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## Document 1550

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# Cartography of the Pacific—Part 2

*References: 1) Justin Winsor (ed.), Narrative and Critical History of America (Boston & NY, 1884); 2) Adolf E. Nordenskiöld, Facsimile-Atlas to the Early History of Cartography (Stockholm, 1889); 3) Erik Wilhelm Dahlgren, Were the Hawaiian Islands Visited by the Spaniards Before their Discovery by Captain Cook? (Stockholm, 1916); 4) Lawrence Wroth, The Early Cartography of the Pacific (NY, 1944); 5) Armando Cortesão & Avelino Teixeira da Mota (eds.), Portugaliae monumenta cartographica (Lisbon, 1960-62).*

## How the discoveries of the Portuguese (1511) and of the Spanish from Balboa to Villalobos (1513-1545) came to be recorded by cartographers

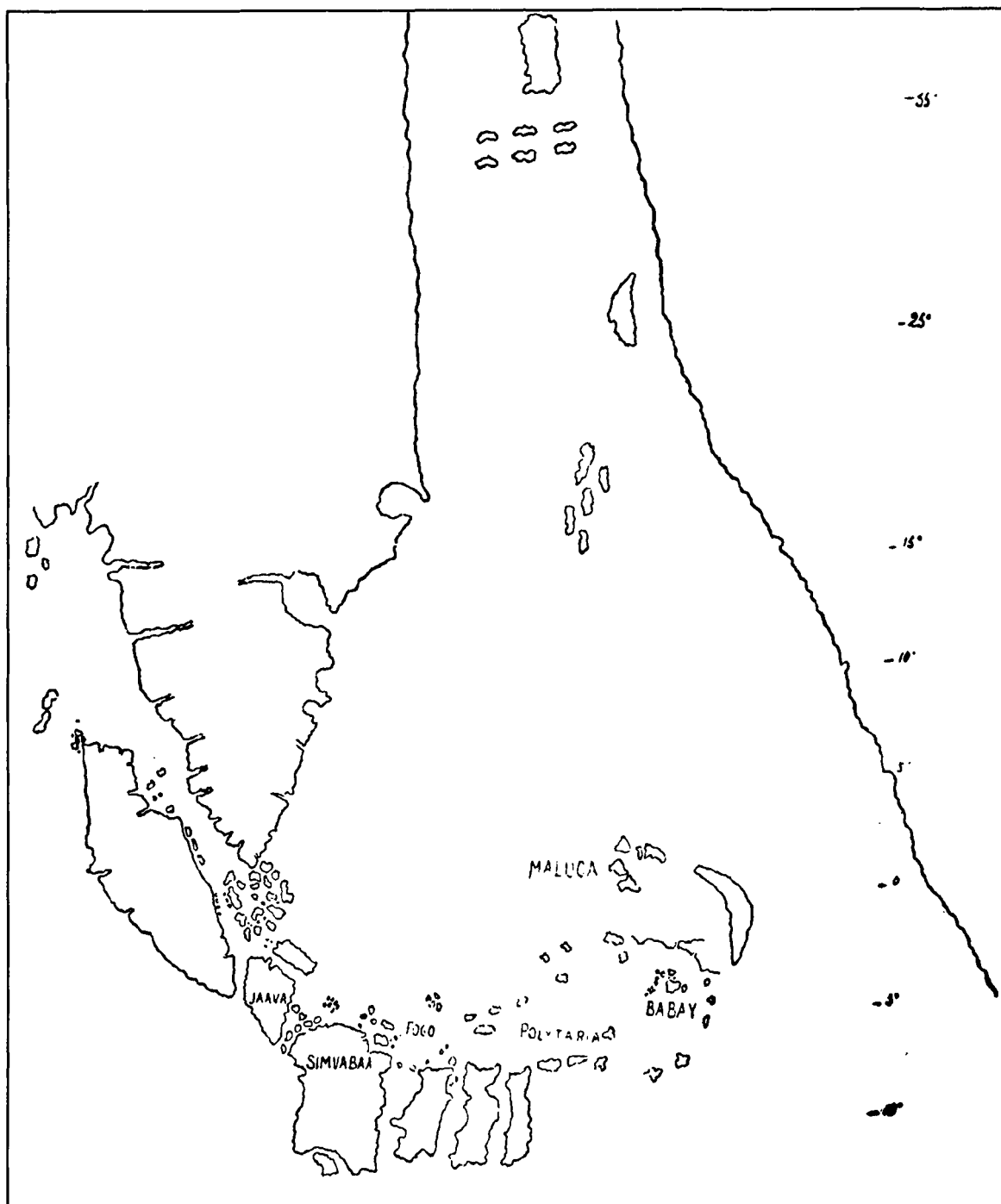
### The Pacific 1511-1521.

The views of Columbus<sup>1</sup> and his companions, as best shown in the La Cosa and Ruysch maps, precluded for a considerable time after the coming of the Europeans to the New World, the possibility of the very existence of a vast South Sea, because North America was thought of as a mere extension of the Chinese mainland. Even as late as 1533, Schöner himself, in his *Opusculum geographicum*, maintained that the city of Mexico was the Quinsay of Marco Polo. The passage of Magellan and the discovery of Balboa in 1513 were accepted, but only in the form of a Pacific Ocean being an arm of the Indian Ocean. Some cartographers of the time even held the view that Europe and America were joined in the arctic regions.

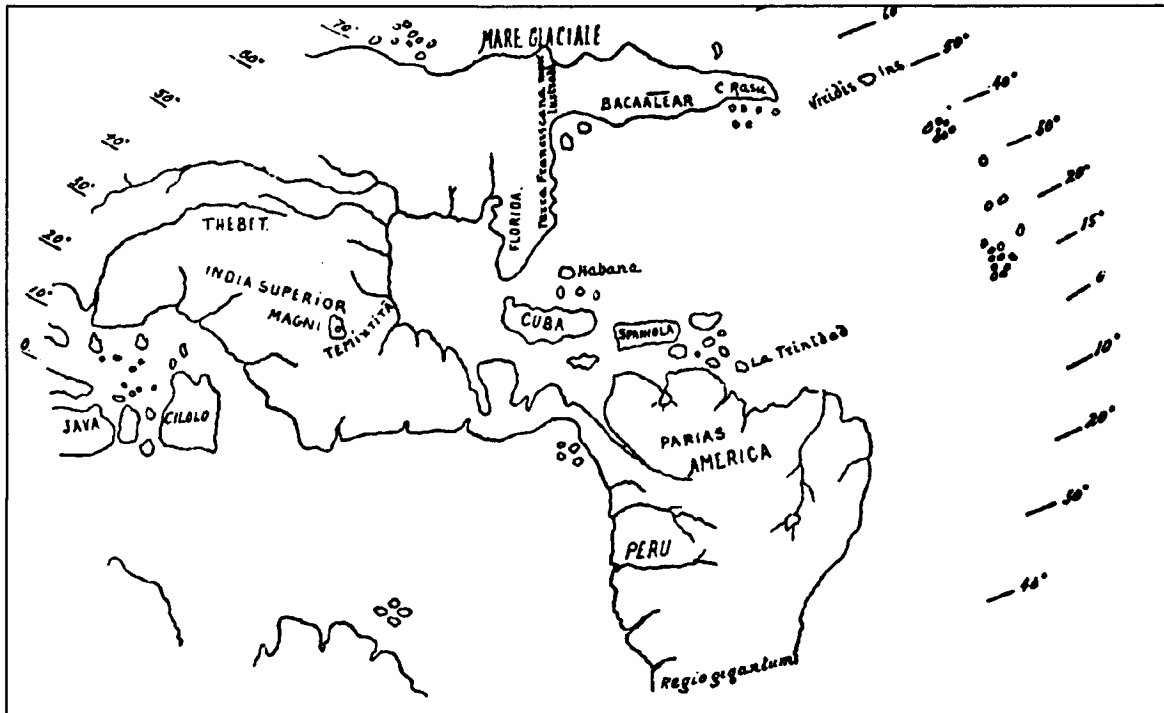
The Portuguese had discovered the western approaches to the Pacific Ocean in 1511, when d'Abreu and Serrão reached the Moluccas. The next year Jorge de Meneses was pushed by a storm as far as West Irian (New Guinea) when he tried to reach the Spice Islands on his own. Antonio da Miranda de Azevedo came in 1513 and a pilot with this expedition is thought by Kohl to have been the author of a surviving sketch map of the Eastern or Indonesian archipelago.

