Americans seized twelve men and ten women and kept them chained for three days, freeing them only when land was out of sight. The men immediately jumped overboard and perished, and the women had to be forcibly restrained from following suit. Since then, the



*Cocos romanzoffiana*, Brazilian palm discovered by Chamisso. Lithograph by L. Choris and Langhans from a drawing by Choris. Bibliothèque nationale, Paris. Photo © Bibl. nat. (Photob.)



Alutian Islands bidar. Lithograph by L. Choris and Langlume from a drawing by Choris. (Bibliothèque nationale, Paris. Photo © Bibliotek.)

*Alutian Islands bidar*

islanders had been on the defensive.

The Russians spent only a few hours on Easter Island before leaving in search of new lands. The first to be found may have been Schouten's Isle of Dogs and was therefore called Doubtful Island, but the following one was certainly unknown. Kotzebue decided to disembark there. "Despite the strong surf, we managed to land by means of a raft. One by one, the sailors got on the raft and let themselves be towed along a rope, profiting from a high wave to cross the reef and reach the shore." Though there were traces of human habitation, they met no one; it seemed the natives from neighboring islands would come to fish there. Chamisso quickly completed his natural history inventory as there was little flora and only a few land and sea birds, a small

lizard, and some butterflies. The first discovery was dedicated to Romanzof, the sponsor of the expedition, and saluted with cannon and a double ration for the crew, it being the Russian Easter. Krusenstern's name and that of the *Rurik* were given to two small coral groups sighted near the Palliser Islands discovered by Cook.

On April 30, the Penrhyns—other low-lying islands linked by reefs and enclosing a lagoon—came into view. The natives, "vigorous, well built, but somewhat frightening as they were covered not with tattoos but with chest and back scarifications, the most recent of which were bloody," soon became so numerous that they were made to keep their pirogues on one side of the ship, since the crew was unable to defend itself against three hundred savages hungry for nails and pieces of iron. Several days later, the *Rurik* was east of the Marshall and Gilbert Islands. There Kotzebue discovered two new islands, dubbed Kutusov and Suvarov.

On June 19, the *Rurik* entered the vast Avacha Bay. It was the first time that Chamisso—who had never been to Russia and was only beginning to learn the language—"put foot on Russian soil." He was all the more surprised to find himself in the home of an American, who had somehow ended up in this small town of Petropavlovsk, before a "cunningly painted portrait on glass of Madame Récamier, the amiable friend of Madame de Staël, in whose home I had long enjoyed her friendly commerce."

The month-long stopover in the capital of Kamchatka was devoted to various excursions and above all to almost daily parties, sometimes on shore and offered to the navigators by their compatriots, sometimes shipboard returns of hospitality. Lieutenant Chichmarev's birthday was celebrated there "with an unbridled joy, especially among the sailors, as he was loved by all." Second Lieutenant Sakharin, who was sick, had to leave the expedition, and Wormskjöld finally disembarked, after having often threatened to do so.

It was only then that Kotzebue unveiled his navigation plan, though only in part. During the



*Fucus antarcticus, giant austral seaweed.* Drawing by A. von Chamisso lithographed by L. Choris and Langlume. (Bibliothèque nationale, Paris. Photo © Bibliotek.)

summer of 1816, they had to content themselves with reconnoitering a safe anchorage on the American coast and preparing for a second summer cruise, which would be devoted to a detailed exploration with the help of employees of the Russian-American Company and the assistance of Aleuts in their bidars. "To these peoples the one-seat bidar is what the horse is to a Cossack. This skiff is a long and narrow swim bladder made of sealskin and ending in a tapering point. Everything is stretched over a light wooden framework. In the middle there is a circular opening; the man sits in it with outstretched legs, his trunk sticking up from the opening. . . . His light paddle in hand, his weapons before him, maintaining his balance like a horseman, he speeds over the mobile surface like an arrow."

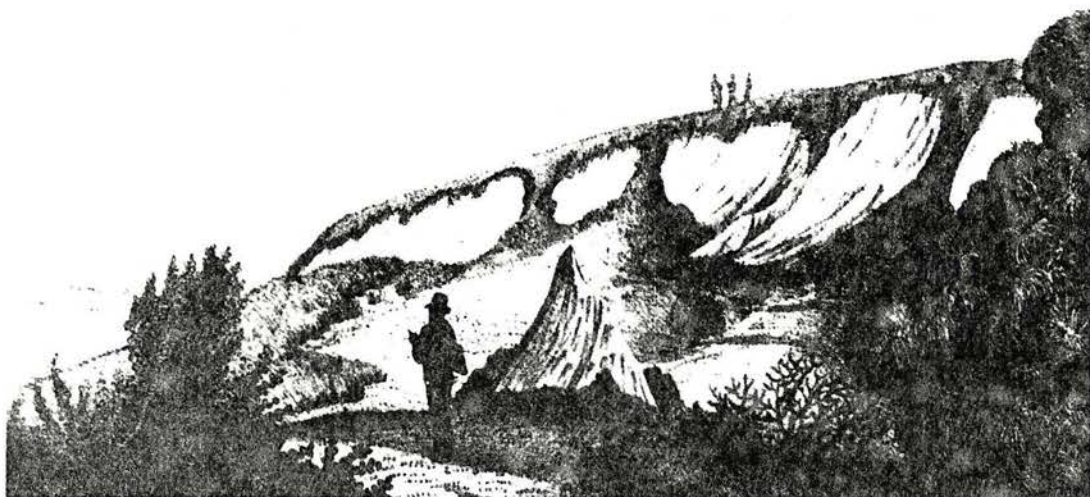
Between two cruises, in the winter of 1816-1817, the *Rurik* descended to the tropical islands for several months. On July 17, she left Petropavlovsk. Three days later, a high, rocky, and snow-covered land that "looked terribly sad" came into view; it was Bering Island, where the unfortunate explorer had died and been buried. On the twenty-seventh, they reached St. Lawrence Island at the entrance to the Bering Strait. Initially fearful, the islanders were soon loudly asking the sailors for tobacco. "Having learned that I was their leader," Kotzebue wrote, "they came in turn to embrace me by rubbing their noses against mine and ending their compliments by spitting into their hands, which they then passed over my face." The ship next entered the channel in which on his third voyage Cook had explored three islands; Kotzebue discovered several others.

To the north of Bering Strait, the Russians found a great arm of the sea on the American coast; they thought they had finally discovered the

Northwest Passage, but they soon saw that it was an illusion: The gulf to which it led was Cook's Goodhope Bay. The sound was given Kotzebue's name. In this vast gulf, the *Rurik* anchored in the shelter of Chamisso Island in little Eschscholtz Bay. The officers left to explore the island. "We had climbed these slopes," Kotzebue records under the date August 8, 1816, "without noticing that we were walking on a veritable iceberg. Dr. Eschscholtz found a part of a talus that had melted and to his great surprise noticed that the interior of the mountain was made of pure ice." In one of these gashes, the naturalist found the teeth and tusks of a mammoth. The inhabitants, who seemed never to have seen a European, watched the ship in astonishment from the coast. Once established in their on-shore camp, the Russians were convinced they were surrounded by "Americans." In the middle of the night, Kotzebue decided to break camp. Of this decision, he wrote: "I saw no other way to escape death." However, as Chamisso notes, these men "were not hostile but simply curious."

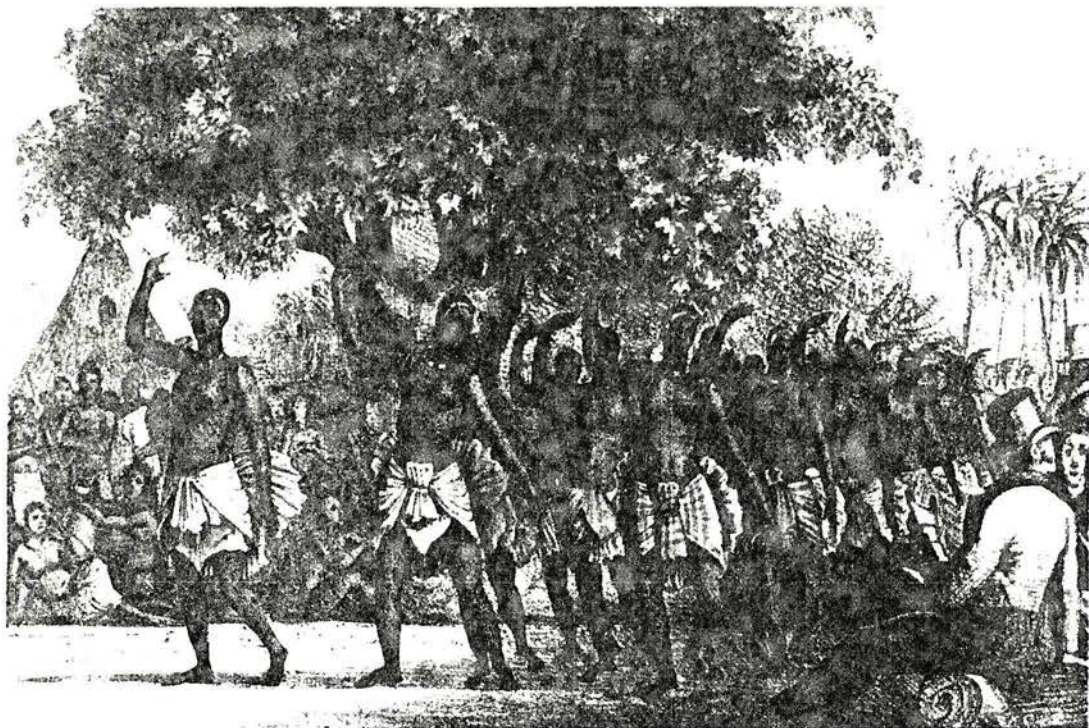
The *Rurik* next followed the Asiatic coast "in order to get to know the people who inhabit it and to compare them with the Americans." They were the Chukchi, an independent Eskimo tribe. "They recognize Russian sovereignty only to the extent that they pay tribute where they trade with the Russians to mutual advantage. . . . They welcomed us on shore as official hosts—amiably, but with a solemnity that deprived us of all spontaneity."

The goal of the first cruise having been achieved, the *Rurik* set sail toward the south, stopping once more in St. Lawrence Bay. On leaving (August 29), she was struck by a violent storm and did not reach Unalaska Island in the Aleutians until September 7. Kotzebue was received there by the



View of icy slopes of Chamisso Island, where Eschscholtz discovered the tusks of a mammoth in August 1816.

Lithograph by L. Choris and Langlumé from a drawing by Choris (Bibliothèque nationale, Paris. Photo © Bibl. nat./Photob.)



The Hula Dance, celebration of the Hawaiians. Lithograph by Chiro, and Langlum, from a drawing by Chiro. Bibliothèque nationale, Paris. Photo © Bibl. nat. Photo 1.

agent of the Russian-American Company and told him of his needs for the second summer cruise. Leaving the port of Unalaska on September 14, the ship went to the California missions, where the crew was to have a few weeks of rest before heading for the South Seas.

"On October 2, at four in the afternoon, we made our entry into the port of San Francisco." The Russians were received there by an officer of the *Présidio*, the Spanish military authority that was responsible for several missions, each mission being directed by two Franciscans who had contracted to spend ten years there. The Feast of St. Francis, which took place the next day, gave the Russians "the opportunity to observe the activities of the missionaries. . . . The pious Franciscans who maintained the New California missions are not educated in any of the arts and crafts that they practice here, that they are supposed to teach; they speak none of the languages spoken by the people to whom they have been sent." The results they achieved were damning. "The death rate of the Indians in the missions rises terrifyingly. Their race is in the process of becoming extinct." Kotzebue and Chamisso wondered why the Spanish bothered to occupy California at great expense and then let the country go to ruin and become depopulated. The only reason that the governor of the province could give them was "the pious intention of propagating the faith of Christ." Chamisso noted: "Well then, here's another good work begun backward and badly carried out." Great Britain and the United States constantly encroached upon the Spanish settlements, and the Russians were doing the same.

