On 5 June 1799 Alexander von Humboldt (Berlin, 1769-1859) and his companion, the botanist Aimé Bonpland, had lunch at the Café León de Oro, in A Coruña's Rúa Real.

After the meal, they went to the dock of the Correos Marítimos Herculinos, located in the vicinity of what was once the Tobacco Factory. A lighter took them to El Pizarro, the packet boat under the command of Juan Manuel de las Cagigas, which was to take them to the Americas.

At 2 p.m. the ship fired the canon that announced its departure and raised anchors. A sudden swerve of the ship at the point where the castle of Santo Amaro once stood created some alarm.

They sighted the Sisargás Islands at 9 o'clock in the evening, from where they had their last view of a human being on European soil.

“Humboldt working on botany”, Friedrich Georg Weitsch, 1806. Oil. Staatliche Museen zu Berlin; Alte Nationalgalerie. Berlin. (Karin März – Wikimedia Commons)

Texts and coordination: Xosé A. Fraga
Three chance events led to the port of A Coruña being the departure point for the American expedition: Humboldt’s unexpected trip to our country; the positive reception and support of the Spanish Government and Crown for his project, and the fact that despite the war with the British, the port of A Coruña was still open to shipping traffic.

The Prussian scientist arrived on 25 May in a carriage that left Madrid on the 13th of that month, travelling along the Camiño Real (Royal Road), which at that time connected the capital of the Kingdom of Spain with the region of Galicia.

The departure from A Coruña marked the start of a scientific expedition that would make Humboldt a world-famous figure. And the name of the city would remain forever linked to the history of one of the most important scientific feats of mankind.
In the city of A Coruña he was attended by an important authority, Rafael Clavijo y Socas, naval brigadier and the person in charge of the maritime mail service that connected Spain with the Americas.

He made the most of the days he spent in A Coruña: he collected and prepared plants, examined algae and molluscs, visited the Tower of Hercules, and established the geographical position of the city of Ferrol. He also checked the altitude data he was taking on his trip around Spain. He also made a sea crossing to Ferrol, an important naval and scientific base.

One of Humboldt’s main pursuits during his stay in A Coruña was the preparation of extensive and valuable writings. He wrote and sent forty-three letters to various friends, and made notes in his diary.
In A Coruña he finished writing a unique document, his "literary testament". In this document, written in anticipation of any misfortune that might occur on his journey, he summarised his main scientific contribution up to that time.

He chose as the subject for this testament his work on the composition and arrangement of strata *Parallelismus der Schichten*. He intended to demonstrate how the slope of the sediment layers that cover the earth's surface is similar all over the planet.

**Humboldt** attributed this uniformity to the forces of rotation and attraction of the Earth, which due to their universal and uniform character caused this planetary homogeneity.
From A Coruña for the scientific discovery of the Americas

He began studying philosophy and natural sciences at the University of Frankfurt am Oder (1787) and later attended the distinguished University of Göttingen (1789). At that time he met Georg Forster, who took part in James Cook’s second expedition. The two travelled to various European countries, including France. This visit aroused Humboldt’s identification with the French revolutionary process.

The Humboldt-Holwed family was part of the Berlin social elite in the kingdom of Prussia. Alexander began his education with various tutors and attended the seminars of cultured people such as Mendelssohn and Herz.

He attended the Mining Academy in Freiberg (Saxony) with the great geologist Abraham Werner. This apprenticeship led to his first professional job, as a mining inspector in Franconia (1792).
In 1794 he visited Weimar, a city which, together with the University of Jena, was the cultural capital of Germany, where intellectuals such as Friedrich Schelling and Johann Wolfgang von Goethe lived. Alexander came into contact with them and studied at the university.

Humboldt’s mother died in November 1796 and he decided, with his inherited fortune, to carry out his project of organising an expedition to distant lands.

He left for Paris in 1797, where he met important scientists such as Georges Cuvier and Antoine Laurent de Jussieu. The following year he worked for several months with important chemists and met the explorer Nicolas Baudin and the botanist Aimé Bonpland.
At the end of 1798, Humboldt and Bonpland travelled to Spain. In Madrid, they received the support of prominent scientists, which allowed them to obtain valuable information about the Americas.
In those days it was unusual for states to accept the entry of foreign citizens into their colonies. However, Humboldt obtained permission from the government and the Crown in Madrid thanks to the help of influential people, who put him in contact with the head of the Secretary of State, Mariano Luis de Urquijo.

On 7 May 1799, he issued a passport that was very favourable to Humboldt's plans. Two days after arriving in A Coruña, on 27th May, he went with his passport to confirm his embarkation permit at the Xulgado de Arribadas, located in the maritime post office (currently the Provincial Government Office, on the seafront).

The Prussian thanked Spain's generosity towards him on several occasions. Nevertheless, he failed to fulfil his commitment to send a considerable number of American natural objects to the Botanical Garden and the Cabinet of Natural History in Madrid.
The objectives of Humboldt’s American expedition were diverse. The first had to do with the study of the strata, in order to confirm his theory of their similar inclination all over the planet.