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1 Remember that he died thinking of himself as the King of Japan...



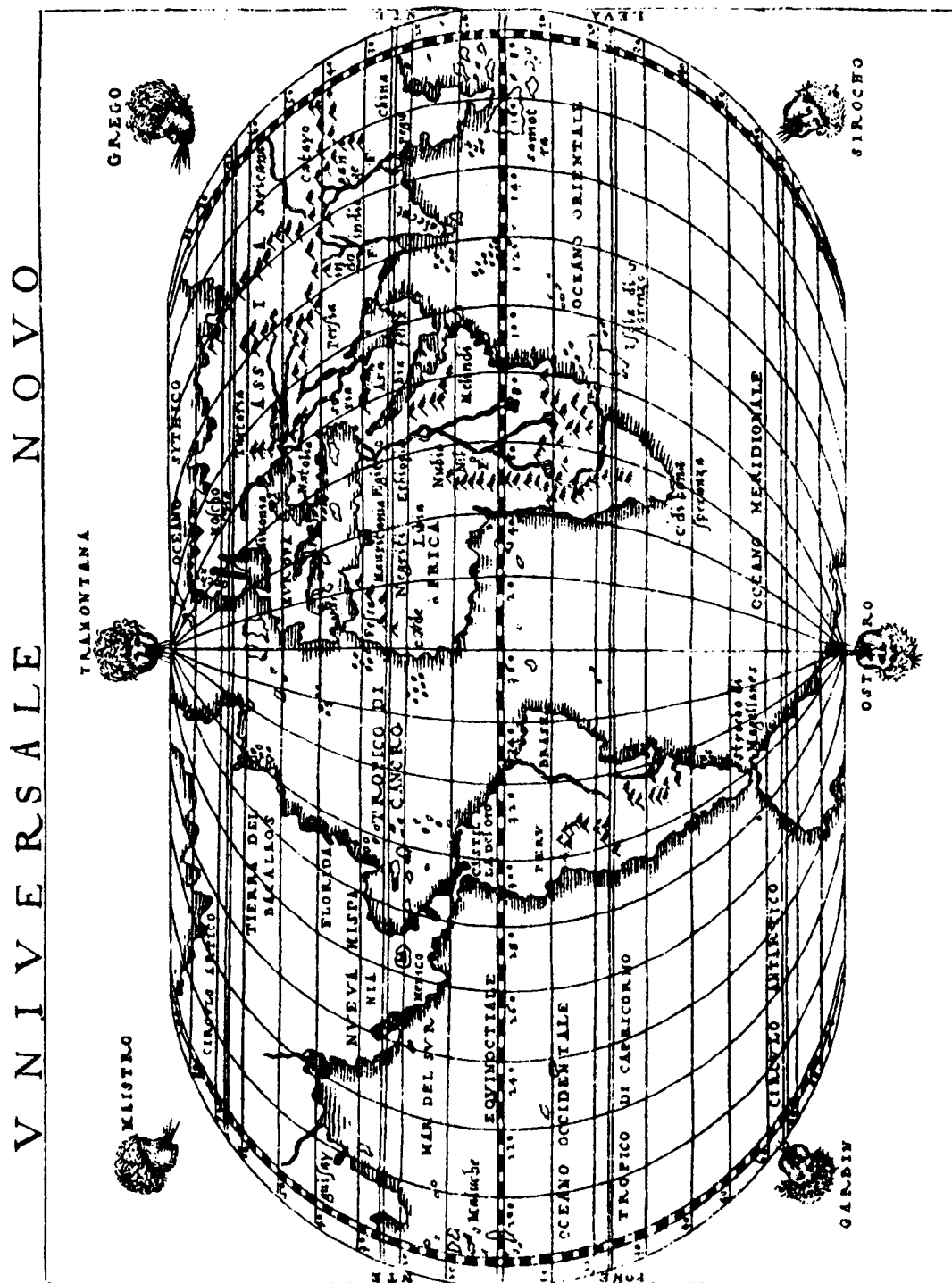
**The Pacific Ocean in 1513 as seen by the Portuguese.** *In this map the existence of a vast ocean is recognized and thought to be limited on its eastern edge by a vast continent, not yet discovered by the Spanish. Maluca is obviously Maluco, or Molucca in English, but Babay means a "wife, married woman" in the Moluccan language, according to Pigafetta; perhaps this is a bad transcription for Banda. (From Kohl's collection, after an original that was in the military archives at Munich. Winsor, II, p. 440)*



**A 1530 map showing New Spain as an extension of China.** *The old capital of Mexico, Tenochtitlán (shown here as Temixtitán) was thought of by this cartographer as being part of the Upper India described by Ptolemy centuries before. (From the Sloane manuscripts in Dr. Kohl's Collection in the Department of State in Washington. Winsor, II, p. 432)*



**The Nancy Globe placed China in Texas.** *The Nancy Globe placed China in Texas and showed Magellan's Pacific Ocean as a mere extension of the Indian Ocean. (From the 1877 Comptes-Rendus of the Congrès des Américanistes, p. 359. Winsor, II, p. 433)*



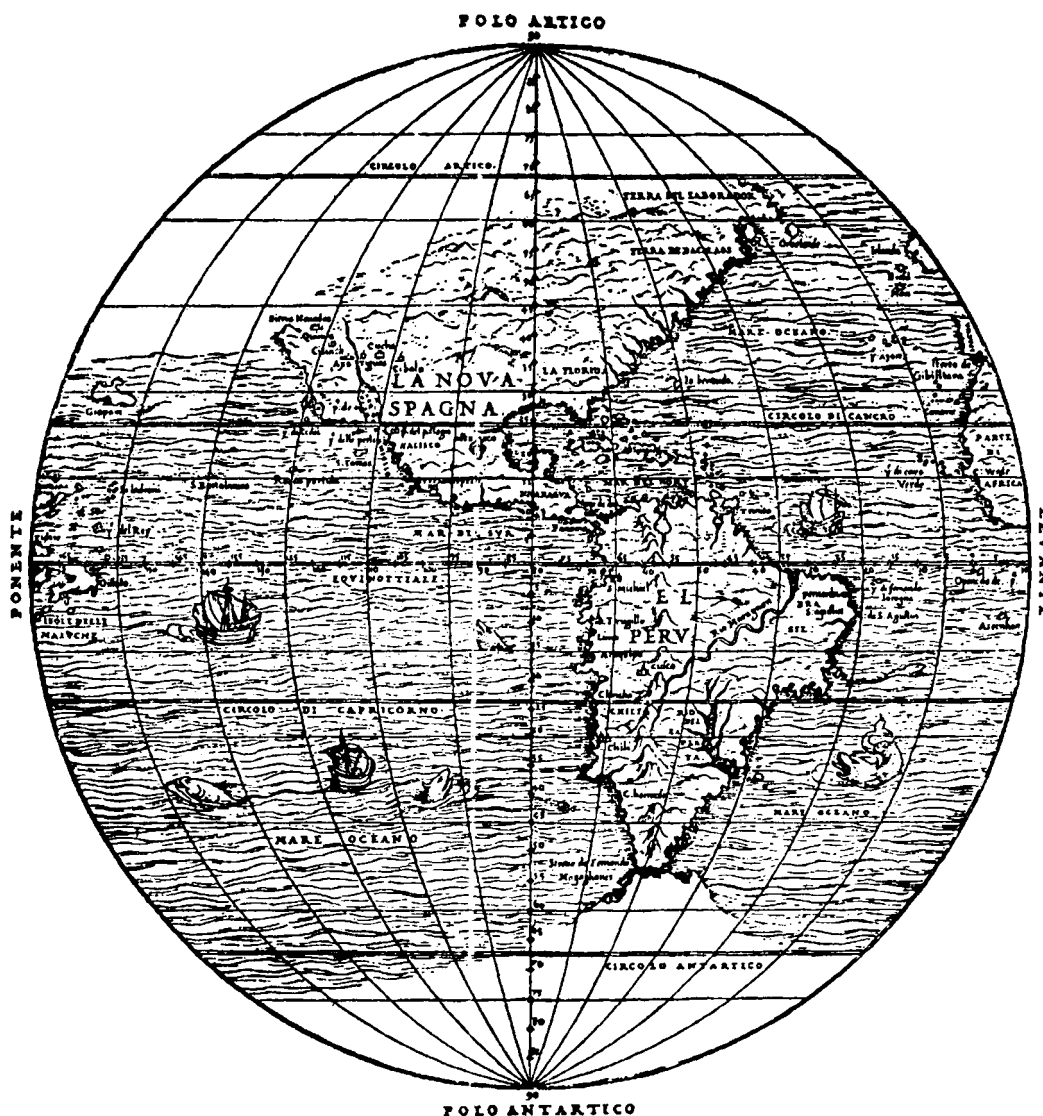
**World map from the Venice 1548 edition of Ptolemy. Map done in the Italian style with the Mediterranean winds all around it, as in the atlas of Battista Agnese. The Pacific is devoid of islands, except for the Moluccas. None of the Spanish discoveries are shown, except along the northwest coast. (From Nordenskiöld, Plate XLV)**