During their stay in California, the naturalists had collected and described the sea lion, or California-eared seal, and a great many birds, including a "humming bird with dazzling plumage." Eschscholtz identified as many as three species of salamander. Though the season was hardly favorable, Chamisso made several interesting discoveries, including the *Eschscholtzia californica*, beautiful papaveraceae with bright yellow flowers, and *Ceanothus thyrsiflorus*, a fine shrub with pale blue flowers. Fresh provisions having been loaded on and the crew being in good health, the *Rurik* left the roads of San Francisco on November 1 to head for the Sandwich Islands.

She reached the Sandwich Isles on November 28. Guided by John Elliot de Castro, a half-English, half-Portuguese surgeon who had become the king's personal doctor, the Russians were presented to Kamehameha I, who had united the archipelago into a single kingdom. "An armed crowd stood on the shore. We landed before the house of the old king, who was seated on a magnificent terrace, surrounded by his wives and wearing his people's national costume, the red *maro* [which goes around the loins] and the black *tapa* [an ample fiber mantle with magnificent folds]."

Kamehameha and his subjects were somewhat alarmed by this unexpected landing. Two years earlier, the crew of a Russian-American Company ship had profaned a morai and raised the Russian flag: "With the help of some Europeans, bloodshed was avoided and the arrogant foreigners murmuring threats of war were forced to re-embark." Had the *Rurik* come to carry out reprisals? Kotzebue

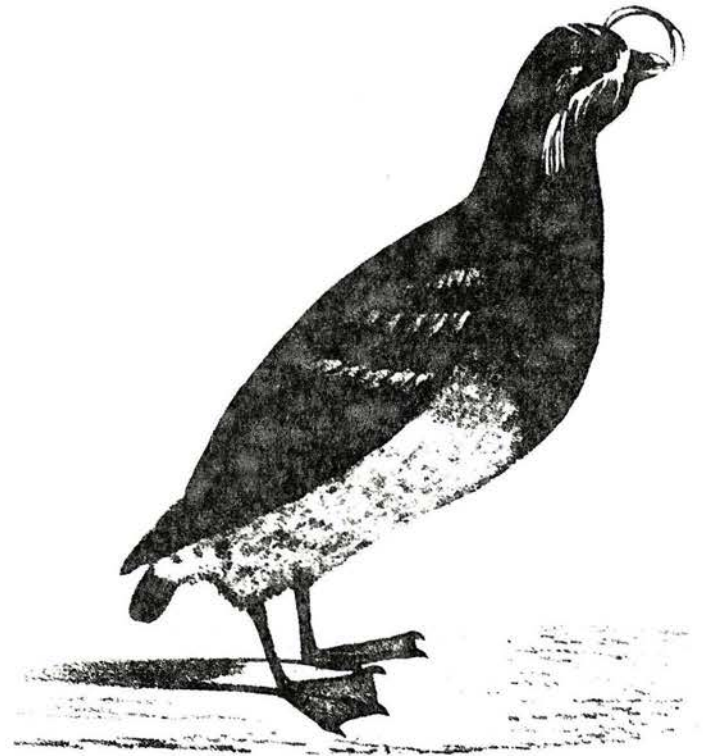
dispelled these fears, and the welcome was very cordial. Chamisso records: "We were introduced to the queens, tall, strong women who were still almost beautiful. . . . In a straw hut, they were all stretched out together on a floor softly covered with delicate mats. We had to take our places among them. The looks directed at me by the neighboring queen made me, a novice, almost uneasy. On following Eschscholtz, who had already slipped out of the house, I learned from him that his queen had expressed herself even more directly."

Chamisso, "eager to attend the mysteries of Hawaiian religious rites," appealed to an island friend he had made and was invited by the latter "with no hesitation. . . . Compared to the joy with which [the sacred gestures] are made, the pleasures of one of our masked balls have all the allure of a burial. The religious ceremonies take up only a few hours. . . . The intervals are filled with the most joyous conversations and goods meals are had. . . ." Chamisso was disappointed, but if he had been so readily admitted to the ceremonies, wasn't it just because they no longer had their earlier initiatory character? On the other hand, he was enraptured by the hula, the Hawaiian festival dance. "In the well-balanced rhythm of the dance, the human figure is shown to magnificent advantage, and as the movement becomes lighter and freer, it offers the spectacle of the beautiful stances to be found in nature. We seem to be watching the metamorphoses of antique statuary; only the feet carry the dancer. He enters quietly. His body unfolds, his arms, all his muscles, stir, and his face becomes animated. . . . These festivals make the Hawaiians drunk with joy."

On December 14, the *Rurik* left the Sandwich Islands and once more turned in the direction of the Marshalls, visited the year before. There the Russians discovered several new islands: New Year Island (Miadi), the Romanzof Archipelago (Wotje), the large island of Otdia, the Kasen Group (Mal-oelap), and the Ternei Group (Aur). These islands formed two more or less parallel lines, and the chain visited by the Russians was the Ratak; the other, which "consists of nine groups," was the Ralik. "The weakness of the Ratak inhabitants eliminated any suspicion about them; their gentleness and generosity made them trust the foreigners who dominated them with all their power; we became friends without reservations."

### Kadu

At Ratak, Chamisso met Kadu, "one of the most beautiful natures that I have met in all my life, one of the men I have loved most." Volunteering to serve as an intermediary with the islanders, Kadu was soon so attached to the Russians that he could not leave them. A friend was also made of an Otdia inhabitant, "who distinguished himself from the others by his wit and intelligence. . . . Lagediack understood that we intended to introduce useful but still unknown plant species to these islands for the



good of his people." Thanks to him, the Russians were able to set up an island garden in which they sowed peas, corn, and other edible plants. Chamisso finally gave way to rapture. "Nowhere else is the sky more beautiful, the temperature more equable, than on these low islands. The sea and the wind balance one another, and the brief passing showers maintain the forest in its luxuriant green splendor." Until March 18, when they returned to the Kutusov (Utirik) and Suvarov (Taka) groups discovered the previous year, the *Rurik* sailed from island to island before regretfully leaving these enchanting places behind and returning toward the Bering Strait, which had to be reached in time. "April 13 was a terrible day on which my best hopes were destroyed," Kotzebue wrote. The *Rurik* was hit by an extremely violent storm during which several men—including the commander—were injured.

On April 24, the Russians arrived safe and sound at Unalaska. Kadu was stupefied by the snow-covered mountains, whose existence he had never even suspected. The equipment asked for by Kotzebue was almost ready, and it was assembled in haste. On June 29, the *Rurik* departed with fifteen Aleuts and some bidars aboard. The naturalists had had time to assemble a detailed inventory of the little-known flora and fauna of the Aleutians. They had made a considerable collection that included northern sea birds and raptors, some small carnivores and rodents, and the cranium of a whale that had been cut apart by the Aleuts. All these things were carefully wrapped and placed in large nailed and tar-sealed cases, which were under Kotzebue's personal protection.

Crested auklet from the Bering Sea.  
Lithograph by L. Choris and  
Langlumé. (Bibliothèque nationale,  
Paris. Photo © Bibl. nat./Photob.)



The *Rurik* was about to enter the Bering Strait when suddenly the commander decided to go no farther. On July 12, he wrote: "At twelve midnight, just as we were preparing to anchor at the northern promontory, to our great horror we noticed an ice floe that stretched to the northeast as far as the eye could see. . . . The cold air hit my weak chest so strongly that I could not breathe and suffered an angina attack in which I kept fainting and spitting up blood. I realized that my condition was more dangerous than I had previously admitted. . . . I sent word to command headquarters that my health forced me to return to Unalaska." This lapse on Kotzebue's part was severely criticized by his men, who greeted his decision with "silent and downcast faces." Chamisso strongly regretted that the commander had not at least discussed the question with the staff. Nevertheless, on the ship's return, Count Romanzof simply accepted Kotzebue's report.

On July 12, 1817, therefore, the expedition was virtually over. But there was still the return to be considered, in other words to "unwind backward what had been accomplished until now," as Chamisso put it with wry irritation. On July 22, the *Rurik* left Unalaska, anchored at Oahu in the Sandwich Islands from October 1 to 14, and headed for the Marshalls, where several new islands were discovered.

At Otdia, the navigators were received with demonstrations of great joy. Kadu, enriched by the experiences of the last few months, "proved himself indefatigable and brimming with activity. . . . He was still firmly resolved to remain with us." Later, "his very gay humor gave way to a peaceful gravity" and he announced that he would "remain at Otdia to look after the animals and plants, which

would not otherwise be cared for. . . . Before the assembled inhabitants of Otdia, Kadu was proclaimed our representative. . . . Having already come to Ratak three times, we solemnly promised that we would return after a while to visit him and ask for an accounting."

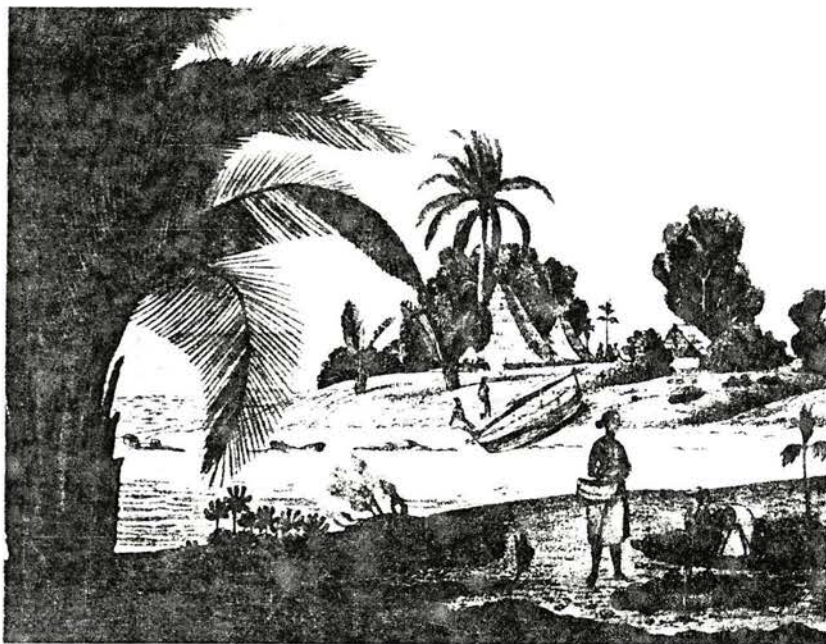
Kotzebue was indeed to return to Otdia, but not until seven years later. The islanders gave him an enthusiastic welcome. "Several waded out up to their waists to be the first to greet us. . . . Four of my old friends lifted me from the launch and carried me to the shore, where Lagediack awaited me with open arms and joyfully pressed me to his heart." But "of all that we had brought to Ratak, Monsieur von Kotzebue saw only a cat, which had gone feral, and a yam root." Kadu was gone; he was at Aur with King Lamari, and "thanks to his care the animals and plants that the king had transplanted there had, it would appear, multiplied considerably." "Lagediack secretly urged Kotzebue to seize power at Ratak and offered to help him do so. As the ship was about to set sail, he brought his friend a last gift: young coconut trees that he wanted to be planted in Russia, since he had heard there were none there."

Leaving the Marshalls on November 5, 1817, Kotzebue decided to stop at Guam in the Marianas. "This green and scented island seemed a garden of delights," wrote Chamisso; however, "it was only a desert. . . . The missionaries from Rome had raised their cross there; 44,000 human beings had been sacrificed to it, and their survivors, mixed with the Tagals who had been brought from Luzon, had become a small silent nation, sad and subjugated. . . ."