His work plan included a general collection of data of scientific interest. He wrote to his friend David Friedländer (on 11 April 1799): "I will collect plants and animals, study the temperature, elasticity, magnetic and electrical composition of the atmosphere, decompose it, determine the longitudes and geographic parallels, and I will measure mountains".

All the same, his ultimate goal was "to investigate how the interaction of all natural forces takes place, the influence of non-living nature on the living animal and plant world". From A Coruña he insisted on this perspective in a letter to Karl Ma. von Moll, noting that he sought "the observation of the harmony of plants and animals in creation".
When Alexander von Humboldt arrived in A Coruña, it was a town of some 14,000 inhabitants.

In the lower part, near the sea, was the “Pescadería”, home to traders, sailors, officials, and army officers.

It was a city of two clearly differentiated parts. On the one hand, there was the Old City, or ‘High City’, a type of citadel surrounded by a wall with 17 towers. It was home to the military, judicial, and political powers.
At the end of the eighteenth century, A Coruña was experiencing an economic boom. This was a result of the opening of the port in 1764 to commercial traffic with the Americas via the Maritime Mail service, and from 1785 onwards, with the founding of the Consulado Marítimo y Terrestre (Maritime and Terrestrial Consulate).

The purpose of the Consulate was to promote wealth and the extension of navigation, and it was made up of a mixture of important landowners and a nascent middle class.

It was also an educational centre for Illustration and Nautical Studies. Its classes were marked by the innovative work of the frigate ensign Francisco Esteban Yebra and Francisco Cónsul Jove.

The Tower of Hercules in the nineteenth century. Martínez Barbeito Collection (Municipal Archive. A Coruña City Council)
As a result of the opening of traffic to and from the Americas, it was necessary to make a series of improvements to the port facilities in A Coruña. The city lacked docks and wharves, so loading and unloading was carried out in boats that were grounded on the beaches, or which were docked during the high tide at the gates of the city walls.

The naval engineer Eustaquio Giannini Bentallol was responsible for the restoration work on the Tower of Hercules (1788-90). He also designed and built the new port infrastructure.

And so, by the end of the eighteenth century, the port of A Coruña had a movement of 250 vessels and 14,000 tonnes of goods.

The castle of San Antón in the nineteenth century. Martínez Barbeito Collection (Municipal Archive. A Coruña City Council)
Society in the Americas was also the focus of the scientist’s attention on his expedition: “My desire is to use the physical sciences and study humanity in its different states of barbarism and culture” (letter from Humboldt to Jefferson, dated 24 May 1804, Philadelphia).

Between 1799 and 1804 he explored the territories of various Spanish Crown possessions in America, currently Colombia, Venezuela, Cuba, Ecuador, Peru and Mexico.

He travelled along rivers, climbed volcanoes and mountains, and fished in jungles. During these trips he collected and identified plants, observed constellations, measured altitudes and terrestrial magnetism, mapped unknown territories, studied the chemical composition of numerous substances, investigated animal electricity, investigated geological structures, and explored the different components of nature…
Alexander von Humboldt’s journey of exploration (1799-1804)

Route

Cities

I Humboldt embarks in A Coruña on the Spanish frigate Pizarro, stopping over in the Canary Islands before continuing on to Cumaná.

II Expedition along the Orinoco and Río Negro with Bonpland.

III Journey to Nova Barcelona in Cuba, passing through Trinidad, and then visiting Cartagena.

IV Journey across the Andes to Lima.

V Journey from Guayaquil to Acapulco, then staying in Mexico before embarking in Veracruz to sail to Havana.

VI Humboldt embarks on the cargo vessel Concepción heading to Philadelphia. In Washington he embarks on the French frigate La Favorite heading to Bordeaux.

Humboldt made contact with scientists living in America, from whom he received interesting information. Among them were the botanist José Celestino Mutis from Cádiz and the Galician-born Grenadian, Francisco José de Caldas.

He also studied the way of life in the colonies, the economic situation and conflicts.

In order to carry out a huge number of measurements he took with him a veritable arsenal of thirty of the most modern scientific instruments. Measuring was essential in order to achieve an objective knowledge of nature and to establish rigorous comparisons.
Alexander encountered a different natural world: "When the traveller who has just arrived from Europe enters the South American jungles for the first time, he is confronted with a completely unexpected challenge. At every step he takes, he feels that he is not on the borders of the torrid zone, but inside it, in an immense continent where everything is gigantic: mountains, rivers and masses of vegetation. He cannot say what surprises him more: whether it is the solemn silence of these solitary spaces, the beauty of the different objects and their contrasts, or the fullness and exuberance of plant life... ".

This extraordinary nature was studied by the Prussian scientist in its components and in the search for correlations between them.

He finished his trip by visiting the United States of America. He interviewed President Thomas Jefferson, and then returned to Europe from Philadelphia.
Humboldt made good use of the opportunity offered by the Americas to take a very important step forward in his knowledge of the natural environment. The scientist who returned to Bordeaux in August 1804 was already becoming the universal scholar we know today.

