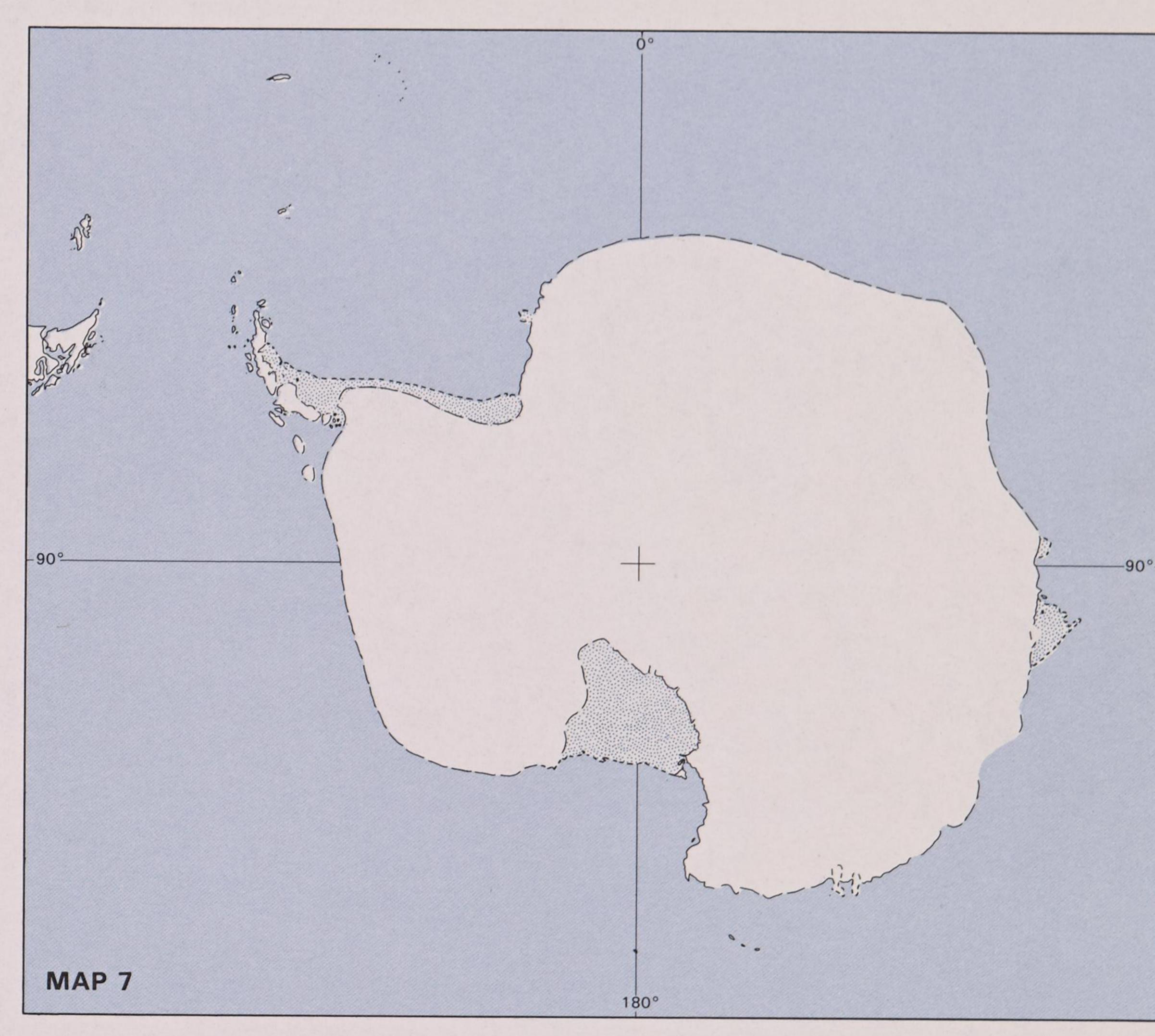
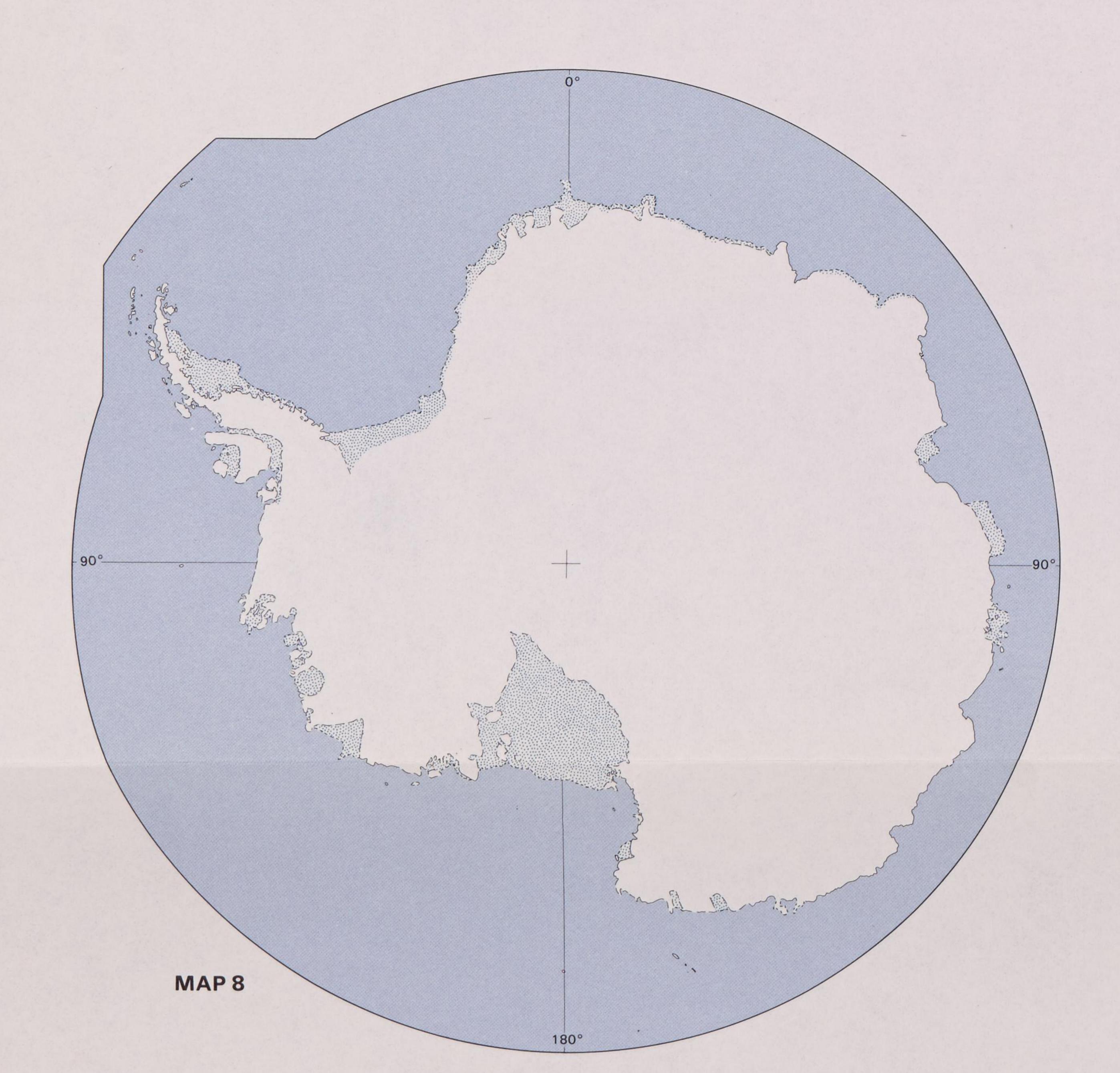