At Guam, Chamisso learned about trepang—smoked holothurians that are the basis of a lucrative trade with China, where they are considered a delicacy. The naturalist made a collection of these echinoderms for the zoological museum in Berlin. On January 17, 1818, the *Rurik* anchored at Cavite in Manila Bay. Chamisso had time to make a one-week excursion, climbing the slopes of the Taal and collecting numerous insects, including the phasma, which looks like a living leaf.

The *Rurik* left Cavite on January 29 at the same time as the *Eglantine* out of Bordeaux, a merchant ship on board which was Dussumier, one of the best animal collectors of the Museum of Natural History in Paris. The Russians had aboard several monkeys, of which at least one belonged to an unknown species; however, almost all died, except for a pair of a species common in Luzon. They "animated our rigging as they had their native forest," arriving safely in St. Petersburg. On March 31, 1818, the *Rurik* entered Table Bay, at the Cape, where it met up with Freycinet's *Uranie*. From June 16 to 30, the navigators stopped at Portsmouth, and this gave Chamisso time to go to London, where he met several famous scientists: the venerable Sir Joseph Banks, then seventy-five; Captain James Burney, who had also been a companion of Cook's; Sir Robert Brown, who had traveled with Flinders;

Landscape of the Ratak Islands  
(Marshall Archipelago). Drawing and lithograph by Choris. "The appearance of this unusual archipelago is very pleasant. The islanders raise their huts in the shade of breadfruit trees. Large ferns and other plants native to equatorial regions cover the ground." (Bibliothèque nationale, Paris. Photo: Bibl. nat. Photo.)



and finally Baron Cuvier, who was passing through.

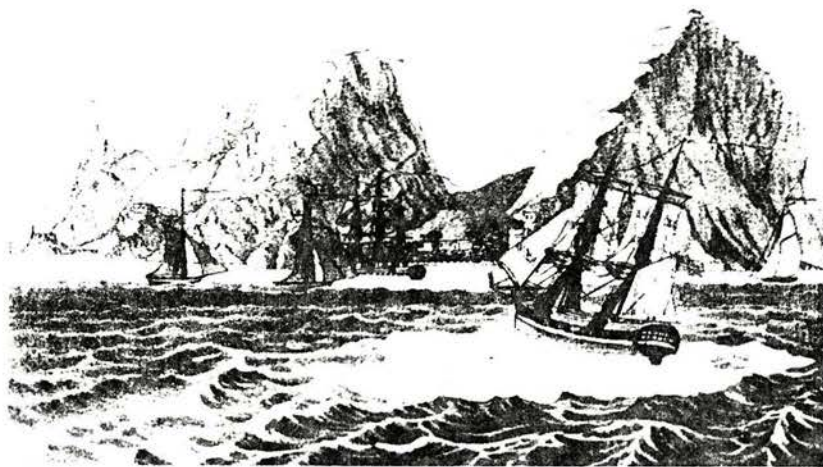
On August 3, 1818, the *Rurik* dropped anchor in front of the home of Count Romanzof in St. Petersburg. The voyage had lasted three years, and there had not been a single death.

### *Kotzebue's second voyage, 1823-1826*

After his return to Berlin, Chamisso remained there and was named first the conservator of the Botanical Gardens and then the Royal Horticulturist. (He also married, and fathered seven children.) His reputation as a poet continued to grow, especially when, in 1829, he published the poem *Salas y Gomez*, written on board the *Rurik*, and, the following year, *Woman's Love and Life*, which was set to music by Robert Schumann. It was this fame that led him to return to and publish—but not until 1835—his *Voyage Journal*. Previously, with his notes entitled "Remarks and Ideas," he had collaborated on Kotzebue's *Riese um die Welt* (Journey Around the World), published in Weimar in 1821.

Promoted, on his return, to captain-lieutenant of the Marine Guards, Otto von Kotzebue was to circumnavigate the globe once more (1823-1826), this time on the *Predpriyatiye* (Enterprise). His voyage that took him to Tuamotus, Tahiti, the Navigators Islands (Samoa), the Marshalls—where he stayed in Ratak from April to May of 1824—and finally to Kamchatka and the northwest coast of America. Initially conceived as a scientific expedition, this voyage took on a political slant when Kotzebue's extremely unfavorable report on the Protestant missions in the Pacific islands caused a sensation.

A nineteen-year-old doctor, H. F. E. Lenz, who was later to become famous, joined the expedition. Dr. Eschscholtz once again accompanied Kotzebue. He discovered a certain number of species new to science: several birds, including the



limicolae, the Patagonian seed snipe, and some reptiles, such as the pustular hydrosaurus native to the South Seas. Of particular interest was his discovery of many marine invertebrates: jellyfish and Alaskan mollusks. On his return from his second voyage, Eschscholtz began to publish his discoveries in a *Zoological Atlas*, the last volumes of which appeared posthumously. He died of exhaustion at the age of thirty-eight in 1831.

The painter Choris did not live even that long. In 1819, he went to Paris, where he remained for eight years and learned lithography so as to be able to reproduce his drawings himself. They were published from 1823 to 1826 in his *Voyage pittoresque autour du monde, 1815-1818* (Picturesque Journey Around the World 1815-1818). In 1827, he went to Mexico, where he was killed in an ambush the following year; he was thirty-three.

*St. Helena, "a rock lost in the ocean." Access to it was forbidden the Rurik on April 24, 1818, by Sir Hudson Lowe, Napoleon's jailer. Lithograph after Choris. (Bibliothèque National, Paris. Photo © Bibl. nat./Arch. Photo.)*

# The first exploration of the Antarctic: Bellingshausen, 1819-1821

In the interval between Kotzebue's voyages, there had been several other Russian expeditions. In 1817, even before the *Rurik* had returned, Captain Vasily Mikhailovich Golovnin—who, in 1813, had been captured at the Kuriles on the *Diana* by the Japanese and been their prisoner for two years—had sailed on the *Kamchatka* to visit the northwest coast of America. He was assisted by two young officers: Fyodor Petrovich Lütke and Baron Ferdinand Petrovich von Wrangel. When he returned in 1819, Golovnin had determined the position of several islands in the Bering Sea.

Of considerably more geographical importance was the first official attempt to explore the Antarctic by Fabian Bellingshausen.

He commanded the *Vostok* (East), which, on July 3, 1819, left Kronstadt accompanied by the *Mirny* (Peaceful), commanded by Mikhail Petrovich Lazarev. In January 1820, the navigators crossed the Antarctic Circle; two weeks later, at 67° S latitude, they saw land through the fog. It was assuredly the Antarctic Continent, which they were therefore the first to see. In the spring, Bellingshausen headed north, explored the Tuamotus, anchored at Tahiti, sailed through the Fiji Islands, then went to Port Jackson and Tasmania before moving south in November to take advantage of the austral summer.

During his stopovers and while on the seas, Bellingshausen worked as a naturalist. He was the first to observe the southern migration of whales at the beginning of the austral summer. In Van Diemen's Land, he noticed that, like the Tasmanians themselves, the island fauna were in the process of becoming extinct. The Macquarie Islands near the Antarctic Circle had been ravaged by seal hunters.

Reaching the waters near Antarctica in December 1820, Bellingshausen discovered at 69° S latitude and 91° W longitude the island he called Peter I, and then a body of land to which he gave the name of the reigning tsar, Alexander I. It was in fact a large island, but an impenetrable ice floe prevented the ships from going farther. On December 15, 1820, Bellingshausen captured the first emperor penguin, a giant bird measuring 1.15 meters high and weighing 30 kilos. The navigators then explored the South Shetland Islands, South Georgia, and Sandwich Land, discovered by Cook. At

the Shetlands, the Russians witnessed the fierce battles fought among the sealers. Three of the eighteen ships present were sunk, and nobody seemed concerned about the number of dead. One of the captains declared that he had killed sixty thousand seals in a single season. Sickened by these massacres, Bellingshausen was sure that all the animals in this region were doomed to imminent extinction.

On his return in 1821, Bellingshausen brought back scientific data of all kinds. Though he had found only two islands in the Antarctic, he had completed Cook's long tour by skirting the South Pole in the opposite direction; he had also discovered some twenty islands in the Tuamotus and as many in the Fijis. In addition, he had assembled a rich collection of birds. Many died in the cold, but as soon as the weather permitted, the survivors were placed on a sunny deck and began to sing; some were even still alive when the ship reached Russia. A magnificent cockatoo died of indigestion after having devoured a stuffed kookaburra (a giant Australian kingfisher), and a parrot profiting from its refund liberty flew to the top of the *Vostok's* main mast. When a sailor was sent up to retrieve it, the frightened bird flew to the bow, where luckily it accepted a perch that was extended to it.

Bellingshausen, his biographer concluded, was one of the last of the maritime explorers in the grand style established by Cook. Thanks to his account of the voyage, we have a last glimpse of the Antarctic Ocean before it was thoroughly invaded, and of the tropical islands before they became a world of adventurers, convicts, and persecuted natives decimated by alcohol and venereal diseases brought by the white man—before their beaches became tinged with blood, before all the disasters foreseen by Cook.

While Kotzebue was finishing his second expedition, Baron Wrangle had sailed on the *Krotky* (Easy Going) for a two-year cruise (1825-1827) which enabled him to demonstrate the nonexistence of Pacific islands some European navigators had claimed to discover. In 1827, the *Krotky* left again, this time under the command of Captain Haghemeister, and sailed the ocean between Australia and Kamchatka, making a special stop in the Tuamotus.

## The naturalists of the *Senyavin*, 1826–1829

The *Predpriatie* of Kotzebue's second voyage returned to Kronstadt on July 10, 1826. On September 1, a newly built ship, the *Senyavin*, "which held the sea excellently but did not have speed," left the same port. It was commanded by Lütke, aide-de-camp to Tsar Nicholas I, who had mounted the throne the year before and now promoted Lütke to captain-lieutenant for the expedition. On board was a scientific team composed of Dr. Karl Heinrich Mertens, a naturalist, "deputy-professor" Alexander Postels, serving as mineralogist and draftsman; and Baron Kittlitz, a retired Prussian captain and an eminent ornithologist.

Mertens, who had just turned thirty, was the son of the famous botanist Francis Karl Mertens. He had twice been to Paris to study at the Museum of Natural History and had established relations with Jussieu, Lamarck, and Humboldt; he had also visited Sir Joseph Banks and Robert Brown in London, and in Germany had met with Johann Reinhold Forster. These connections had given him a taste for distant voyages, and he had wanted to sign on as botanist for the Bellingshausen expedition; but his father had insisted that he first finish his studies. In Russia, Mertens worked as a doctor and watched for the first chance to sail off. It was offered him by Krusenstern, who had the Academy of Sciences name him the *Senyavin* naturalist.

The ship left in the company of the *Möller*—commanded by a Captain Staniukovich—which accompanied her as far as Valparaiso and then left for Tahiti, sailed to Kamchatka, and, in August 1827, visited the Aleutians. Afterward, the *Möller* stopped for several months in Honolulu in the Sandwich Islands. In April 1828, Staniukovich was back in Kamchatka, from where he left to explore the northern coast of the Alaskan peninsula.

The two ships made their first stop at Tenerife in November 1826. They were in Rio in January 1827, and then, going around Cape Horn, reached Concepción in Chile on March 16 and Valparaiso on the twenty-sixth. To give the *Senyavin* crew a rest after a seven-month voyage, Lütke remained ashore until April 15. Since the effective liberation of Chile by General San Martín in 1817 and the opening of the country's ports to ships of all nations, Valparaiso—which had previously been a simple, almost wretched village—had become the most important commercial center of the South Pacific. Its population had increased enormously.



"The streets were filled with people rushing here and there on foot and on horseback; the multitudinous shops are crammed with all sorts of goods from Europe." It was Lent and the upper classes lived in strictest seclusion, but the crowd continuously amused itself. "The cafes are always full and there is music, singing, and dancing everywhere."