(Facing page) **The South Sea by Gaspar Vopellio, 1556.** *Geronimo de Girava published this map in a book on cosmography which he published in Spanish at Milan in 1556. The western half shown here extends the California coast as far as ... the Ganges. The legend printed on top of the Pacific says, correctly, that "Basco Nuñez de Balboa descubrió este mar el año de 1513." However, the legend on top of Antarctica says, erroneously, that it was discovered in 1499. (From Girava's *Dos Libros de Cosmographia*, Milan 1556. Nordenskiöld, Plate XLV)*

When the exploits of Cortés in Mexico became known in Europe, most learned men expressed surprise that the so-called Indians would not have known about horses, because they are common in Asia. However, some cartographers still clung to the idea of the Asiatic connection until the end of the century. It was Cortés' exploration of the north-west coast, however, that helped change many opinions. As early as 1526, Cortés had wished to send an expedition of conquest toward the Moluccas, at the time Loaysa and Cabot were leaving Spain. We have seen how he got his chance to send Hernando de Grijalva on the sly and later Saavedra, but he died before his major expedition, that of Villalobos, had departed from the west coast.

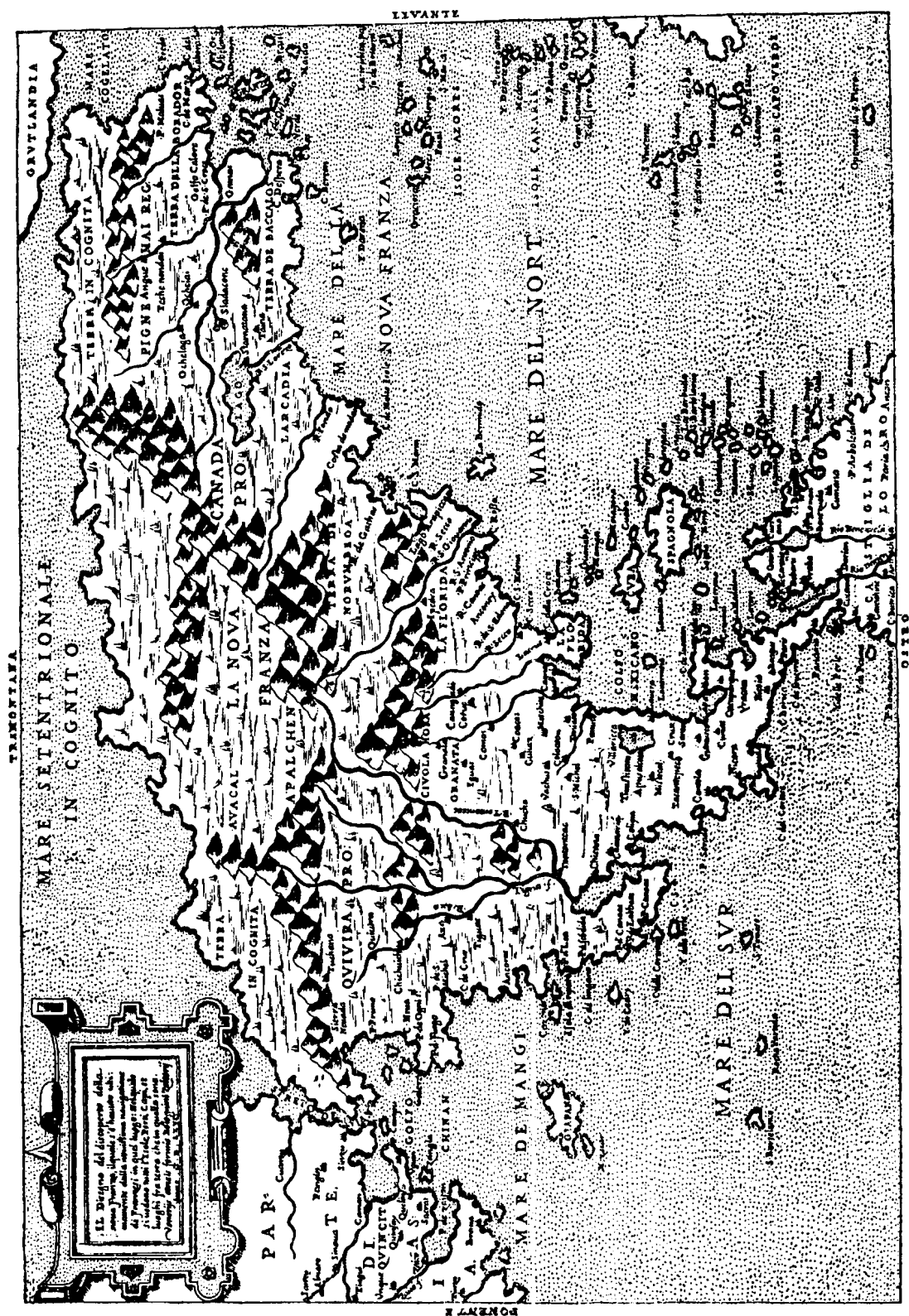
Meanwhile in Europe, the cartographers were unable to get any clear geographical data about the Pacific because the original documents were locked up in the archives at Évora, Portugal, until the Spanish won the political control of that country in 1580. By 1550, however, with the publication of the first volume of Ramusio's *Navigazioni*, some Italian map-makers, such as Gastaldi, and Zaltieri, were able to draw the coarse outline of the west coast of the Americas, and soon afterward, display the discoveries made by Villalobos, according to Juan Gaytan's account.



**Map attributed to Giacomo Gastaldi, ca. 1553.** *Map attributed to Giacomo Gastaldi, ca. 1553. He showed the discoveries of the Loaysa expedition: San Bartolomé (Taongi), and 1ª del Rey (Ulithi). One of the discoveries of Villalobos, Roca Partida, is also shown to illustrate the narrative of Juan Gaytan. The island of San Tomas off the coast of California had previously been discovered. (From Ramusio's Navigazioni, Venice, 1566, vol. III)*

(Facing Page) **Map of North America by Zaltieri, 1566.** *It was published in Venice as part of the Lafreri Atlas. It shows the author's belief that America was probably separated from Asia, but still underestimate the vastness of the Pacific, by placing Japan, and San Bartolomé too close to the American coast. (From Nordenskiöld's Facsimile-Atlas, p. 129)*