THE CHANGING CONCEPT OF THE ANTARCTIC FROM A.D. 43 TO 1956





The maps of this plate may be said to fall into three general categories: conjectural maps that influenced the course of Antarctic exploration—Nos. 1, 2, 3; maps that show developing knowledge of Antarctica, based on exploration—Nos. 4, 5, 8; and maps that show an erroneous but durable or widely held concept of Antarctica—Nos. 6, 7.

MAP 1. This map was conceived by Pomponius Mela, the first Roman geographer, in A.D. 43. The theory that the earth was divided into five zones had been developed by the Greeks and was still commonly held. Greek philosophers had believed that there must be a habitable landmass south of the equator to balance the known landmass north of it, but their idea that the equator was impassable because of extreme heat inhibited their search for it, and indeed deterred exploration for hundreds of years.

Part of the description of the map (in translation) reads: '... the earth, above, is surrounded on all sides by the sea. It is likewise divided by the sea into halves which are called hemispheres; and from East to West into five zones. The middle zone is hot; the two extreme zones, cold. The remaining two zones are habitable and have comparable temperatures, but at different times of the year. The Antichthones inhabit one of these zones; we, the other. The geography of the former is unknown because of the heat of the intervening zone.'

The map is from *De Situ Orbis, Libri III*, by Pomponius Mela; Samuel Luchtman and Son, Leyden, 1748.

MAP 2. This map was drawn by Oronce Finé in 1531. The great burst of exploration sponsored and encouraged by Prince Henry of Portugal (Henry the Navigator) resulted in numerous discoveries. The equator was crossed by 1475, thus disproving the theory of an impassable zone. In 1520, when

Magellan sailed through the strait subsequently named for him, he saw Tierra del Fuego to the south. Finé's map is one of the first to record the findings of Magellan's voyage, and it seems that Finé thought Tierra del Fuego to be part of a large southern continent. This map is the first on which appears the designation 'Terra Australis.' The inscription on the southern landmass reads, in translation: 'the southern land, newly discovered, but not yet fully known.'

