

HANDBOOKS PREPARED UNDER THE DIRECTION OF THE
HISTORICAL SECTION OF THE FOREIGN OFFICE.—Nos. 140
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GALÁPAGOS
AND
JUAN FERNÁNDEZ
ISLANDS

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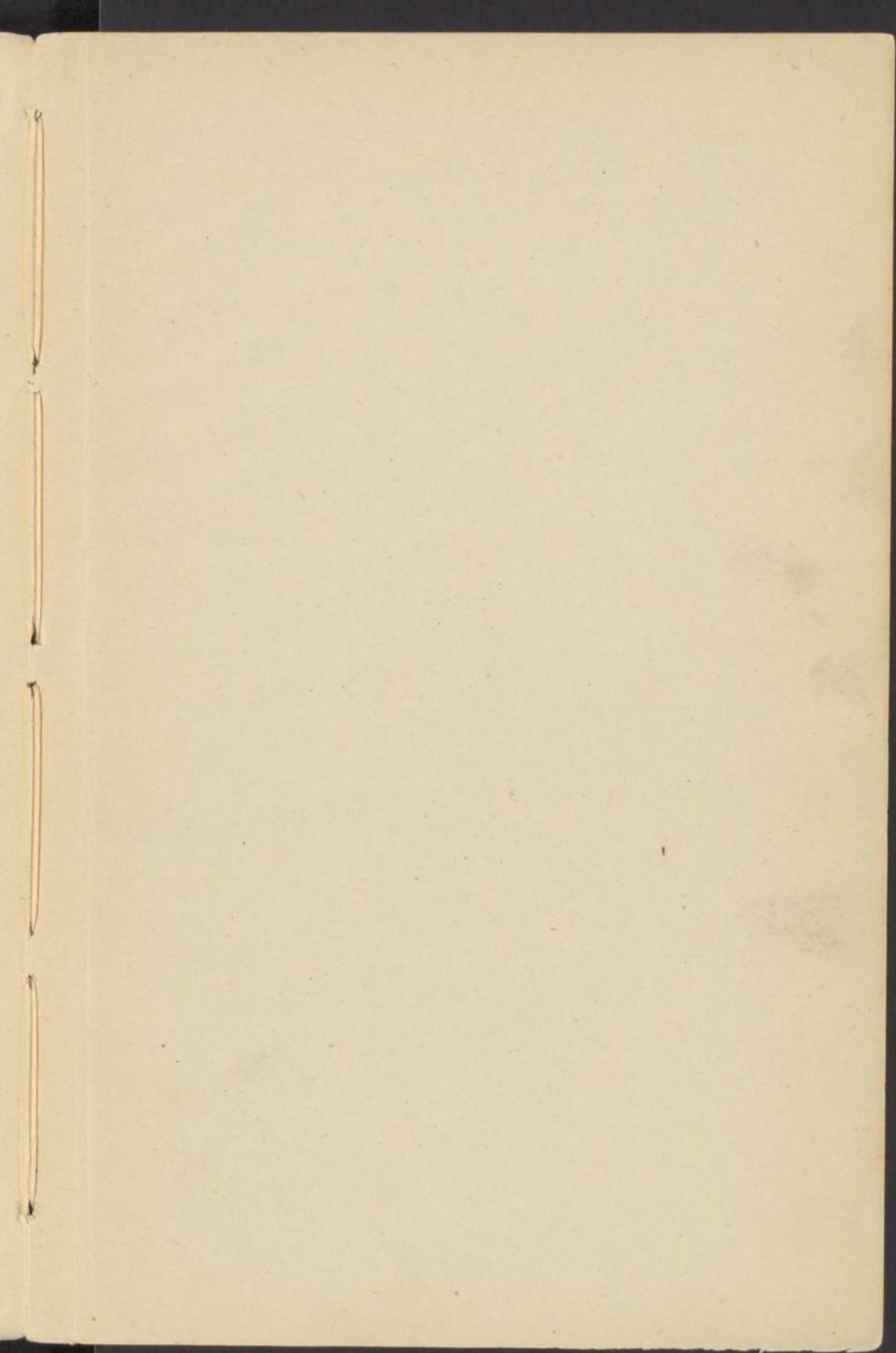
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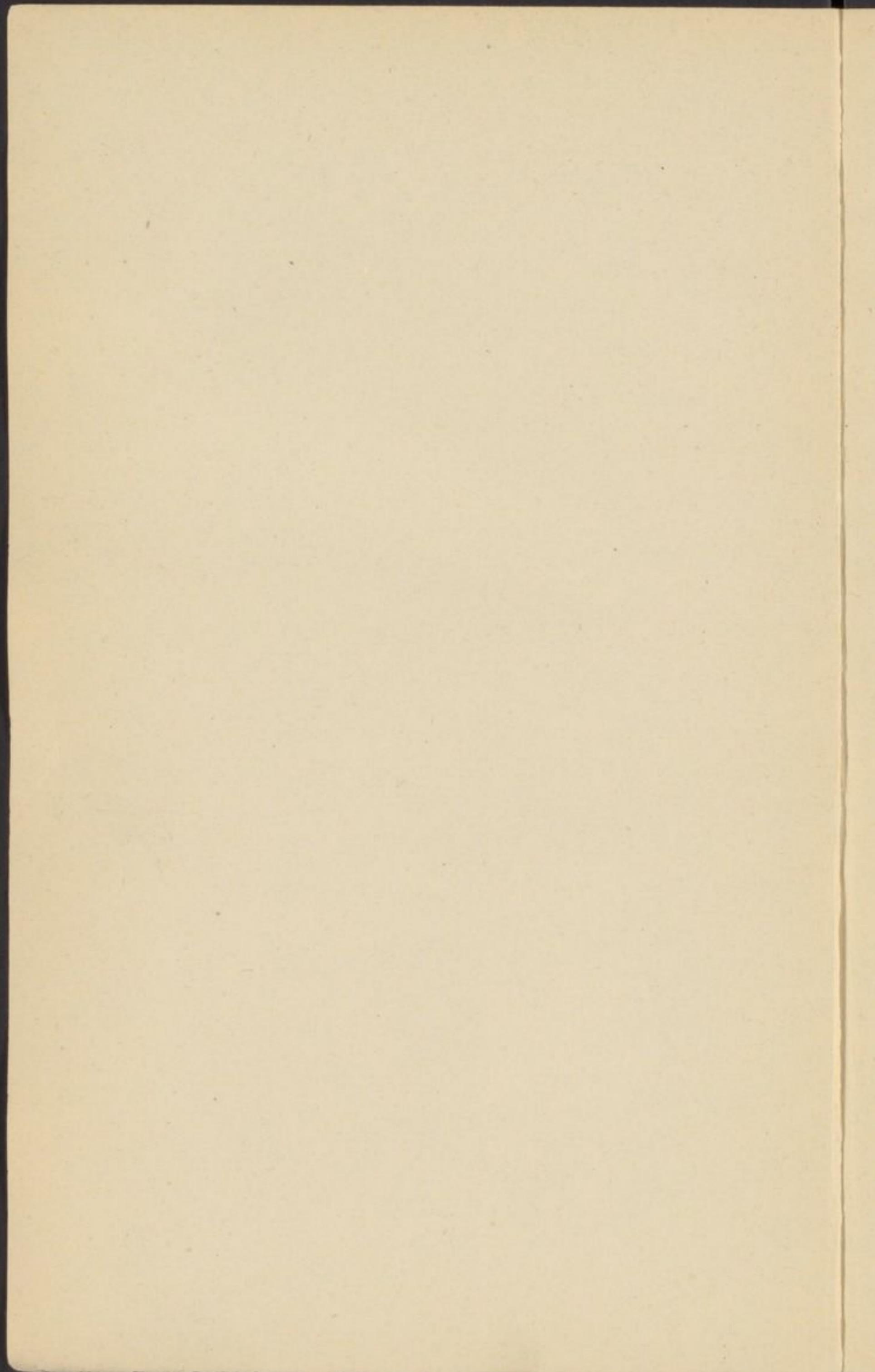