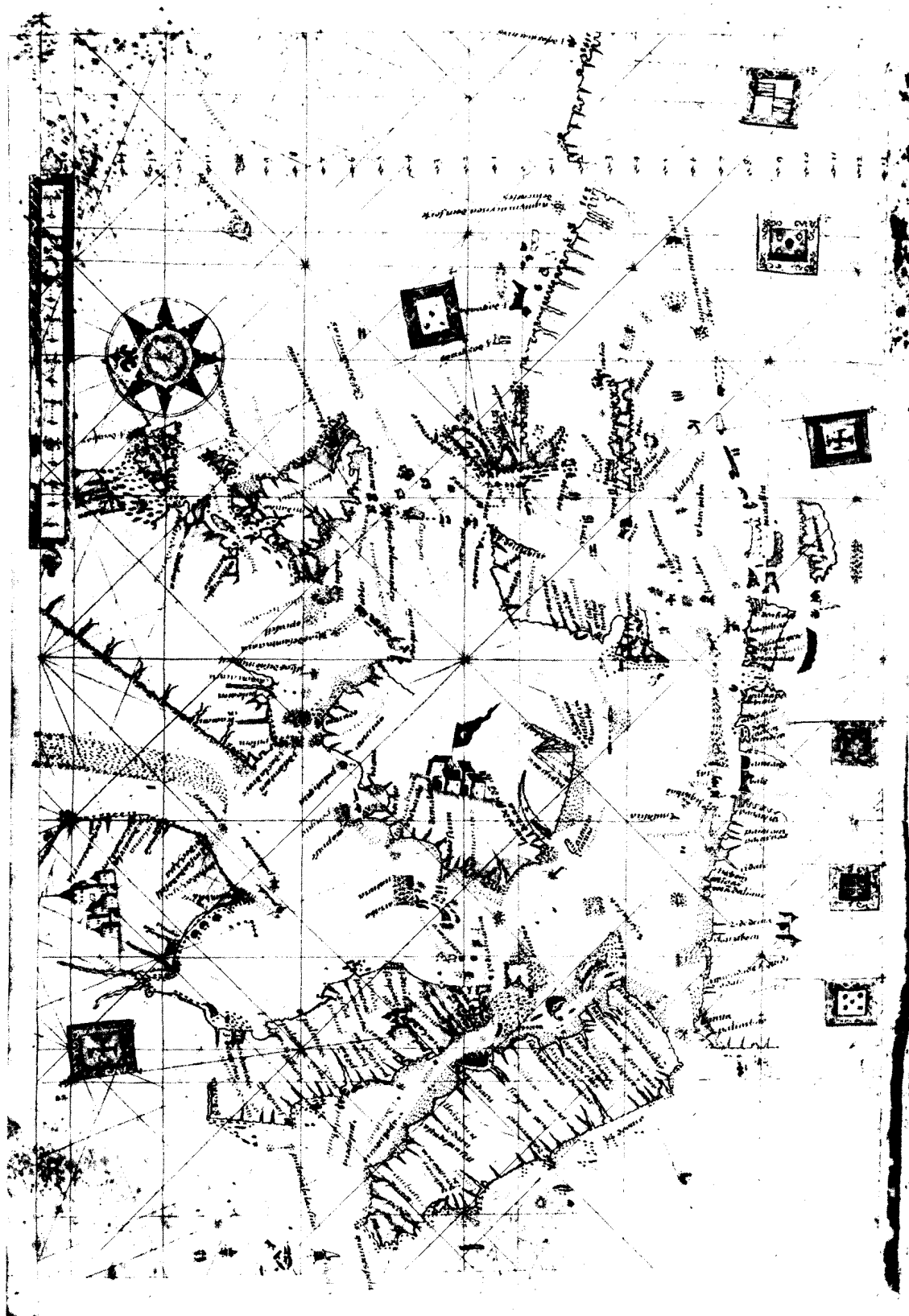


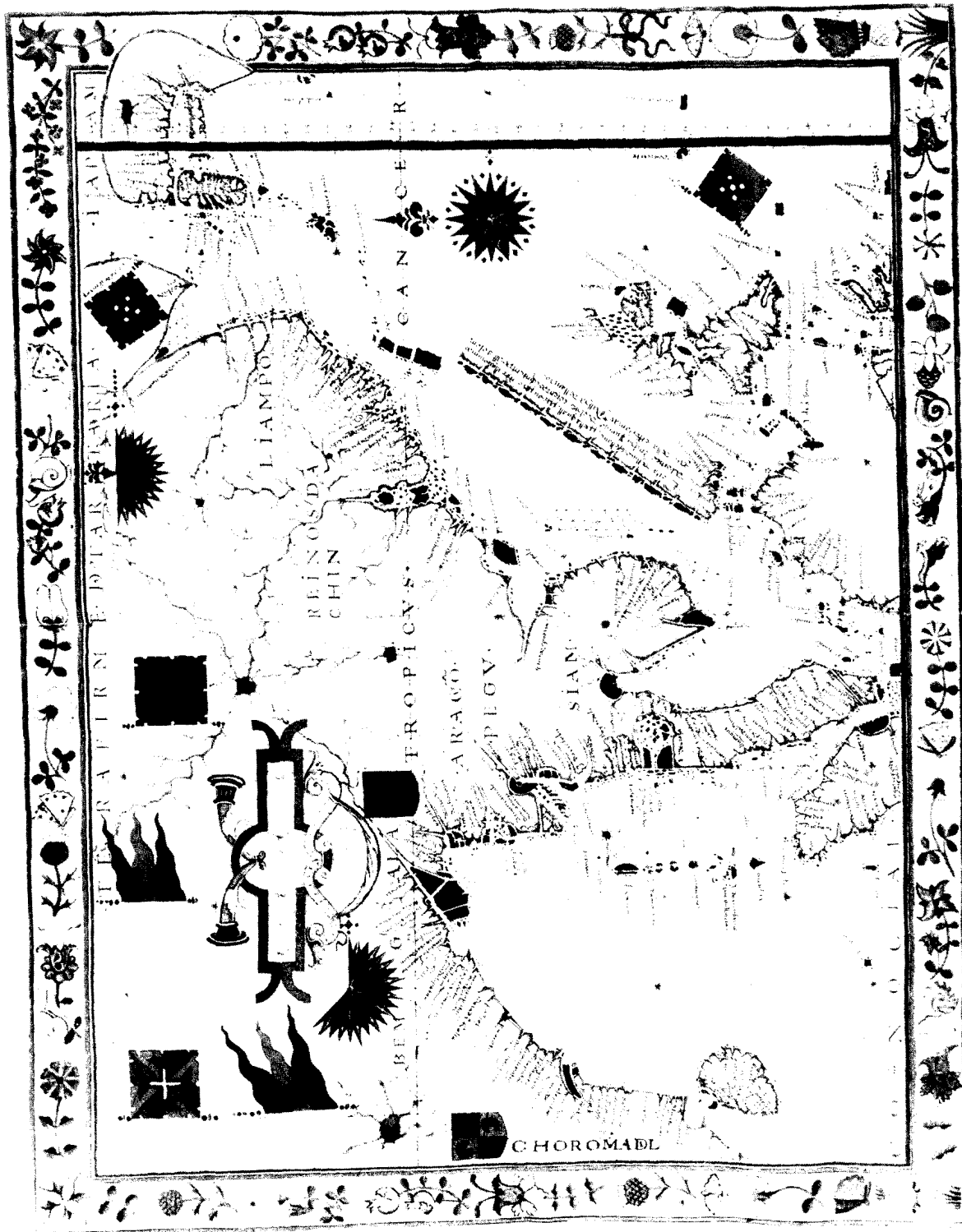


## The Portuguese start publishing the knowledge they got from the Spanish.

As of about 1545, when the Portuguese were more or less assured that the Spanish would no longer raid their Moluccas, they began to publish maps of Asia and the Pacific that brought to light some data they had seized from members of the Magellan, Loaysa, Saavedra, Grijalva and Villalobos expeditions. All these maps were limited editions, either anonymous or by Vaz Dourado, and meant for Portuguese navigators only. However, knowledge of their existence in modern times is due mainly to the efforts of Cortesão and Teixeira (see references above). Two such maps have already been reproduced above as part of Documents 1522D and 1542E.