Mertens began a collection of plants and most especially of algae, specimens of which were drawn by Postels as soon as they were gathered. He himself saw to the mineralogical samples, while Kittlitz established an inventory of Chilean birds. He discovered several little-known species, the most remarkable of which was the tapaculo—"cover your bottom"—with its constantly moving tail and recognizable "shrill and throbbing notes that follow one another and become lower and lower."

From Valparaiso, the Russians went up the western coast of America until Sitka Island, not far from the Alaskan peninsula. The shoreline looked savage: "Two steep mountains covered with virgin forest from the foot to the summit. . . . All was quiet and wild. . . . A navigator sailing off the coasts could see the Russian flag floating over the fortress."

### *New Archangel*

They had reached Novo-Arkangelsk, a fort

*Kaloshes in their hut. Smoked fish are suspended from the beams. Lithograph from a drawing by A. Postels, extracted from the Voyage of the Senyavin. (Bibliothèque nationale, Paris. Photo © Bibl. nat./Photek.)*



*Novo-Arkangelsk, a settlement of the Russian-American Company on Sitka Island. Lithograph from a drawing by von Kittlitz for Voyage of the Senyavin. (Bibliothèque nationale, Paris. Photo © Bibl. nat. Photob.)*

established in the bay of Sitka by the Russian-American Company. The local population of Kaloches had burned it down in 1804 when the *Neva*, commanded by Lisiansky, was at Sitka, but with Lisiansky's aid, Governor Baranov had vanquished the Kaloches and reconstructed the fort. Novo-Arkangelsk then had eight hundred inhabitants—three hundred Russians, four hundred Aleuts, and some halfbreeds fathered by the Russians on Aleut women. The colony was linked to the mother country by ships that sailed from Okhotsk in Siberia only once a year.

Thanks to Krusenstern's report, the status of the company's employees had improved significantly; they received regular salaries and had the right to free lodging. The governors were now navy officers. Novo-Arkangelsk was of extreme importance, since all the Russian settlements in America and even in the Kuriles on the Asian coast depended on it. Nevertheless, the fort had almost been abandoned because of the persistent hostility of the natives.

The Aleuts of Unalaska, where the *Senyavin* remained from August 21 to 30, were, on the contrary, already "Christians and showed a great disposition to become civilized. . . . Good, sturdy, and skillful, they made the sea their true element." Next going north to the Bering Sea, Lütke made brief stopovers at the islands of St. George and St. Paul, both of which were covered with moss and entirely deforested.

Farther to the north, the *Senyavin* visited the island Cook had spotted in 1778 and named Gore Island, unaware that it had previously been discovered by the Russian navigator Sindt and named St. Matthew. Lütke was the first to make a detailed reconnaissance of it. Next he sailed along the Asiatic coast, and having on the way visited Bering Island—then inhabited by 110 people of Russian,

## Lütke's Ship and Crew

The *SENYAVIN*: bark with an 86-foot keel, carrying 16 carronades, like the *Möller*, constructed in the Okhta shipyards especially for the expedition, launched May 1825; left from Kronstadt, September 1, 1826, with the corvette *Möller*, Captain Staniukovitch; the 2 ships separated at Valparaiso in March 1827 and joined up again at Kamchatka in June 1828, returned with the *Möller* to Kronstadt, 9/6/1829; crew: 11 officers and 51 men; deaths: 1, in an accident.

**Commander:** Captain-lieutenant Fedor Petrovitch Lütke.

**Lieutenants:** Zavalichine, Abolechev.

**Ensigns:** Ratmanov, Mayet, Butakov, Glazenapp.

**Midshipman:** Pavel von Krusenstern (son of the admiral).

**Surgeon and naturalist:** Dr. Karl Heinrich Mertens.

**Mineralogist and draftsman:** Alexander Postels.

**Ornithologist:** Baron von Kittlitz.

Aleut, and mixed descent—he arrived at Petropavlovsk on September 25. There preparations were made for the winter cruise, which was to be in the tropics. At Kamchatka, the naturalists assembled collections of rocks, algae, birds, and marine animals.

"Not having had until now a tropical station for experiments with the invariable pendulum, I resolved to stop at Ualan Island [Kausaie or Strong's Island]." In 1824, this island had been visited by Duperrey, and it was in the same harbor that the *Senyavin* dropped anchor on December 4, 1828. Until April 1829, the Russian expedition was to remain in the Carolines, which it sailed through in every direction, discovering numerous islands, which were explored and named.

Ualan, the first stop, was mountainous and covered with an all-but-impenetrable forest. Some eight hundred inhabitants lived along the shore. They were of medium height, well built, and extraordinarily agile; their brown skin, covered with coconut oil, was tattooed, but without great skill. They went nude, wearing only a belt woven of banana-tree bark. Content with breadfruit, bananas, and fish, they led an idle life, especially their chiefs, the most powerful of whom owned all the land and lived apart. "A chief spends his life eating, sleeping, and sitting around in circles and talking." The people of Ualan had neither weapons nor musical instruments. They knew nothing of war, and their only distraction was dancing, in which the women were not allowed to join. Gentle and peaceful, they received the navigators hospitably. The naturalists were always accompanied on their expeditions by

natives, who would climb the trees for them and be helpful in many ways. Mertens found strange insects and collected many ferns; Kittlitz discovered several unknown birds, among them the Caroline rail, small and black, of which he captured two that are now in the Leningrad Museum and considered very precious, for no more have ever been found. Numerous fish were also taken from the reefs, including a magnificent surgeon fish with orange jaws—a drawing of which was made by Postels before it was preserved in alcohol—crustaceans, and mollusks, which were painted by Mertens.

On January 3, 1828, the *Senyavin* left to make a tour of the archipelago. To the northwest of Ualan, the navigators found a previously uncharted large high body of land surrounded by small groups of islets and bordered by reefs. Its inhabitants called it Ponape, which the Russians transcribed as Puy-nipet. "Soon boats with sails began to appear. From a distance, the Puy-nipets began to sing at the top of their voices, to dance, and to gesticulate with their heads and hands," but once on board, they shouted and jumped about, brandishing their spears menacingly, "their boldness and impertunity increasing from moment to moment." Seeing that he could not land without risk, after having cruised about for a week Lütke left this group of islands, which he called the Senyavin Islands. In January, he also discovered Ngatik (Palau), previously named Los Valientes by the Spaniard Lazcano, who had discovered the archipelago in 1636; and then the Mortlocks, reconnoitered in 1796 by the Englishman Wilson. Like the Ualanders, the inhabitants of these islands were "hospitable, good, reserved, and pleasant mannered. . . . We learned that the group of islands was called Lukunor." To the northeast were the Truk Islands, named Hogoleu Islands by Duperrey, who had visited them in 1824, and the Namonuito group.

Leaving the Carolines, Lütke sailed toward the Marianas and was well received by the governor of Guam, Don José Medinilla, who a year earlier had been so helpful with the sick men on Dumont d'Urville's *Astrolabe*; Lütke remained on this island from February 26 to March 19. An observatory was set up on shore, the ship was put back into shape, and the crew was able to rest. "It was still not time for us to go north," wrote Lütke. "Therefore, on leaving Guam we returned to the Carolines to continue its exploration." The *Senyavin* then visited Namorik, Elato, and Namoliaour, and finally, thanks to indications from the inhabitants of these islands, Olimario and the Farauleps.

On April 9, the Russians left the tropics to head north, arriving on May 1 at the Bonin Islands off the Japanese island of Kyūshū, where they stayed until the fifteenth. The *Senyavin* dropped anchor at Port Lloyd on Peel Island, where there were only two inhabitants, survivors of the British whaler *Williams*, which had been shipwrecked there three years earlier. Another ship, the *Timor*, had come to look for survivors, but the two men—the Prussian Wittrien and the Norwegian Petersen—had decided

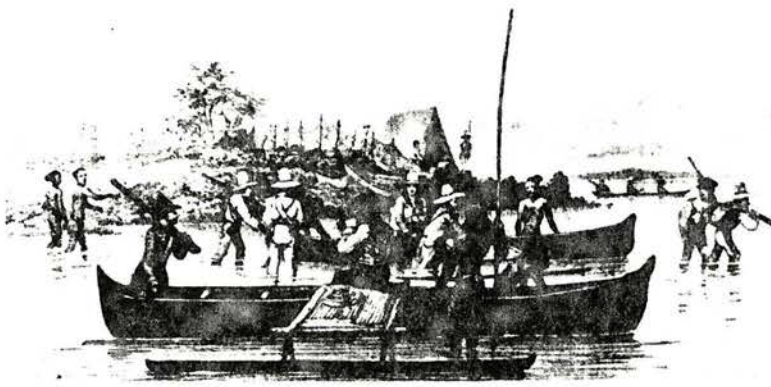
to remain where they were. "A house of ship's planking and an entranceway covered with cloth . . . was the residence of our hosts. A table, two hammocks, a trunk, some muskets, a Bible, several fishing implements, and two engravings formed the furnishings of this solitary human habitation in the Bonin Islands." With some disappointment, Lütke then learned that Great Britain's Captain Frederick William Beechey had visited and reconnoitered these islands a year earlier. He had offered to take Wittrien and Petersen with him, but, thinking that another ship would come for them, they had refused. However, weary of waiting and no longer able to bear the solitude, they asked Lütke to repatriate them, and he agreed. Kittlitz had captured two unknown birds—the bush warbler and the Bonin hawkfinch, a rare species that was to disappear after 1857.

### The Chukchi

Having returned to Petropavlovsk on June 9, the *Senyavin* left again on the twenty-sixth to visit the Asian coast north of Kamchatka. First following along this peninsula, Lütke, having rounded Cape Kronotski, saw Klyuchevskaya Sopka, a gigantic volcano; then he reached Karaginskiy Island. Only the Russian navigator Sindt had seen this part of the coast. The land, once inhabited by the Koryaks, about whom Lütke had been ordered to obtain information, was now deserted.

Moving farther north, he next went along the coast and the islands explored by the Bering expedition in 1740-1741, and he discovered the channel that separates the continent from Arakamchechen Island; it was named Senyavin Strait. After visiting what Bering had called Holy Cross Island, a small group was sent along the Anadry River. They were then in the land of the Chukchi, who inhabited the northern end of the Asiatic continent near the Ber-

Departure of an excursion on Ualan Island (the Carolines). Lithograph from a drawing by von Kittlitz. (Bibliothèque nationale, Paris. Photo © Bibl. nat. (Photoch.))





Cascades surrounded by mangroves on  
Peei Island, Bonin Archipelago.  
Lithograph by Sabatier from a  
drawing by A. Postels. Bibliothèque  
nationale, Paris. Photo: Bibl.  
nat. Phototh.

ing Strait. They proved extremely hospitable, especially after receiving a gift of tobacco, of which they were passionately fond. According to Lütke, the Chukchi were divided into two groups, one of which was the Namollo, settled along the river banks. In the winter, they lived in huts of wood and, in the summer, in huts made of seal skin; their principal foods were walrus and seal. The Russians stayed with them and only met members of the other group, the "reindeer Chukchi," when the latter visited the Namollo. The reindeer raisers were nomads who lived in tents all year round; they would trade tanned reindeer skins for iron utensils offered by Russian trappers.

Returning to Petropavlovsk on October 5, 1828, the *Senyavin* stayed there for five weeks and then returned toward the Carolines before starting back to Europe. Until December, Lütke worked on completing his exploration by visiting the western islands of this vast archipelago. At Manila (January

13-30, 1829), the *Senyavin* was put into shape and reprovisioned. On February 13, she dropped anchor on the coast of Sumatra at the entrance to Sunda Strait. On April 14, she was at the Cape and, on April 30, at St. Helena. After a brief stopover on the English coast, the ship reached Kronstadt on September 16, 1829, having been on the seas for three years. "The *Senyavin* had the joy of being visited by His Majesty the Emperor and that same day she entered the port of Kronstadt and struck her colors."