The original of this map is in the collection of the British Library and is reproduced here with the permission of the British Library Board.

MAP 3. This map, first published in 1570, depicts a vast southern continent stretching well into temperate latitudes. The idea that this continent was vast, fertile, and perhaps rich in precious minerals, was widely held for a long time. It was not until Cook's voyage of 1772–1775 that this view was finally discredited.

This map is from *Theatrum Orbis Terrarum*, by A. Ortelius; Antwerp, 1573.

MAP 4. The map from which this tracing was made was drawn by James Clark Ross and published in 1847. It shows the discoveries of Cook, American and British sealers, Bellingshausen, Weddell, Biscoe, Kemp, Balleny, d'Urville, and Ross's own expedition. Ross had attempted to locate the South Magnetic Pole, in support of Gauss's theories. His failure—and the subsequent failure of the British Pagoda expedition—to do so was one of the factors contributing to the lapse of Antarctic exploration for some thirty years. Ross writes: 'It was nevertheless painfully vexatious to behold at an easily accessible distance under other circumstances the range of mountains in which the pole is placed, and to feel how nearly that chief object of our undertaking had been accomplished: and but few can understand the deep feelings

of regret with which I felt myself compelled to abandon the perhaps too ambitious hope I had so long cherished of being permitted to plant the flag of my country on both the magnetic poles of our globe.'

The original map appears in Volume 2 of A Voyage of Discovery and Research in the Southern and Antarctic Regions, During the Years 1839-43, by J. C. Ross; John Murray, London, 1847.

MAP 5. The map from which this tracing was made was prepared by John Murray, the British scientist, and represents his conjecture of the shape of the Antarctic continent. Although no exploratory expeditions had been undertaken since Ross compiled his map (Map 4), new data of a different nature had been obtained during the *Challenger* expedition (see Plate 3 of this folio). Murray says: '... The *Challenger* has dredged up fragments of micaschists, quartzites, sandstones, compact limestones, and earthy shales, which leave little doubt that within the Antarctic Circle there is a mass of continental land quite similar in structure to the other continents.'

The original map appears with John Murray's article, 'The exploration of the Antarctic regions,' in the Scottish Geographical Magazine, Volume 2, p. 527, 1886.

MAP 6. The question of whether a channel connected the Ross and Weddell Seas was a most persistent one. Bruce, Nordenskjöld, Filchner, Ellsworth, and Byrd, among others, sought to answer it. Byrd's expedition of 1933–1935 established with reasonable certainty, by means of aerial reconnaissance, that there is no such strait. The map shown here was published by Wilhelm Filchner, the leader of the *Deutschland* expedition (see Plate 6), who speculates: 'From the Ross Sea to the Weddell Sea stretches a channel filled with blocks of ice, which divides the Antarctic landmass into the continental landmasses East Antarctica with the South Pole near its western edge, and West Antarctica.'

The map and quotation are from Zum Sechsten Erdteil; Die Zweite Deutsche Südpolar-Expedition; Ullstein, Berlin, 1922.

MAP 7. The map shown here is a reduced tracing of the outline of Antarctica as it appears on the 1:12,500,000 'Map of Antarctica compiled and published by the American Geographical Society in 1929, incorporating data from the Wilkins-Hearst Antarctic Expedition of 1928-1929.' This was the first map of Antarctica of which a portion-a very limited portion-was compiled from aerial photographs. Wilkins mistook for channels the glaciers he saw on his flights over the Antarctic Peninsula and hence a group of islands appears on his map where the Peninsula should be. Wilkins writes: 'I noted in my log, "We are now quite certain that Graham Land is not connected with the mainland continent." We felt sure of this before, but at this point it could be distinctly shown in a photograph.'

The quotation is from 'The Wilkins-Hearst Antarctic Expedition, 1928-1929,' *Geographical Review*, Volume 19, 1929.

MAP 8. The map shown here is a reduced tracing of the outline of Antarctica as it appears on a map compiled and published by the American Geographical Society in 1956 at 1:6,000,000. It shows the knowledge of the continent prior to the International Geophysical Year. Great stretches of the coastline between about 15° East clockwise to 50° West had been charted by the expeditions sent to Antarctica by Lars Christensen of Norway. The Norwegian-British-Swedish Expedition had surveyed part of the interior of Queen Maud Land. The British-Australian-New Zealand Expedition had charted parts of Enderby Land, Kemp Coast, and Mac. Roberston Land. The Australians had explored George V Coast. The French had explored the Adélie Coast, the British the Antarctic Peninsula area, and the Americans the interior regions of western Antarctica.