(Facing page) **Anonymous Portuguese map, ca. 1560.** *It was found in an anonymous Livro de marinharia or Naval Handbook in the archives of the Ministry of Finance in Lisbon. Properly located at 10°N are shown the "I. darecifes", the Isla de Arrecifes of Villalobos, and his "I. de Matalotes", which correspond to Ulithi and Fais respectively. There are also some stain spots in the NE corner of the map which should not be confused with any island. North of New Guinea can be seen the Portuguese discoveries of, west-to-east, I. dos graos [Two degree I.], I. dagoada [The Aguada or Watering I.], "Aqui invernou dom Jorge de meneses" [Here wintered Don Jorge de Meneses], I. dos martires [Martyrs I.]. Also recognizable is Villalobos' Baia de resurreccão [Resurrection Bay] on the east coast of Mindanao, and the Visayan Islands of the Philippines explored by Bernardo de la Torre and his companions. The Abuyog River in eastern Leyte is shown as "r. de abuio", but the corresponding Tandaya River on the opposite coast of Samar is not shown. However, Is. de palmeiras, east of the Sarangani Islands, is a Portuguese discovery; it is the I. de Palmas of modern Spanish maps and, today, Indonesia's Pulau Miangas (5°33'N & 126°36'E). (From Cortesão, Vol. I, Plate 97B)*

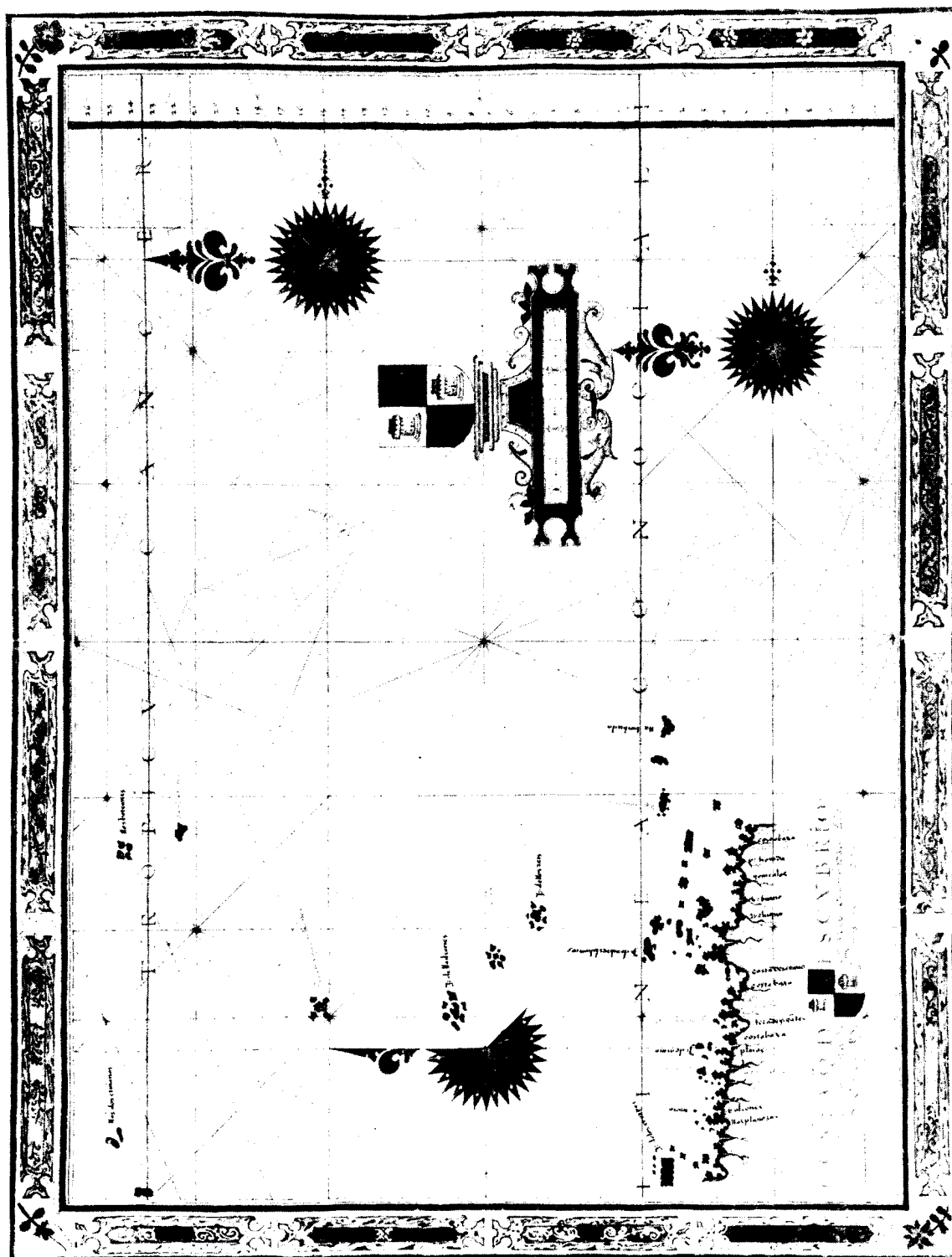


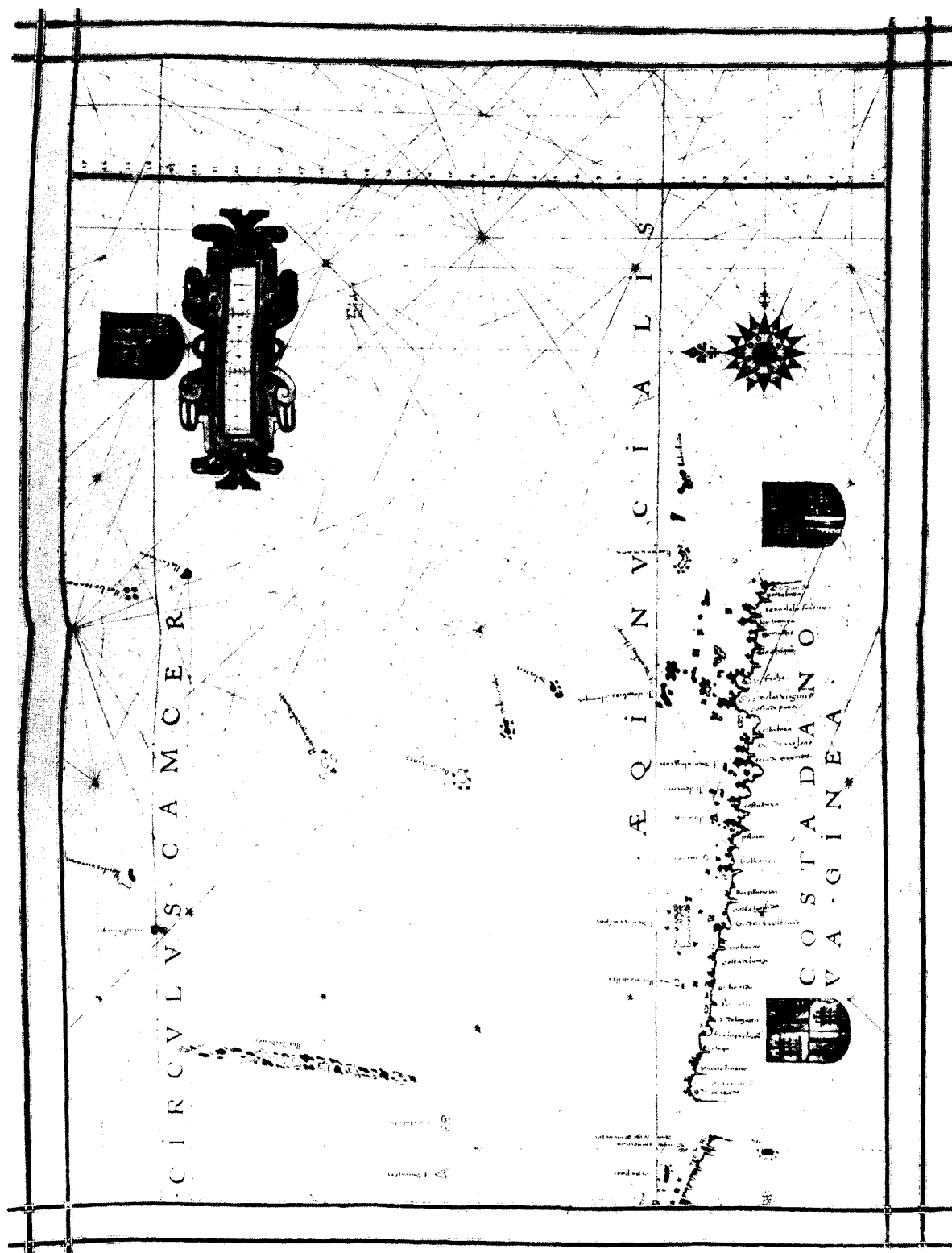


(Facing page) **Map of Asia by Fernão Vaz Dourado, 1570.** *This map also shows at 10°N “de arecife” and “os matalotes”, but in addition, below Japan, are shown two of De la Torre’s discoveries of 1543: “malabrigo” and “Llas dos ermanas”. However, they are wrongly placed at 27°N rather than in the latitudes of the Northern Marianas where they belong. (From Cortesão, III, Plate 270). Note: There is a similar map by the same author, also produced at Goa but in 1571 (See B&R 33:270-271) which is in Torre do Tombo.*