The geographic and hydrographic results of the voyage were remarkable, but even more so, perhaps, were those of the naturalists. Though they brought back only a small number of mammals, including some rare species of bats and a seal, Kittlitz alone had collected, prepared, and painted three hundred species of birds, of which there were 750 samples. Mertens had done the same for 150 species of crustaceans and seven hundred species of insects, whereas Postels painted 245 of the three hundred types of fish caught and twenty-three of the one hundred amphibians collected. The fish were afterward identified by Cuvier during a visit Kittlitz and Postels made to Paris. Postels, who had been responsible for mineralogical research, brought back 330 specimens. In addition, Mertens had collected more than four thousand plants, including twenty-five hundred phanerogams, and his collection of algae was the largest ever made. During the voyage, thirteen hundred drawings were made, seven hundred by Postels, 350 by Mertens, and 250 by Kittlitz. No other expedition had ever brought back so generous and so expertly executed a pictorial record.

Because of this success, Lütke was named a correspondent of the Academy of Sciences in Paris and a member of the one in St. Petersburg, of which he was to become a president in 1864. Before his departure, Lütke had published *Four Voyages in the Polar Seas from 1821 to 1824*; soon after his return, he left again on the *Senyavin* for a new cruise of the coasts of Iceland and only afterward published his *Voyage Around the World by the Corvette Senyavin*, along with an atlas reproducing some of the drawings by Postels and Kittlitz.

On his second voyage, Lütke had taken Mertens with him, though the latter had been in bad health during the first expedition. He nevertheless behaved fearlessly and refused to listen to prudent counsel. A "nervous fever" having broken out on board, Mertens devotedly tended the sick. On his return to St. Petersburg, he joyously greeted the woman he had married the year before, but his wife and his brother thought he looked so ill that they persuaded him to take to his bed that very day. Thirteen days later, on September 17, 1830, he died at the age of thirty-four.

tain, 1837-1842, takes command of the expedition on the *Sulphur*, which he picks up at Panama, 1843-1846, commands the *American* in the China Seas and at Borneo, 1852-1858 on the *Blossom* command in Arctic expedition in search of the remains of the ill-fated Franklin expedition, fails to show sufficient authority and is reprimanded; abandons his ships and withdraws himself from the ice and is rescued by the *Enterprise*. This failure brings disgrace and he is never again assigned active service, though he is made rear admiral (1864), vice admiral (1866), and admiral (1872). Dies in London, 3/18/1877.

**BLIGH William.** Born in Tynan (Cornwall), 9/4/1754, 1776-1780, master on the *Resolution*, Cook's 3rd voyage, 1782, takes part in the British rescue expedition to Gibraltar, 1787, as lieutenant is in command of the *Bounty* charged with bringing tropical trees from Tahiti to the Antilles, 1789, following a mutiny Bligh and 19 men are abandoned in a launch that sailed 700 kilometers before reaching Timor, 1791, 1792, commands a second expedition on the *Providence*, which manages to bring 300 breadfruit trees to Jamaica, 1793-1805, as captain commands several vessels, commands *Colombo* in 1807, 1808, as governor of New South Wales, his extreme severity provokes a rebellion among the colonists and he is recalled in 1808, 1810, rear admiral, 1814, vice admiral. Dies in London, 10/7/1817.

**BOUGAINVILLE Hyacinthe Yves Philippe Potentien, Baron de.** Born in Brest, 10/26/1732. Eldest son of L. A. de Bougainville, 1748, student at the Ecole Polytechnique, 1800-1804, midshipman on the *Geographie*, Baudin expedition, 1805, attached to the staff of Admiral Bruix at Bouaume, 1808, lieutenant commander on the *Charlemagne*, 1809, commands the corvette *Hussara*, 1811, frigate captain, 1817-1819, serves on the frigate *Cybele*, commanded by Kerguelen, in Indochina and Malacca, 1820, commands the corvette *Seme*, which goes to the United States, 1821, captain, 1824-1826, commands the expedition of the *Thésis* and the *Esperance*, 1827, publishes *Journal de la navigation autour du globe . . .*, 1828, commands the *Scipion*, 1838, rear admiral. Dies in Paris, 10/18/1846.

**BOUGAINVILLE Louis Antoine de.** Born in Paris, 11/11/1729. Son of a notary at Chatelet. Becomes lawyer, 1751, student of d'Alembert's, 1753, assistant medical officer for the Picard regiment, 1754-1756, publishes a *Traite du calcul integral*, 1758, as Montcalm's aide-de-camp, he is wounded during the attack on Fort Carillon, 1759, as colonel he negotiates the surrender at Quebec, 1760, sent back to France to defend French interests in America, 1763, switches to the navy with the rank of captain, 1763-1766, establishes a French settlement in the Falklands, 1766-1769, voyage on the *Boudeuse* and the *Etoile*, 1771, publishes his *Voyage autour du monde*, 1772, proposes an expedition to the north pole and is turned down, 1779, participates in the American Revolution as a squadron commander, 1781, in Brest, he marries Flore de Lenchamp-Montendre, 1782, is defeated by Hood at Martinique and is court-martialed; in disgrace, he withdraws to

Senart. Birth of his 1st son, Hyacinthe (he was to have 3, born in 1765, 1788, and 1796), 1789, member of the Academy of Sciences, 1790, commands the Brest squadron, 1792, refuses the rank of vice admiral, 1793, withdraws to his farm in Anneville (Calvados), 1794, imprisoned in Couleuvres from 7/4 to 9/4/1796. Member of the Institute and the Central Astronomical office, 1798, member of the commission preparing the Egyptian campaign, 1799, senator, 1804, officer of the Legion of Honor, 1808, count of the Empire. Dies in Paris, 8/31/1811, and is given a state funeral at the Pantheon (9/3/1811).

**BROWN Robert.** Born in Montrose (Scotland), 12/21/1773, 1794, assistant surgeon in a Scottish regiment, 1798, is presented by the botanist Correa da Serra to J. Banks, who recommends him to Flinders, 1801-1805, naturalist on the *Investigator*, Flinders expedition, August 1803, remains behind at Port Jackson with F. Bauer and stays in Tasmania for 10 months, October 1805, returns to England, 1810, librarian and curator of the Banks collections, publishes *Prodromus Florae Novae Hollandiae*, contains 2,200 species, of which 1,700 are new, 1811, member of the Royal Society, 1823, inheriting the herbarium and library belonging to Banks, he has them transferred to the British Museum (1837), where he becomes curator, 1827, discovers the "Brownian movement," 1832, corresponding member of the Academy of Sciences in Paris. Dies in London, 6/10/1858.

**BURNEY James.** Born in London, 1750, 1760, cabin boy in the Navy, 1776, voyage to Bombay as a seaman, 1772-1775, 2nd lieutenant on the *Adventure*, Cook's 2nd voyage; on return, presents Omai to London society and to his sister Fanny, a writer who was later to become famous, 1776-1780, 1st lieutenant on the *Discovery*, Cook's 3rd voyage, 1782, captain, 1784, no longer goes to sea, 1804-1816, publishes a chronological history of South Seas discoveries which is greeted as "a masterpiece of fundamental erudition," 1806, member of the Royal Society, 1816, writes a history of buccaneers in America, 1819, publishes a history of discoveries in the Northeast and of the first Russian expeditions to the East, 1821, rear admiral. Dies in London, 1821.

**BUSSEUIL François Louis.** Born in Nantes, 11/2/1791. Becomes a doctor, 1824-1826, surgeon on the *Thésis*, expedition by H. de Bougainville. Next, voyages on the *Terpsichore* to Brazil, the South Seas, and Madagascar, and on the *Flore* to Senegal. Dies in Goree, 6/14/1835. One of the pioneers in marine fauna of the South Atlantic.

**BYRON John.** Born 11/8/1723 at Newstead Abbey, 2nd son of the 4th Baron Byron and grandfather of the poet Lord Byron, 1740, midshipman on the *Wager*, Anson expedition, 1741, shipwrecked on the coast of Patagonia, 1745, returns to Great Britain and publishes his account of the loss of the *Wager*, 1758, distinguishes himself in battles against France and is appointed commodore, 1764-1766, voyage on the *Dolphin* and the *Tamar*, 1767, publishes *An Account of a Voyage round the World in the Years 1764, 1765, and 1766*, 1769, governor of Newfoundland, 1775, rear admiral, 1778, vice admiral, 1779, con-

voying an army of reinforcements to America, he encounters the worst recorded storms in the Atlantic and is given the nickname "Foul Weather Jack," because each time he goes to sea he meets



John Byron in his captain's uniform. Painting by Sir J. Reynolds. National Maritime Museum, London. Photo © the museum/Photo 12.

with foul weather. Commander-in-chief in the West Indies (Antilles). Dies in London, 4/16/1786.

**CARTERET Philip.** 1764-1766, 1st lieutenant on board the *Tamar*, Byron expedition, 1766-1769, commands the *Swallow*, Wallis expedition, 1794, vice admiral. Dies in Southampton (Hampshire), 7/21/1796.

**CHAMISSO DE BONCOURT Louis Charles Adélaïde called Adelbert von.** Born at the Château de Boncourt (Champagne), 1781, 1792, immigrates with his family to Holland, then to Würzburg, 1796, page of the queen of Prussia in Berlin, 1798, ensign, then in 1801 lieutenant of von Gütze's infantry regiment, 1802, his family returns to France, but he remains in Prussia, 1804, with Varnhagen founds an *Almanac of the Muses*, 1808, leaves the army and goes to France, where he meets Mme. de Staël, whom he follows to Coppet, where he remains 1811-1812, 1812, at the University of the Berlin botanical gardens, marries and eventually has seven children, 1821, publishes "Ideas and Remarks" in Kotzebue's *Reise um die Welt*, 1827, *Observations on Botany and the Vegetable Kingdom*, 1829, *Salas y Gomez*, 1830, *Frauenhebe und Leben*, 1832, director of the Royal Herbarium in Berlin, 1833, member of Prussia's Academy of Sciences, 1835, publishes *Voyage Journal*, 1836-1837, works on a Hawaiian grammar. Dies in Berlin, 8/21/1836.

**CHESNARD DE LA GIRAUDAIS François.** Born in St. Malo in 1727. Goes to sea with his father at the age of 5, 1759, commands the *Machaut* in a convoy for Canada in which Bougainville sails on the *Chézine*, 1761, frigate lieutenant, 1763, commands the *Sphinx* in the Bougainville expedition to the Falklands, 1767-1769, commands the *Etoile* in the Bougainville voyage around the world.

**CHORIS Louis.** Born in Iekaterinoslav, 3/21/1795, into a German family established in Russia, 1813, painter of the scientific expedition of Marshall von Biber-





Albert von Chamisso. Lithograph by Oldermann from a drawing by Ruschel (Bibliothèque nationale, Paris; Photo: Bibl. nat. Photsch.)

stein to the Caucasus. 1815-1818, trawler on the *Rurik*, Kotzebue expedition. 1819-1827, lives in Paris, frequents scientists and artists, works in the studio of Gérard and learns lithography. Illustrates his *Voyage pittoresque autour du monde* (1823-1826) and publishes *Vues et paysages des régions équinoxiales* (1825). 1827, lives in New Orleans. On 3/19/1828, leaves from Veracruz for an expedition to the interior of Mexico and dies several days later in an ambush.

**CLERKE Charles.** Born in Weatherfield (Essex), 1743. 1755, enters the Navy. 1764-1766, on board the *Dolphin*, Byron expedition. 1766, serves in the Antilles. 1768-1771, midshipman on the *Endeavour*. Cook's 1st voyage. 1772-1775, 2nd lieutenant on the *Resolution*, Cook's 2nd voyage. 1776-1779, frigate captain, commands the *Discovery*, Cook's 3rd voyage. On Cook's death, commands the expedition on the *Resolution*. Dies of tuberculosis at Kamchatka. 7/22/1779.