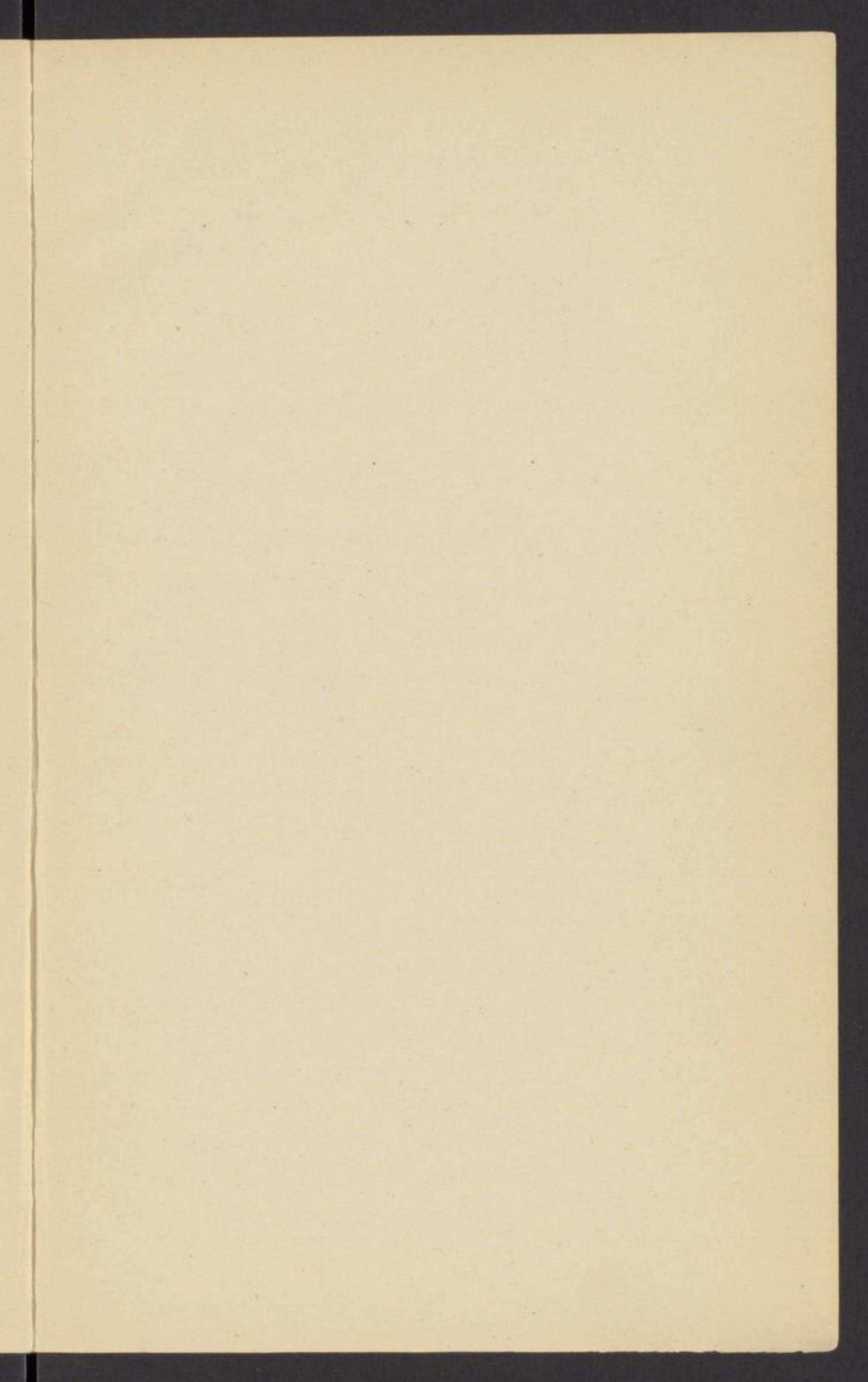


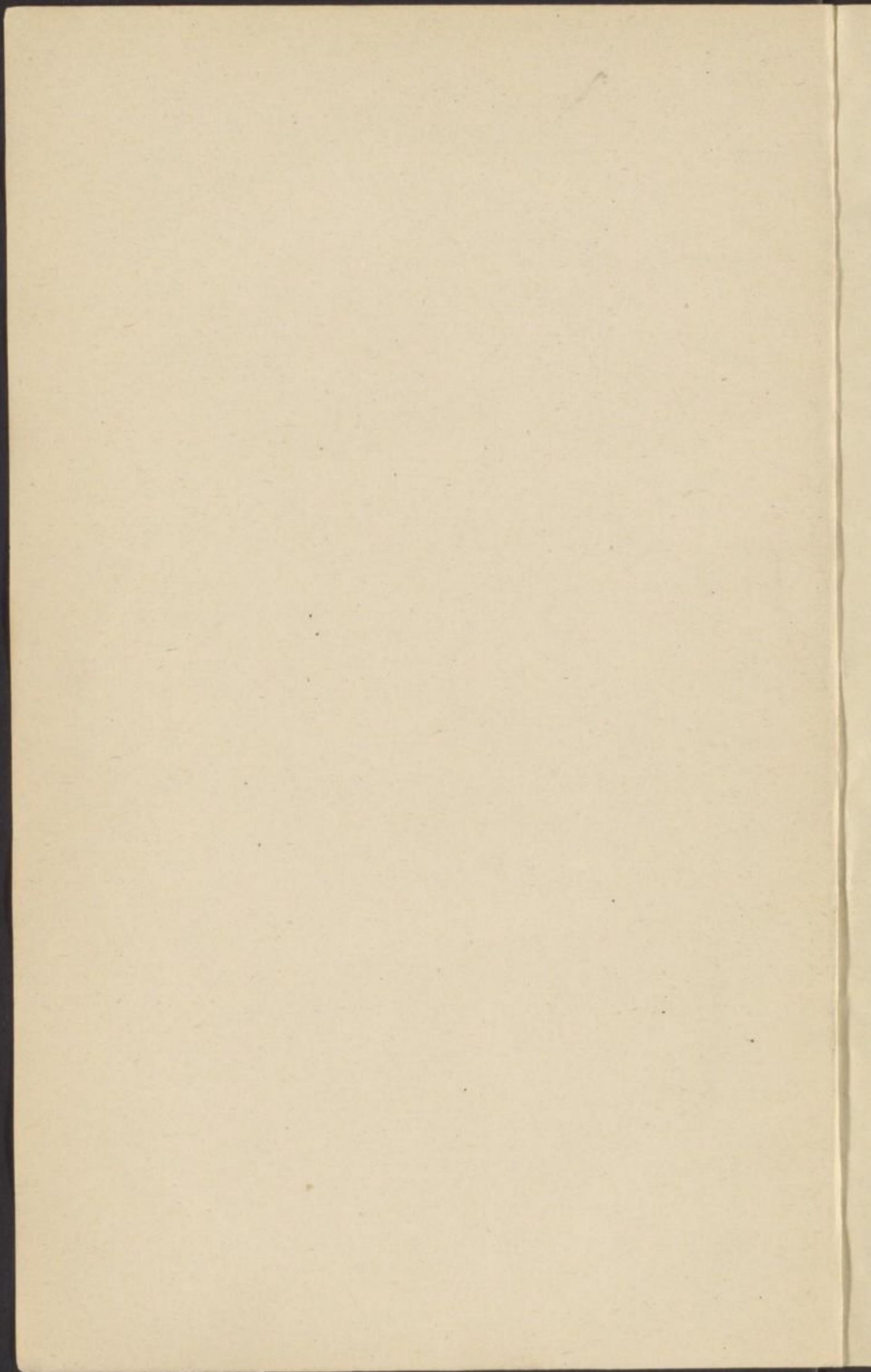
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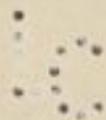
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HANDBOOKS PREPARED UNDER THE DIRECTION OF THE
HISTORICAL SECTION OF THE FOREIGN OFFICE.—No. 140.