(Next 2 pages) **Map of the Pacific by Vaz Dourado, 1570.** *Besides the islands of Malabrigo and Dos Hermanas shown in the previous map, the other discoveries of 1543 are here added, but rather than being north of the above, they are shown east of them: “llos bolcanes” and “lla ffarfana”. At 15° is shown “restinga de ladrones”, i.e. the so-called barrier reef of the Ladrones, but “I. de los corales” and “I. dellos reis” are badly placed. Some new names (from Villalobos) appear on the north coast of New Guinea: “I. de los crespos” [Is. of the Frizzy Ones], “I. dombres blancos” [I. of the (painted) White Men], “lla barbuda” [The Bearded One], etc. The information shown on this map was similarly reproduced in his editions of 1575, and 1580 (see below). (From Cortesão, III, 272)*

**Corrected map of the Pacific by Vaz, 1580.** *Same as above, except that, in wanting to give back to the Ladrones their island chain aspect, he labelled them “llos jardines”, a group he had forgotten in 1575. Something new appears in the eastern Carolines: “abeio”. This must correspond to the Spanish “Abrejo(s)” [Open your eyes, or Look Out] whose origin is not referred to in any document that I have seen, but must have been on some manuscript Spanish chart of the period, now lost. Similar words, e.g. Quita-sueño [Wake Up!], will also appear on published maps of the next century, to warn pilots about un-named atolls and reefs. (Cortesão, III, 324)*









(Facing page) **Map of the Pacific by Bartolomeu Lasso, 1590.** *Disregarding some future discoveries by Mendaña in the Solomon Islands for now, the rest of this map derives its information from the same sources as those of Vaz Dourado, and it corrects some of his errors. The Ladrones are shown properly as a vertical chain of islands. The route of Villalobos via Reyes, Corales, Jardines, Matalotes, Arrecifes can be traced readily, albeit with an error in latitudes for those belonging to the Marshalls. Worthy of note are the Sonsorol Islands (See Doc. 1522C), properly recorded here as the St. John Islands discovered by Espinosa in 1522: "I<sup>as</sup>. de Sam Y<sup>o</sup>". Next to them are the wandering "Is. Palm(eir)as".*

### **The Belgian, or rather Flemish, map-makers get into the act.**

The names of Mercator and Ortelius have become famous as a result of the awakening of their nation to overseas exploration and the modern map and chart trade which the so-called Dutch practically invented.<sup>1</sup> The techniques involved with the printing of maps from engraved copper plates were not fully developed until this (16th) century, and the Dutch became masters at it. Gerard **Mercator** devised the method by which a round surface, such as the Earth, could be projected onto a flat plane. Although booksellers-publishers began to switch from woodcut illustrations to copper-plate engraving about 1550, some printers insisted on producing old-fashioned maps from woodcuts as late as 1600. The following is an example by Matthias Quadus or Quad; this man was really behind the times, as the data on his map does not go beyond the Villalobos period.

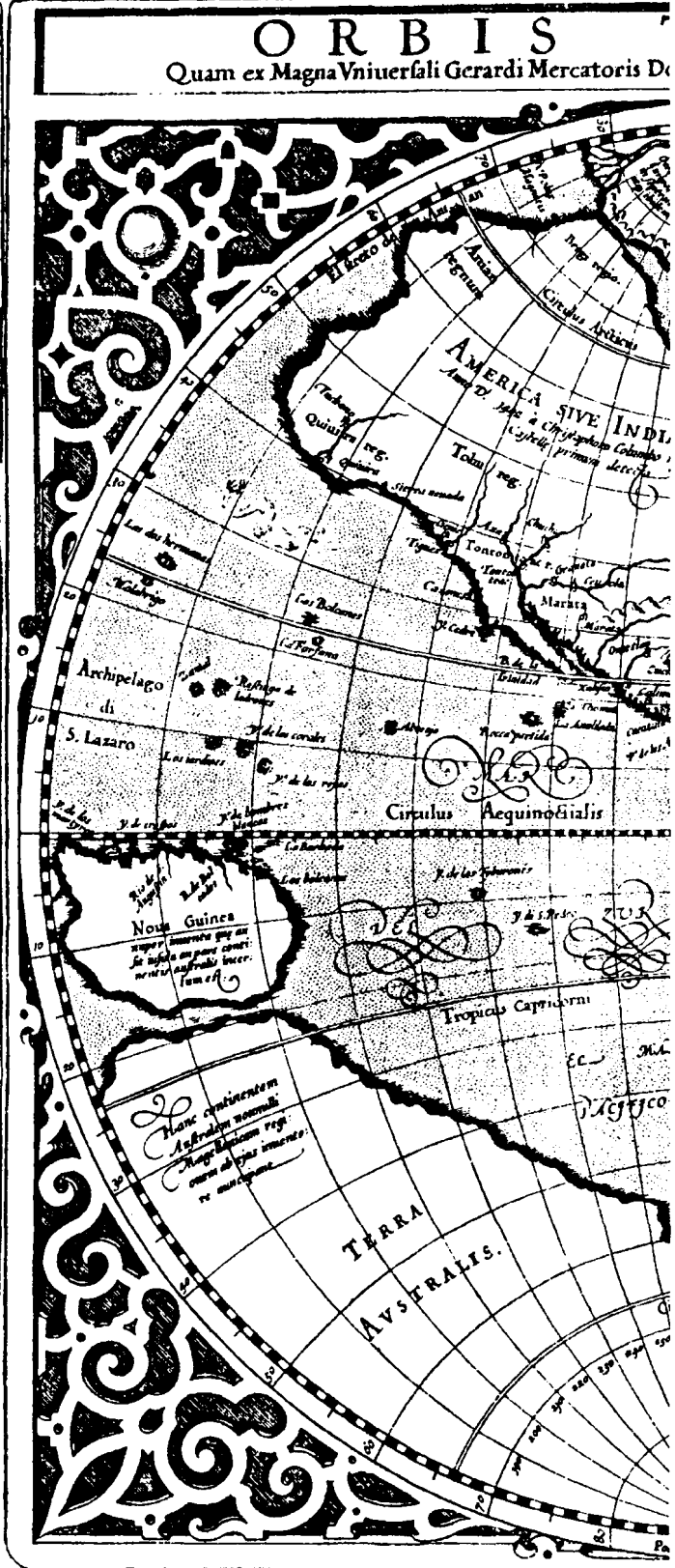
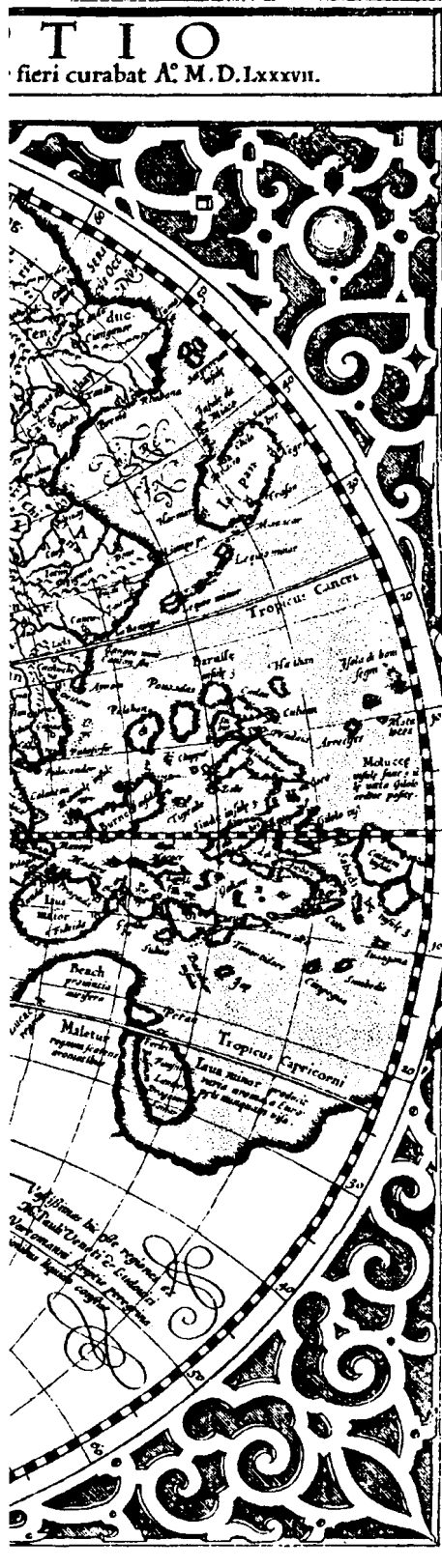
Mercator studied and first worked at Louvain. He drew and engraved his first map (a large map of the Holy Land) in 1537, one year after getting married. In 1552, he moved from Louvain to Duisburg, 60 miles from Antwerp where Ortelius lived. His best-known work is an edition (1578) of Ptolemy's atlas which was reprinted many times over the next 150 years.