**COMMERSON Joseph Philibert.** Born at Châtillon-les-Dombes (Ain) 11/18/1737. Son of a notary. 1747, doctor of medicine at Montpellier, corresponds with Bernard de Jussieu and Linnaeus, who commends him for the queen of Sweden, to study Mediterranean fish. 1755, at Fernet, meets Voltaire, who wants to keep Commerson with him as his secretary and the agricultural administrator of his estates; he returns. 1760, marries. 1762, his wife dies in giving birth to a son. 1764, takes Jeanne Baret into his service, called to Paris by Buffon. 1766, king's naturalist and botanist. 1766-1768, naturalist on the *Étoile*, Bougainville expedition. 12/12/1768, lands on the Ile de France, where he works with P. Poivre. 1770-1771, the king asks him to make a study of Madagascar, where Commerson stays 6 months. Works on the Ile de France with the painter Lescaze; dies there of pleurisy. 3/13/1773.

**COOK James.** Born in Marton-in-Cleveland (Yorkshire), 10/27/1728. As 2nd of 9 children of a poor peasant, lives in a thatched cottage. 1741, leaves school to help his father. 1742, apprenticed to a grocer in Staithes. 1743, cabin boy on the *Freelove* at Whitby. 1755, 2nd in command on a collier, he joins the Royal Navy on the *Eagle*. 1757, deep-sea pilot on the *Pembroke*. 1758, commissioned by Admiral Saunders to sound the St. Lawrence from Quebec to the sea. 1760, returns to

England. 1762, marries Elizabeth Batts. 1763, leaves for Newfoundland as hydrographer with Palliser. 1768, on the advice of Palliser, Sir Edward Hawke, First Lord of the Admiralty, recommends him for the command of the astronomical expedition of the Royal Society. 1768-1771, 1st voyage on the *Endeavour*. 1771, named commander. 1772-1775, 2nd voyage on the *Resolution* and the *Adventure*. 1775, ship's captain. 4th captain of the Greenwich Hospital, member of the Royal Society. 1776-1779, 3rd voyage on the *Resolution* and the *Discovery*. Dies on Owhyhee (Hawaii). 2/14/1779.

**CROZIER Francis Rawdon Moira.** Born in Ireland in 1796. 1810, joins the navy. 1821, lieutenant, accompanies Parry on his 2nd expedition. 1824-1825, participates in Parry's 3rd expedition in the Arctic. 1831-1835, serves on the coasts of Portugal. 1835, makes a cruise to Baffin Bay. 1839-1843, captain, commands the *Terror*, in J. C. Ross expedition. 1845, commands the *Terror* in the Franklin expedition sent to search for a Northwest Passage. 1847, on the death of Franklin, takes command of the expedition. Spring 1848, dies of starvation with all his men.

**DANA James Dwight.** Born in Utica (New York), 2/12/1813. 1838-1841, geologist and mineralogist on the Peacock, Wilkes expedition; responsible later for marine zoology. 1842-1856, at government expense, publishes his discoveries on geology, crustaceans, zoophytes, and coral islands. 1873, a correspondent of the Paris Academy of Sciences. Dies in New Haven (Connecticut). 4/14/1895.

**DARONDEAU Benoit Henri,** called **Benni.** Born in Paris. 1805-1826, graduates from the Ecole Polytechnique. 1826-1829, takes part in a project to sound the harbors and parts of France's western coast, then in 1831-1835, hydrographs the northern coast. 1836-1837, hydrographer on the *Bonne*, Vaillant expedition. Publishes several important works on hydrography and earth magnetism. Dies in Paris in 1869.

**DARWIN Charles.** Born in Shrewsbury (Shropshire), 2/12/1809. Son of Dr. Robert Darwin and grandson of Dr. Erasmus Darwin. 1817, mother dies. 1825-1827, begins his medical studies at the University of Edinburgh, but soon gives them up to devote himself to geology and natural history. 1828-1831, theological studies at Christ's College, Cambridge; becomes friendly with the botanist Henslow and the geologist Sedgwick. 1831-1836, naturalist on the *Beagle*, FitzRoy expedition. 1838, secretary of the Geographical Society. 1839, marries his cousin Emma Wedgwood; publishes the 3rd volume of FitzRoy's voyage. 1839-1843, zoology of the *Beagle*. 1843, settles with his family at Down House, Kent. Publishes *On the Origin of Species by Means of Natural Selection* (1859); *The Variation of Animals and Plants under Domestication* (1868); *The Descent of Man, and Selection in Relation to Sex* (1871). Dies at Down House. 4/19/1882; is buried in Westminster Abbey.

**DUCLOS-GUYOT Pierre Nicolas.** Born in St. Malo. 12/14/1722. 1734, apprentice in Merchant Service on the *Duchesse*. 1742-1743, ensign and then lieutenant on the

*Saint-Michel* of the British East India Company. 1759, with Bougainville, on the *Chézane*, which goes to Quebec. 1763, lieutenant on the *Aigle*, Falklands cruise. 1764, fire-ship captain. 1765, commands the *Lion*; returning from Lima, he rediscovers the island discovered by La Roche and named South Georgia in 1775 by Cook. 1766-1769, Bougainville's 2nd in command on the *Boudeuse*. 1777, captain of the port of the Ile de France. 1784, leaves the service for health reasons. 1792, recalled to active duty, made captain. Dies at Saint-Servan. 3/10/1794.

**DUMONT D'URVILLE Jules Sébastien César.** Born in Condé-sur-Noireau (Calvados), 5/23/1790, into a noble but poor family. 1797, his father dies. 1804-1807, excellent student at the lycée of Caen; bets with a friend that at 50 he will be a rear admiral. 1807, apprentice midshipman, Brest. 1810, midshipman 1st class, Toulon. 1812, ensign. 1815, marries. 1817, does not manage to embark on Freycinet's *Uramie*. 1819-1821, ensign on Captain Gauthier's *Chevrette*, he hydrographs the Mediterranean islands, the Dardanelles, and the Black Sea; announces the discovery of the *Venus de Milo*. 1821, Legion of Honor, lieutenant commander, continuation of his botanical studies at the Museum of Natural History. 1822, publishes at his own expense *Enumeratio plantarum quas in Insulis Archipelagi . . .*. 1822-1825, Duperrey's second in command on the *Coquille*. 1824, frigate captain. 1826-1829, commands the *Astrolabe* expedition. 1829, captain, presents his candidacy to the Academy of Sciences but is not elected. 1830, made responsible for conveying Charles X and his family into



Jules Sébastien César Dumont d'Urville in uniform. Anonymous lithograph (Bibliothèque nationale, Paris; Photo: Bibl. nat. Photsch.)

exile on the cargo boat the *Sème*. Publishes, in 1830-1835, the *Voyage de l'Astrolabe*; in 1834-1835, *Voyage pittoresque autour du monde*, a general summary of voyages of discovery since Magellan. 1837-1840, commands the expedition of the *Astrolabe* and the *Zélée*. 1841, rear admiral, begins writing *Voyage au pôle Sud*. . . . 5/6/1842, he dies along with his

wife and son in a railroad accident at Bellevue.

**DUPERREY Louis Isidore.** Born in Paris 1801. After 1803 enters the navy. 1809, minor hydrographic survey of the coasts of Turgay. 1817-1820, ensign on the *Uranie*. French expedition, 1821, cruise on the *Uranie* with Dumont d'Urville. 1822-1824, commands the expedition on board the *Uranie*. 1825, frigate captain. 1825-1826, publication of the *Voyage de la Coquille*. Afterward publishes numerous works on physics, geography, and meteorological observations. 1831, establishes the map of movements of waters on the surface of the Great Ocean, in which he shows the origin of the Humboldt Current that brings cold waters to the coasts of Peru. 1842, succeeds Freycinet at the Academy of Sciences, of which he becomes the president in 1850. Dies in Paris in 1858.

**DUPETIT-THOUARS Abel Aubert.** Born at La Fessardiere, near Saumur, 8/3/1793. Nephew of the botanist Louis Marie Dupetit Thouars and of naval Captain Antoine Dupetit-Thouars. 1805, joins the Bourbon expedition to the Navy. 1826, takes part in the *Uranie* expedition, which he presides over. 1830, commands the *Uranie* and the *Uranie* in the South Seas. Distinguishes himself at Tahiti, by his energetic handling of the trade between France and Peru. Captain, commands the *Cécile*. 1836-1839, commands the expedition on board the *Vesta*. 1841, rear admiral. 1842, commands the frigate *Réine Blanche*, and takes the Marquesas, occupies Tahiti, expels Fitzroy—but is disavowed by the French government. 1846, vice admiral. 1848, deputy representing Maine-et-Loire. 1855, member of the Academy of Sciences. Dies in Paris 3/17/1864.

**ENTRECASTEAUX Antoine Raymond Joseph de Bruni, Chevalier d'.** Born in the château d'Entrecasteaux (Var), 1737. His father presided at the *parlement* of Provence. 1764, marine guard under the command of the *ballist* of Suttren, a relative of his. 1756, distinguishes himself at the battle of Minorca. 1770, lieutenant commander. 1779, assistant director of Ports and Arsenals. Following a murder committed by a nephew, wants to leave the service, is named commander of the naval station of the Indies. 1787-1789, governor of the Ile de France. 1789, division chief. 1791-1794, commands the expedition of the *Recherche* and the *Esperance*. 1791, rear admiral. 1792, vice admiral, but he dies of scurvy while still at sea (21/1793) before he receives word of his promotion.

**ESCHSCHOLTZ Johann Friedrich.** Born in Dorpat (Livonia), 11/12/1793. Doctor of medicine in Dorpat. 1815-1818, doctor and naturalist on the *Rurik*, Kotzebue expedition. 1823-1826, doctor and naturalist on the *Predpriyatiye*, 2nd Kotzebue expedition. Published *Entomographien* (1823), *System der Aculeiphen* (1829), *Zoologische Atlas* (1829-1833). Dies 5/19/1831.

**EYDOUX Fortuné.** Born in 1802. Medical doctor. Makes a scientific voyage to Tangiers. 1830-1832, surgeon and naturalist on the *Favorite*, 1st Laplace voyage. 1834-1835, cruise on the frigate *Victoire* to the African coasts. 1836-1837, surgeon and zoologist on the *Bonite*, Vaillant expedi-

tion. Dies of yellow fever at Martinique, 1841.

**FITZROY Robert.** Born at Ampton Hall (Suffolk) 7/5/1805. Descendant of a liaison between King Charles II and the Duchess of Cleveland. Son of Lord Charles Fitzroy, grandson of the Duke of Grafton and of the 1st Marquess of Lansdowne, nephew of the minister Castlereagh. 1818, enters the Royal Naval College. 1826-1830, accompanies Captain King on a hydrographic exploration of the coasts of South America. 1828, replaces on the *Beagle* Captain Stokes, who committed suicide in his cabin. 1831-1836, lieutenant, then captain, commands the *Beagle* expedition. 1839, publishes the voyage of the *Adventure* and the *Beagle*, and then various works on astronomy and meteorology. 1841-1843, member of Parliament. 1843, governor of New Zealand. Heads the Meteorology Department of the Board of Trade. 1850, his wife and his oldest daughter, age 16, die. 1857, rear admiral. 1861, publishes a treatise on meteorology. Commits suicide in Norwold (Surrey) 4/30/1865.

**FLEURIOT DE LANGLE Paul Antoine Marie.** Born in the suburb of Kerlouet at Quimper-Gazzenner. 1744, Makes several voyages under the orders of Rosily and Lumet-Piquet, notably to San Domingo. Member of the Naval Academy of which he becomes the director in 1763. 1778, takes part with the Duke of Chartres in the battle of Ushant. 1781, transports to America the U.S. envoys Lorenz and Perin. 1782, commands the *Astree* in the raid on Hudson Bay directed by La Pérouse. 1785, captain, having probably refused command of the expedition in favor of his friend La Pérouse, he commands the *Australis*. Massacred at Tutuila (Samoa), 12/12/1787.