He returned with an enormous number of natural objects and observations. For example, he collected thousands of specimens of plants, 10% of which were completely unknown to European botanists.

He spent the following decades in Paris studying, evaluating and publishing the results obtained from his American expedition. This work drained his personal fortune.
Based on what he observed in the Americas, in 1807 he published a very interesting work, titled *Essay on the Geography of Plants*. With it he intended to promote the study of the distribution of vegetation according to physical factors in general.

He focused his attention on the way in which plant species group together, and the forms of these natural associations. He also established the first classification system of biological groupings.

**Humboldt’s proposal clearly expresses his vision of nature, the attempt to unify different natural phenomena related to each other and to living beings, in this case the plant species.**

*Illustration by Humboldt, 1803, Géographie des plantes près de l’Equateur. Virtual library of the Bank of the Republic of Colombia*
Humboldt understood that "the simple aspect of nature, the vision of the fields and forests, cause a pleasure that differs essentially from the impression produced by the particular study of the structure of an organised being. Here, what interests us is the detail, which excites our curiosity; there, it is the whole, it is the masses that arouse our imagination."

The Prussian scholar founded botanical geography, one of the cornerstones of modern plant ecology.

The Essay on the Geography of Plants was first published in Spain in 1999, specifically in Galician, and sponsored by the University of A Coruña and the regional government of Galicia (Xunta de Galicia).
Alexander von Humboldt confirmed in his American expedition the unity of nature, understood as an autonomous element: "Both in the Amazon jungle and in the high peaks of the Andes, I was always aware that a single breath, from one pole to the other, breathed a single and unique life into the rocks, the plants, the animals and the body of man".

He proposed a new way of seeing, understanding and studying the environment. In contrast to the descriptive and passive vision of the natural world, in his writings he tried to capture his impressions of the landscape and its dynamic character.

He also incorporated subjectivity, the personal emotion of the observer. The influence of German scientific philosophy and romanticism was decisive in his outlook.

The black forest of Galipán, La Guaira. F. Bellermann, 1845. Staatsbibliothek zu Berlin - Preußischer Kulturbesitz
In the Americas, Humboldt observed unknown phenomena and created new concepts related to physical geography. He described the oceanic current that bears his name, also known as the Peruvian current. It runs along the eastern Pacific coast. The first person to identify it was the Spanish scientist José de Acosta in the sixteenth century.

He was to refer (in 1817) to isotherms, the lines that in a plane present the same temperature, of great current interest, in relation to the monitoring of climate change.

His journey to the Americas deepened his interest in nature conservation, and his anti-colonialism and anti-slavery attitudes.
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In 1829, at the age of sixty, he set off on another great expedition, this time to the Urals and Siberia. In 1845 he published *Cosmos: A Sketch of a Physical Description of the Universe*.

In 1829, Alexander began to give a series of highly celebrated conferences, lectures on the Cosmos, in the German capital. Initially aimed at the university world, they were later transformed into activities for the general public, something that was very much a novelty at the time.


Galician edition of *Views of Nature*, 2020 (original version by Humboldt, 1808).
The Prussian scientist was a pioneer in popularising science. He attractively divulged new approaches and perspectives of research, combining a precise description of phenomena with an attractive image of the natural scenery.


His informative writings on the natural sciences were enthusiastically received by the public of his time, spreading the image of science as a rigorous intellectual model and as a powerful instrument in the search for human welfare and happiness.

Among these works are Views of Nature, published in 1808, and Views of the Cordilleras and Monuments of the Indigenous Peoples of the Americas, published in 1810. The various editions of Journey to the Equinoctial Regions of the New Continent (1814-1825) achieved enormous acclaim, and his final work, Cosmos, was a veritable bestseller.
Humboldt was highly regarded and was a model scientist, enlightened traveller and communicator. This image is completed with the consideration of a citizen committed to progressive liberalism, a "savant démocrate".

Even an asteroid and two features on the Moon bear his name. It is also used to name nature conservation initiatives throughout the Americas, such as the first national monument in Venezuela (1949), the "Cueva del Guácharo". Multiple institutions are named after him, as well as towns and cities in several countries, especially in the United States of America.

Today we find the name of Alexander von Humboldt in every corner of the world, in the great capitals, naming prestigious awards, designating natural phenomena, used to name up to seven animal species and eleven plant species dedicated to him, as well as geographical and geological elements in the Arctic, Antarctic, North and South America, Asia, Oceania and Europe.
Humboldt’s scientific thinking, and above all, his intellectual messages, are still valid and of value today. They form a part of cultural and scientific modernity.

Plaque installed in A Palloza on 5 June 2019 by the Humboldt Coruña Forum, commemorating Humboldt’s departure (photo by Xosé A. Fraga)

We would draw special attention to the following aspects:

- His global perspective of the world and nature, and the need for a comprehensive understanding that complements local analysis.
- Respect for different cultures.
- Defending the interaction between scientific and humanistic knowledge.
- His role as a pioneering defender of the environment.

Humboldt.

Texts and coordination: Xosé A. Fraga