(Overleaf) **India Orientalis, by Matthias Quadus, Cologne, 1600.** *The 1543 set of Malabrigo, Las dos Hermanas, Los Volcanes, La Farfana have been copied from the Portuguese, with the same misplacements. The Marianas are here confused for the first time (but not the last time), as the latter are shown as the Archipelago of St. Lazarus which is the name Magellan gave to the Philippines. Some of Pigafetta's islands (Zamal, Humunu, Cenalo, Abarien) have been shifted eastward as well. Japan, it is said in Latin, was called Zipangri by Marco Polo. Actually, he called it Cipango, or something similar, from the Chinese name for Japan in the Middle Ages, Jih-pên-kwé. America is still too close to Japan, etc. (From the Carlos Quirino Collection, Manila, 1970, made available through the Ayala Museum archives)*

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<sup>1</sup> See Chapter 6 of Lloyd A. Brown, *The Story of Maps* (Boston, 1950) for more information about this trade.







**Gerard Mercator of Rupelmonde (1512-1594).** *This mathematician and cartographer did much to elevate the art of map-making to the status of an exact science. (From Brown's Story of Maps, f. p. 174)*

**(Overleaf) Parts of a map of the world by Mercator, 1587.** *The information for the Pacific islands comes from Portuguese maps. What is 'new' is the vast Australian continent. This appears to be the source for Quad's map of 1600. Luzon, the main island of the Philippines is still not shown. (From Nordenskiöld, Plate XLVII)*

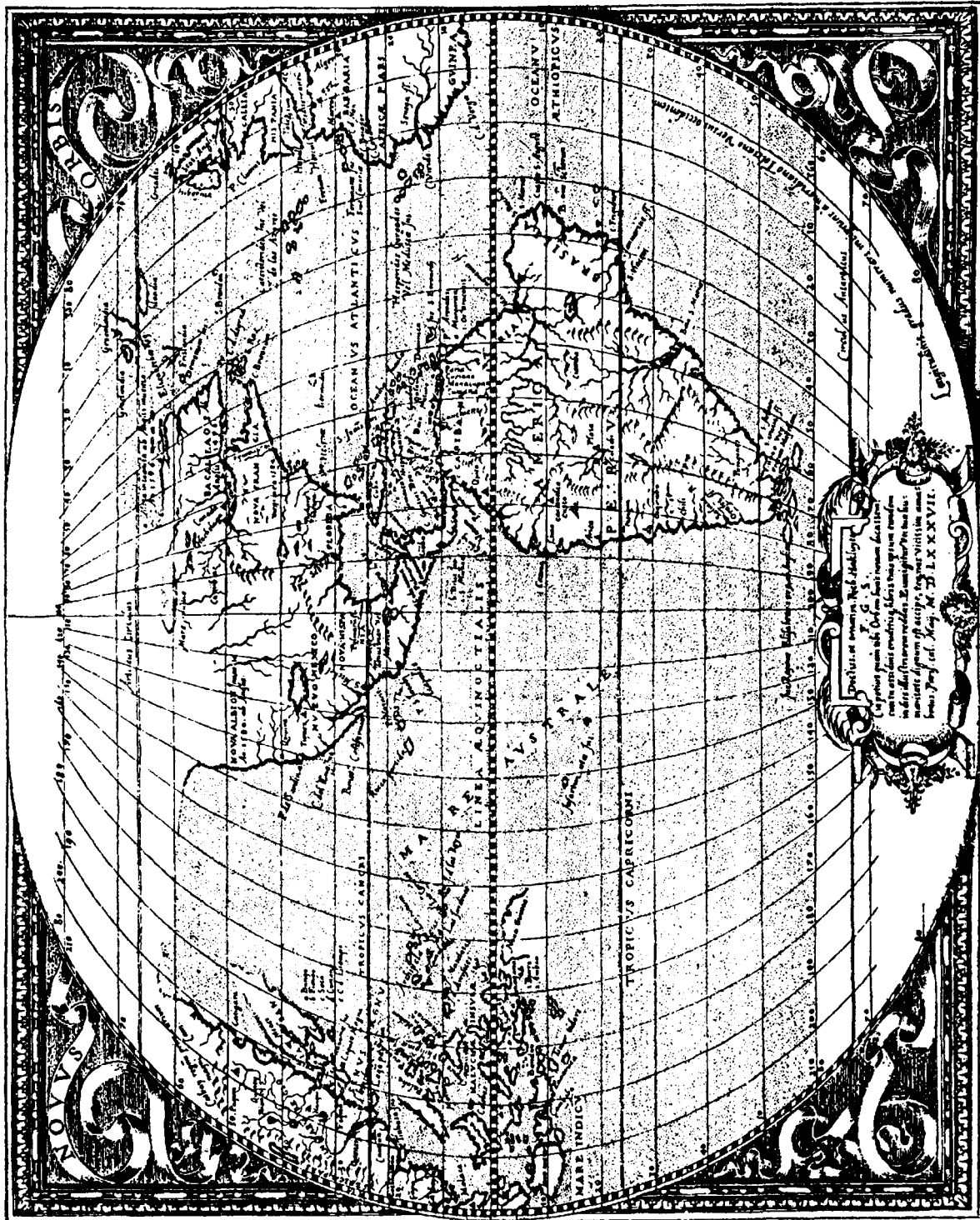


**Abraham Ortelius of Antwerp  
(1527-1598).**

Mercator's competitor and sometimes collaborator in the map trade, was his friend Abraham Ortel or Ortels, better known by his Latin name of **Ortelius**. He was born at Antwerp in 1527 and died there in 1598. His most famous work was the first world atlas, made up of standard-size sheets. It was published at Antwerp by Egidius Coppens Diesth in 1570, and it bore the Latin title: *Theatrum Orbis Terrarum* [Theater of the World]. Most of the plates had been engraved by Francis Hogenberg. The atlas was so popular that a second edition was made three months after the first one. This work was mostly responsible for his nomination as Geographus Regius, or Royal Geographer, by King Philip II in 1573. In spite of this title, the man was merely a collector, compiler and an intelligent publisher, but not a land surveyor, nor a scientific cartographer, nor even an engraver of maps, unlike his friend Mercator, who was all those, in addition to being a map dealer.