**FLINDERS Matthew.** Born in Donnington (Lincolnshire), 3/16/1774. 1789, enters the navy and serves on the *Bellerophon*. 1791-1792, accompanies Captain Bligh on his 2nd expedition on the *Providence*. 1795, midshipman, leaves for New South Wales with Governor Hunter and George A. Bass. 1796-1797, visits with Bass the southeast coast of Australia. 1798, with Bass, finishes the exploration of Bass Strait and sails around Tasmania. 1801-1803, frigate captain, commands the expedition on the *Investigator*. In December 1803, he is imprisoned on the Ile de France. 1810, returns exhausted to England; prepares the publication of his voyage. Dies in London, 7/19/1814.

**FORSTER Johann Georg Adam.** Born in Nassenhuben, near Danzig (Gdansk), 11/27/1754. Son of J. R. Forster. 1765, accompanies his father to Russia. 1772-1775, with his father, naturalist on the *Resolution*, Cook's 2nd voyage. 1777-1778, publishes in London *Voyage Round the World . . . and Observations*, by J. R. Forster. 1778, goes to Paris, where he would like to remain, but he does not stay. 1779, returns to Germany. 1780, professor of natural history at Kassel and, in 1784, at Wilna, where he gets his doctor's degree in medicine. 1788, librarian of the Elector of Mayence. 1790-1791, voyage with A. von Humboldt to Belgium, Holland, England, and France. 1792, is deputized by the people of Mayence to ask the National Convention to attach this city

to the republic, but he meets only with indifference on the part of the leaders of the Revolution. 1793, denounced as a traitor in Germany. Dies in despair and poverty in Paris, 11/2/1794, while the Terror is at its height.

**FORSTER Johann Reinhold.** Born in Dirschau (Polish Prussia), 10/22/1729. Pastor and preacher in Prussia. 1765, makes a scientific voyage on the *Vulpa*. 1766, settles in London. 1771, publishes *Flora Americae septentrionalis* and *Novae species insectorum*. 1772, translates Boudinville's voyage. 1772-1775, naturalist on the *Resolution*, Cook's 2nd voyage. 1776, in Göttingen, in Latin, publishes *Description of Species of Plants Collected During the Voyage in the South Seas* in 1778, in London, his *Observations Made During a Voyage Round the World*. 1780, Frederick II has him come to Halle as a professor of natural history and director of the botanical gardens. 1787, publishes a history of discoveries and voyages made in the North. The latter part of his life is saddened by the death of his sons. Dies in Halle, 12/9/1798.

**FREYCINET Louis Claude de Saulces de.** Born in Montélimar, 6/17/1779. 1794, midshipman with his brother, Louis Henri, on the *Heureux*. 1800-1804, ensign on the *Naturaliste*, Baudin expedition. 1801, lieutenant commander. 1802-1803, commands the *Casuarina*. 1804-1805, commands the brig *Volteur*, but, still exhausted, is assigned to the Map Depot. 1811-1816, is charged with continuing his friend Peron's *Voyage aux terres australes*. 1813, correspondent of the Institute. 1817-1820, frigate captain, commands the *Uranie* expedition. 1820, captain. 1821, one of the founders of the Société de Géographie. 1824, publishes an augmented edition of Baudin's *Voyage*. 1824-1842, publishes *Voyage autour du monde sur l'Uranie*. . . . 1826, member of the Academy of Sciences. 1830, replaces Rossel as director of maps and charts. 1832, retires, is saved from cholera by Gamard; death of his wife, Rose Pinon. Dies at Freycinet, near Loriol (Drôme), 8/18/1842.

**FREYCINET Louis Henri de Saulces, Baron de.** Born at Montélimar, 1777. Older brother of Louis Claude. 1794, midshipman on the *Heureux*, takes part in Mediterranean battles. 1800-1804, ensign on the *Géographe*, Baudin expedition. 1801, lieutenant commander. 1804-1805, under the command of Louis Claude on the *Volteur*. 1806, commands the *Phaëton*; loses his right arm. 1811, frigate captain, commands the *Elisa* and stands up to an entire English division near Martinique; has a leg shattered. 1816, captain. 1821-1826, governor of Bourbon Island. 1826, rear admiral. 1827, governor of French Guyana. 1828, *baron*. 1829, governor of Guadeloupe. 1830, major general at Toulon. 1834, maritime prefect of Rochefort, where he dies in 1840.

**FURNEAUX Tobias.** Born in Stoke Damerei (Devon), 1735. 1755-1766, sails on various ships: Antilles, African coasts, the English Channel. 1766-1768, 2nd lieutenant on *Dolphin*, of Wallis, his cousin. 1772-1775, commander of the *Adventure*, Cook's 2nd voyage. 1775, captain. Dies in Swiley, 9/18/1781.



Johann Reinhold Forster and his son Johann Georg. Anonymous engraving. (Bibliothèque nationale, Paris. Photo © Bibl. nat./Arch. Photo.)

**GAIMARD Joseph Paul.** Born in Saint-Zacharie (Var), 1796. 1817-1820, assistant surgeon and zoologist on the *Uranie*. Freycinet expedition. Makes several trips to Holland, Belgium, and Great Britain to study the scientific establishments of the navy. 1826-1829, surgeon and naturalist on the *Astrolabe*, Dumont d'Urville expedition. 1831-1832, goes to study a cholera epidemic in Poland, Prussia, Austria, and Russia for the Academy of Sciences. 1835-1836, surgeon on the *Recherche* in Greenland; 1836, president of the Scientific Commission of Iceland. 1837, voyage to Sweden, Norway, and Denmark. 1838-1839, makes 2 cruises to Iceland on the *Recherche*. 1839, directs the scientific commission for expeditions to the Polar Seas, but no longer goes to sea. 1844, publishes *Voyage en Islande et au Groenland*; 1847, *Voyage en Suède, en Scandinavie et au Spitzberg*. 1848, returns. Dies very poor in Paris, 1858, and is buried at the expense of the government.

**GAUDICHAUD-BEAUPRE Charles.** Born in Angoulême, 10/4/1789. Studies botany at the Museum of Natural History with L. Cl. Richard and Destotaines. 1811-1814, pharmacist of the naval forces in Antwerp. 1817-1820, pharmacist on the *Uranie*. Freycinet expedition. 1825, publishes *Flore des îles Malouines*. 1826, botany of the *Uranie*. 1828, correspondent of the Academy of Sciences. 1830-1832, pharmacist and botanist on the *Hermione*; visits Brazil, Chile, and Peru, then stays in Rio, explores the Mato Grosso and the province of São Paulo, and brings back 3,000 plants. 1836-1837, pharmacist and botanist on the *Bonite*. Vaillant expedition. 1837, member of the Academy of Sciences. From his voyages he brings back more than 10,000 plants, of which 1,200 to 1,400 are new. Dies in Angoulême, 16/1854.

**GORE John.** Born in America, about 1730. 1755 joins the navy. 1764-1766, assistant master on the *Dolphin*. Byron expedition. 1766-1768, mashupman on the *Dolphin*. Wallis expedition. 1768-1771, 2nd and then 1st lieutenant on the *Endeavour*. Cook's 1st voyage. 1772, takes Banks to Iceland. 1776-1780, 1st lieutenant on the *Resolution*. Cook's 3rd voyage; after the death of Clerke, takes command of the expedition and brings it to a conclusion. Captain; he takes over the post left vacant by Cook at Greenwich Hospital. Dies in Greenwich, 8/10/1790.

**HAMELIN Jacques Felix Emmanuel.** Born in Hontleux, 10/13/1768. 1786-1788, a sailor, despite family objections, embarks on the *Asie* for the coast of Angola. 1792, assistant helmsman on the *Entrepreant*. 1793, ensign on the *Proserpine*. 1795, lieutenant on the *Minerve*; seriously wounded in the leg during the capture of the *Bewick*. 1796, frigate captain on the *Revolucion*; then commands the *Fraternite*. 1800-1804, commands the *Naturaliste*. Baudin expedition. 1805, captain, commands part of the Boulogne fleet commissioned at Le Havre. 1806, on the *Venus*, breaks the blockade at Le Havre and Cherbourg. 1808, crosses the Indian Ocean. 1810, in the battle of Grandport (Île de France) takes or destroys four British frigates. Baron of the Empire and rear admiral, commands an *Escaut* (Schelde) division, then a Brest squadron. 1818, major general at Toulon, then commander of the Mediter-

anean naval forces. 1832, director general of the Map Depot. Dies in Paris, 11/25/1839.

**HODGES William.** Born in London, 1744. Student of Richard Wilson, paints theater decors and landscapes. 1772-1775, painter on the *Resolution*, Cook's 2nd voyage. 1775, goes to India, where he makes his fortune. 1777, begins to show at the Royal Academy. Dies in Brixham (Devon), 3/6/1797.

**HOOKER Sir Joseph Dalton.** Born in Halesworth (Suffolk), 6/30/1817. 1839, doctor of medicine in Glasgow, becomes friendly with Darwin. 1839-1843, assistant surgeon on the *Erebus*, J. C. Ross expedition. 1844-1847, publishes *Flora antarctica*. 1846-1847, botanist of the Geological Survey of Great Britain. 1847, member of the Royal Society. 1847-1851, travels in the Himalayas for Kew Gardens. 1851-1855, publishes *Flora Novae Zeelandiae*. 1855, assistant director of Kew Gardens. 1855-1859, publishes *Flora Tasmaniae*. 1860, botanical voyage to Palestine. 1865, director of Kew Gardens. 1873-1878, president of the Royal Society. 1874, explores the Moroccan Atlas Mountains; 1877, the Rocky Mountains. 1885, leaves Kew Gardens. Dies in Sunningdale (Berkshire), 12/10/1911.

**HUON DE KERMADEC Jean Michel.** Born in Brest, 1748, into a family of Breton sailors. Takes part in the battles led by Orville and Lamotte-Picquet. 1766-1787, vice chief of naval staff with d'Entrecasteaux on the *Resolution* at the time of voyage to China. 1791-1794, captain, commands the *Esperance*. d'Entrecasteaux expedition. Dies during a stop in Balade (New Caledonia), 5/6/1793.

**JACQUINOT Charles Hector.** Born in Nevers, 3/4/1796. 1822-1825, ensign on the *Coquille*, Duperry expedition. 1826-1829, lieutenant commander, 2nd in command to Dumont d'Urville on the *Astrolabe*. 1837-1840, corvette captain, commands the *Zélee*. Dumont d'Urville's 2nd voyage. 1840 captain. 1842, commands the *Genereux*. 1842, begins publishing Dumont d'Urville's voyage. 1852, rear admiral commands the Levant division. 1855, commands the Piræus expedition, is named vice admiral. Dies in Toulon, 1879.

**JURIEN DE LA GRAVIÈRE Pierre Roch.** Born in Gannat (Allier), 11/5/1772. 1786, apprentice in Merchant Service on the corvette *Favorite*, then on the brig *Héros*. 1791-1794, *volontaire* on the *Esperance*, d'Entrecasteaux expedition; is made ensign. 1798, frigate captain. 1803, captain. 1809, in the battle of Sables d'Olonne with three frigates forces the withdrawal of 6 British vessels. 1814, takes possession of Bourbon Island. 1817, rear admiral and vicount. 1830, vice admiral and peer of France. 1848, retiree. Dies in Paris, 1/5/1849. *Souvenirs d'un amiral* (1860) was assembled from his writings by his son, Rear Admiral J. B. E. Jurien de La Gravière.

**KING James.** Born in Clitheroe (Lancashire), 1750. 1765-1770, serves under Palliser in Newfoundland, then in the Mediterranean. 1774-1776, studies in Paris, then at Oxford. 1776-1780, 2nd lieutenant on the *Resolution*, Cook's 3rd voyage; 1779, after the death of Clerke, commands the *Dis-*

covery. 1780, captain. 1782, member of the Royal Society. 1783, gets tuberculosis, goes to Nice, where he dies in October 1784.

**KOTZEBUE Otto von.** Born in Revel (present-day Tallinn, Estonia), 12/30/1767. 2nd son of the German writer A. F. F. von Kotzebue, 1803 student at the St. Petersburg school for cadets when Krusenstern takes him on his expedition. 1815-1818, lieutenant, commands the *Rurik*. Captain-lieutenant of the *gardes-marine*. 1821, publishes his *Reise um die Welt*. 1823-1826, commands the 2nd expedition on the *Predpriyatiye*. 1830, *Neue Reise um die Welt in 1823, 1824, 1825, und 1826*.

**KRUSENSTERN Adam Ivan (Johann) Ritter von.** Born in Haggud (Estonia), 11/19/1770. 1787-1789, serves in the navy during the Russo-Swedish War. 1793, serves on a British ship. 1797-1799, travels to the Indies and to Canton on a British merchant ship. 1803-1806, commands the expedition aboard the *Nadezhda* and the *Neva*. 1810-1814, publishes *Voyage Around the World, 1803-1806*, and in 1814 *Contribution to the Hydrography of the Great Ocean*. 1815, expedition to the Arctic in search of the Northwest Passage. 1824-1827, *Atlas of the Pacific Ocean*. 1826, rear admiral and director of the naval academy, member of the scientific committee of the Ministry of the Navy, of the St. Petersburg Academy of Sciences, corresponding member of the Paris and Stockholm Academies of Science. 1829, vice admiral. 1841, admiral. Dies on his estate of Asz, near Revel (Estonia), 8/24/1846.

**LA BILLARDIERE Jacques Julien Houtou de.** Born in Alençon, 10/23/1755. 1772, studies medicine and botany at Montpellier. 1780, works in the Jardin du Roi with Destotaines and Lemonnier, who send him to Kew Gardens, where he meets Banks. 1786-1788, botanical voyage to the Levant. 1790, publishes *Icones plantarum Synæ rariorum*. 1791-1794, botanist on the *Recherche*, d'Entrecasteaux expedition; 1794, prisoner at Semarang. 1796, returns to France. 1799, publishes *Relation du voyage*. . . . member of the Academy of Sciences. Republican and anti-Bonapartist, lives in retirement, spending the summers in a cottage near Paris. Dies in Paris, 1/8/1834.

**LANANON Robert de Paul, Chevalier de.** Born in Saion-de-Provence, 1752. Initially a seminary student. 1774, begins walking tours through Provence, Switzerland, the Alps, and the Pyrenees. 1779, in a cellar on Rue Dauphine in Paris he discovers the skeleton of a fossil whale. 1780-1782, publishes studies on the fossil, geology, and mineralogy of the Midi. 1785, physicist, mineralogist, and meteorologist on the *Beussolle*. La Pérouse expedition; is killed at Tutuila (Samoa), 12/1/1787.

**LANGSDORFF Carl Heinrich, Baron von.** Born in Wollstein (Rhenish Hesse), 4/18/1774. 1797, doctor of the Prince of Waldeck, whom he accompanies to Portugal. 1803, naturalist on the *Nadezhda*. Krusenstern expedition, which he leaves in July 1804 to cross Siberia. 3/16/1808, arrives in St. Petersburg. 1812, publishes *Bemerkungen auf einer Reise um die Welt in den Jahren 1803 bis 1807*. 1813, Russian consul general in Brazil, where he collects plants with Freyreiss. 1821-1830, di-



Sir Joseph Dalton Hooker, photograph taken in about 1855. (National Portrait Gallery, London. Photo Maull and Polyblank & the mission Photoc.)

with a great Russian expedition to the unexplored territories of the Amazon Basin and Mato Grosso. Dies at Freiburg, Baden, 1/9/1802.

**LA PEROUSE Jean François de Galaup, Comte de.** Born in the château de Gué, Aisne, 23/1/1741 into an old merchant family. In the 16th century, 1766 to 1770, *de la marine* he participates in the Seven Years War. 1759 is wounded and taken prisoner by a British squadron. 1762 sails for America. 1764 navy ensign. 1767 commands the *Adour*. 1773-1775 takes part in the campaigns of Bengal, India and China. 1775, on the *Île de France*, falls in love with a young Creole, Eleonore Braudou, and wants to marry her; his family objects. 1778 lieutenant commander. 1779, as commander of the



DE LA BILLARDIÈRE.

*Amazonie*, he takes part in the attack on Savannah, capturing a British raider and a frigate. 1780, captain. 1781, as commander of the *Astree* with *La Touche-Treville*, he captures 2 British ships at Cape Breton. 1782, commander of the *Sceptre*, is ordered to attack the English posts in Hudson Bay; destroys the forts of York and Prince of Wales. 1783, marries Eleonore Braudou. 1785-1786 commands expedition on the *Boussole* and the *Astrolabe*.

**LAPLACE Cyrille Pierre Théodore.** Born "at sea" 11/7/1793. 1809 élève in the imperial navy. 1812, ensign. 1819, lieutenant commander. 1828, corvette captain. 1829-1833, commands the expedition of the *Favorite*. 1830, ingate captain. 1833-1839, publication of his *Voyage autour du monde*. . . . 1834, captain. 1834-1836, commander of the *Artemise* in the Martinique observation squadron. 1837-1840, commands expedition on the *Artemise*. 1841, rear admiral. 1841-1854, publishes *Campagne de circumnavigation de l'Artemise*. 1844-1847, commands the naval division of the Antilles. 1853, vice admiral. 1854, member of the Admiralty Council. publishes *Observations sur l'emancipation des Noirs*. Dies in Brest in 1875.

**LAUVERGNE Barthélemy.** Born in Toulon, 7/4/1805. 1826-1829, secretary to the commander on the *Astrolabe*. 1st Dumont

d'Urville expedition. 1830-1832, secretary to the commander and draftsman on the *Favorite*. 1st Laplace expedition. 1836-1837, painter on the *Bonne*. *Valliant* expedition. 1838-1849, shows his paintings at the Salon. Dies in Carcès (Var), 11/16/1871.

**LESSEPS Jean-Baptiste Barthélemy, Baron de.** Born in Sete, 1/27/1766. Son of the consul general of France in St. Petersburg. 1783, vice consul in Kronstadt. 1785-1787, Russian interpreter aboard the *Astrolabe*. La Perouse expedition; disembarks 10/7/1787 at Petropavlovsk, arrives at Versailles 10/17/1788. 1789, consul in Kronstadt. 1790, publishes the account of his voyage from Siberia to France. 1793, consul general in St. Petersburg. 1798, chargé d'affaires in Constantinople, is thrown into prison at the time of the Egyptian Expedition. 1802-1812, general commissioner of commercial relations with Russia. 1814, consul general and chargé d'affaires in Lisbon. 1831, publishes a new edition of *La Perouse's voyage*, containing all that has been discovered since the shipwreck. Dies in Lisbon, 4/6/1834.

**LESSON René Primevère.** Born in Rochefort, 3/20/1794. 1816, medical officer and then pharmacist in charge of the Rochefort botanical garden. 1817, his first wife dies. 1822-1825, assistant surgeon and pharmacist on the *Coquille*. Dupertey expedition. 1829, publishes *Voyage médical autour du monde*. 1830, publishes *Journal d'un voyage pittoresque*. . . . Professor of botany at the naval school in Rochefort, where he is to remain the rest of his life, writing numerous works on natural history. 1835, chief pharmacist in the navy. His 2nd wife dies, and in 1838, his 15-year-old daughter. Dies in Rochefort, 4/28/1849.

**LESUEUR Charles Alexandre.** Born in Le Havre, 1/1/1778. 1800-1804, assistant gunner on the *Géographe*, Baudin expedition; distinguishes himself as a draftsman and is relieved of his regular duties to become Péron's assistant; makes more than 1,500 drawings and paintings. 1807-1815, works on the *Voyage aux terres australes* with Péron, then Freycinet. 1815, sails for the United States and settles in Philadelphia, from where he sends many things to the Paris Museum of Natural History; voyage on the Mississippi, meets Audubon, prepares a work on North American fish. 1836, returns to France, directs the Museum of Natural History at Le Havre. Dies in Le Havre at end of 1857.

**LUTKE Fedor Petrovich, Count.** Born in St. Petersburg, 9/17/1797. Studies at the school for naval cadets. 1817-1819, on the *Kamchatka*, Golovnin voyage. 1821-1824, on the *Apollo* in the Arctic seas. 1825, aide-camp of Nicolas I. 1826-1829, captain-lieutenant, commands the *Senyavin* expedition. 1835, publishes *Voyage Around the World*. . . . rear admiral. 1843, vice admiral. 1850, maritime governor of Revel, then in 1853 of Kronstadt. 1855, admiral and member of the Council of State. 1861, corresponding member of the Paris Academy of Sciences. 1866, president of the St. Petersburg Academy of Sciences. Dies in St. Petersburg, 8/8/1882.

**MERTENS Karl Heinrich.** Born in Bremen, 1796. Son of the botanist F. K. Mertens. 1820, doctor of medicine. 1826-1829, surgeon and naturalist on the *Senyavin*,

Lutke expedition. 1829-1830, sails again on the *Senyavin* for the coast of Iceland. Dies on his return to St. Petersburg, 9/17/1830.

**MILIUS Pierre Bernard.** Born in Bordeaux, January 1773. Son of a ship-builder. 1787-1793, apprentice in the merchant service; makes several voyages to the Antilles. 1793, serves on the frigate *Précieuse*; his heroism wins him rank of ensign. 1796, promoted to lieutenant. 1800, lieutenant on the *Naturaliste*, Baudin expedition. 1801, frigate captain; after the death of Baudin (1803), takes command of the *Géographe*, which he brings back to France. 1805, commands the *Didon*, is taken to Great Britain as a prisoner. 1806, freed on giving his word that he will not return to active service. 1811, captain, commands the port of Venice. 1814, chief of the naval mission charged with retaking possession of Martinique and Guadeloupe. 1818-1821, governor of Bourbon Island. 1821, baron. 1822, commander and administrator of Cayenne, French Guiana. 1827, rear admiral. Dies of paralysis at Bourbonne-les-Bains, 8/11/1829.

**NASSAU-SIEGEN Charles Henri Nicholas Othon, Prince d'Orange et de.** Born in Paris, 1/6/1745. 1761, 2nd lieutenant, captain of dragoons; obtains authorization to accompany Bougainville, 1766-1769, on the *Boudeuse*. 1778, takes part in the American Revolution, raising a legion in his name. 1783, enters the Russian navy. 1788, defeats a Turkish fleet in the Black Sea. 1789, admiral, commands the Russian fleet in the Baltic, defeats the Swedish squadron commanded by Gustavus III. 1792, sent by Catherine II to the banks of the Rhine in order to organize the war against revolutionary France. Dies in the Ukraine, 1808.

**NELSON David.** Gardener-botanist of Kew Gardens, a protégé of Banks. 1773-1774, takes part in an expedition to the Arctic coasts of America. 1776-1780, midshipman on the *Discovery*, Cook's 3rd voyage. 1787, botanist on the *Bounty*, Bligh expedition. 1789, is disembarked with Bligh at the time of the mutiny. Dies of fever in Kupang (Timor), 6/20/1789.



Portrait of Krusenstern. Engraving by F. Lehmann, 1812, in *Voyage Around the World*. (Bibliothèque du Muséum d'histoire naturelle, Paris. Photo © Bibl. du Muséum/Photoch.)

J. J. de La Billardièrre in 1799. Engraving by Julien Boilly, 1831 (Bibliothèque nationale, Paris. Photo © Bibl. nat./Photoch.)

C. A. Lesueur on the *Géographe*, resting on a cage containing fowl. Self-portrait in pencil. (Muséum d'histoire naturelle, Le Havre. Photo © the muséum/Photoch.)