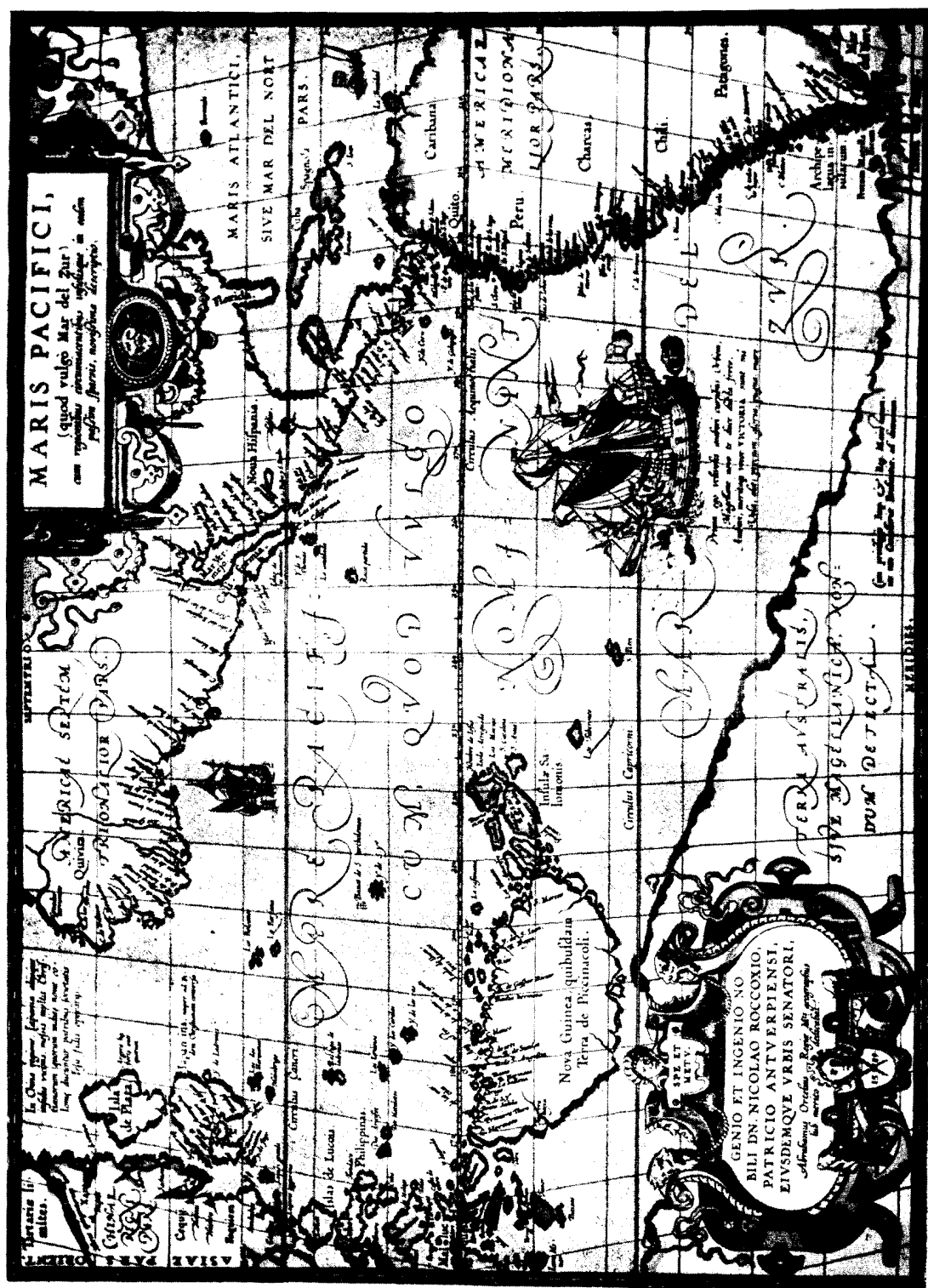
(Overleaf) **Part of the general map of the world by Ortelius, 1570.** *It is taken from the first-ever atlas of the world produced at Antwerp that year, the famous Theatrum Orbis Terrarum, or Theater of the World. Mercator was right when he wrote to congratulate him, saying, among other things: "Your work will, I believe, always remain saleable, whatever may be reprinted by others." The atlas went through many editions in many languages, the last being posthumous, in 1612. (From Nordenskiöld, Plate XL VI)*





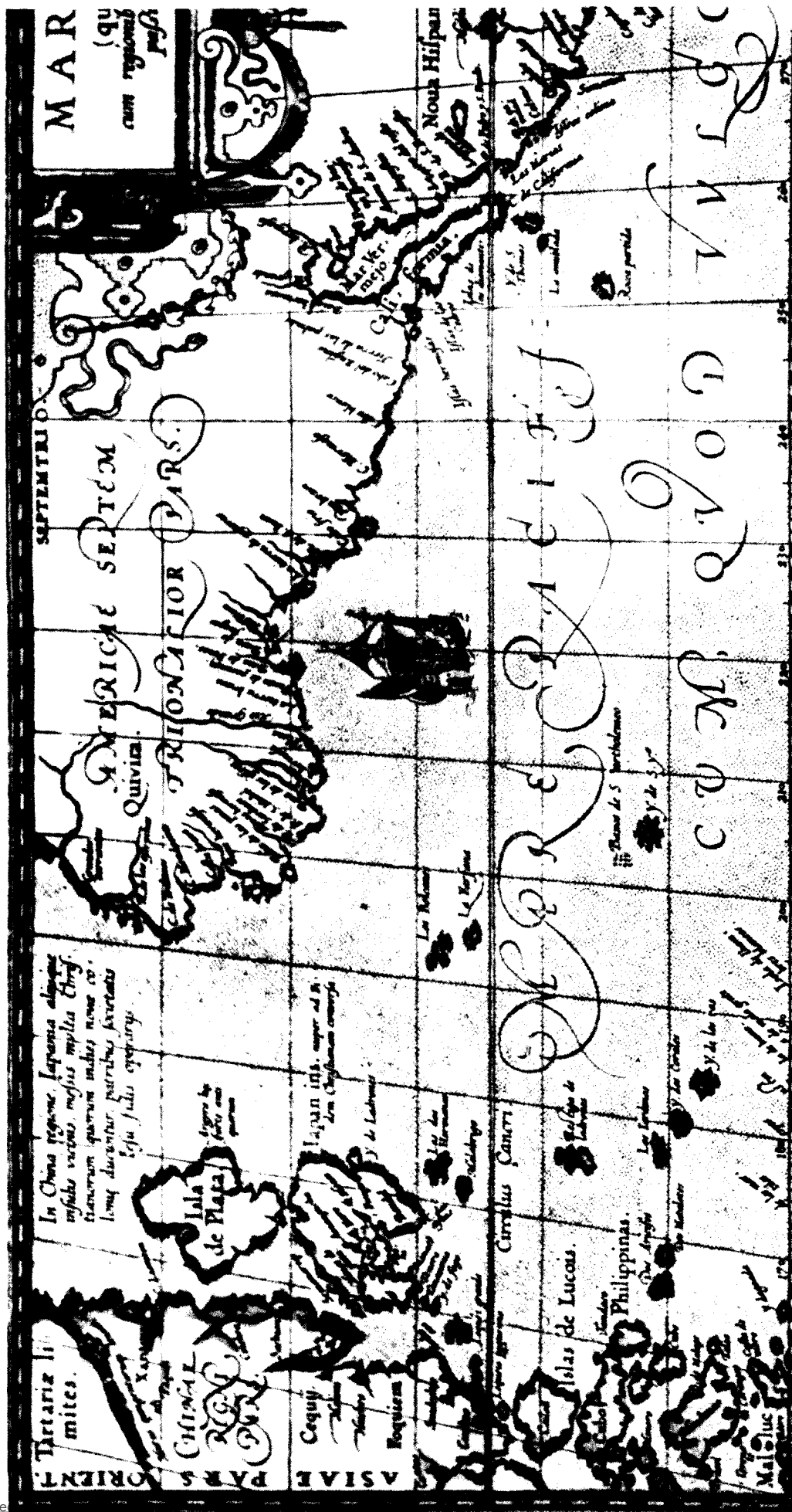
**Hakluyt in 1587 left blank the unexplored parts of the world** when he published this map to illustrate an edition of Peter Martyr's *Decades*. The discoveries of Villalobos are properly placed along the 10° line. (From Nordenskiöld, p. 131)





The Pacific Ocean, alias the South Sea, by Ortelius, 1589. The discoveries of the Solomon Islands by Mendaña have been added to this updated chart of the Pacific. See close-up view on facing page.





(Facing page) **Part of a map by Jodocus Hondius, Amsterdam, 1599.** *At the close of the century, the Dutch had arrived in the Far East and the Dutch maps show their own view of that part of the world. The Philippines and southern Japan have taken a more accurate form. However, the Dutch have invented their own names in New Guinea and duplicated some islands in Micronesia; there are now two Malabrigos, two Matelotes, as well as a new atoll in the eastern Carolines: Mira como vas [Look where you're going!]. Other new islands are: I. Desierta (2 of them), Una Columna, I. de Bidivia(?), Pulo Vilan, I. de Salteadores, and I. de Aves. Volume 2 will cover some of these in due course. (From Linschoten's Navigatio, The Hague, 1599. From Nordenskiöld, p. 97)*