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GALÁPAGOS ISLANDS



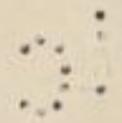
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Editorial Note.

IN the spring of 1917 the Foreign Office, in connection with the preparation which they were making for the work of the Peace Conference, established a special section whose duty it should be to provide the British Delegates to the Peace Conference with information in the most convenient form—geographical, economic, historical, social, religious and political—respecting the different countries, districts, islands, &c., with which they might have to deal. In addition, volumes were prepared on certain general subjects, mostly of an historical nature, concerning which it appeared that a special study would be useful.

The historical information was compiled by trained writers on historical subjects, who (in most cases) gave their services without any remuneration. For the geographical sections valuable assistance was given by the Intelligence Division (Naval Staff) of the Admiralty; and for the economic sections, by the War Trade Intelligence Department, which had been established by the Foreign Office. Of the maps accompanying the series, some were prepared by the above-mentioned department of the Admiralty, but the bulk of them were the work of the Geographical Section of the General Staff (Military Intelligence Division) of the War Office.

Now that the Conference has nearly completed its task, the Foreign Office, in response to numerous enquiries and requests, has decided to issue the books for public use, believing that they will be useful to students of history, politics, economics and foreign affairs, to publicists generally and to business men and travellers. It is hardly necessary to say that some of the subjects dealt with in the series have not in fact come under discussion at the Peace Conference; but, as the books treating of them contain valuable information, it has been thought advisable to include them.

It must be understood that, although the series of volumes was prepared under the authority, and is now issued with the sanction, of the Foreign Office, that Office is not to be regarded as guaranteeing the accuracy of every statement which they contain or as identifying itself with all the opinions expressed in the several volumes; the books were not prepared in the Foreign Office itself, but are in the nature of information provided for the Foreign Office and the British Delegation.

The books are now published, with a few exceptions, substantially as they were issued for the use of the Delegates. No attempt has been made to bring them up to date, for, in the first place, such a process would have entailed a great loss of time and a prohibitive expense; and, in the second, the political and other conditions of a great part of Europe and of the Nearer and Middle East are still unsettled and in such a state of flux that any attempt to describe them would have been incorrect or misleading. The books are therefore to be taken as describing, in general, *ante-bellum* conditions, though in a few cases, where it seemed specially desirable, the account has been brought down to a later date.

G. W. PROTHERO,

General Editor and formerly

January 1920.

Director of the Historical Section.

GALÁPAGOS ISLANDS

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A

I. GEOGRAPHY PHYSICAL AND POLITICAL

(1) POSITION AND EXTENT

THE Galápagos Islands or Colón Archipelago, belonging to the Republic of Ecuador, are a group of fifteen large and about forty smaller islands lying in the Pacific Ocean, 580 miles west of the coast of South America. The limits of the group are $0^{\circ} 38'$ north to $1^{\circ} 27'$ south latitude and $89^{\circ} 16' 30''$ to $91^{\circ} 40' 45''$ west longitude, with the exception of the two isolated islets of Wenman and Culpepper, which lie north-north-east of Albemarle Island, 77 and 97 miles distant respectively. The total land area is about 2,870 square miles. The largest islands are Albemarle or Isabela, 100 miles in length and 28 miles in extreme breadth, with an area of 1,650 square miles; Narborough or Fernandina, 250 square miles; Indefatigable or Santa Cruz, 390 square miles; James or San Salvador, 220 square miles; Chatham or San Cristóbal, 174 square miles; and Charles (King Charles) or Santa María (also called Floreana).

The group was known as the Galápagos (Spanish, *galápagos* = tortoise) before the time of the buccaneers, and, despite a decree of the Ecuadorean Government in 1892 renaming it the Colón Archipelago, so remains. The alternative Spanish names of the islands were given at various times. (See Appendix II, p. 25.)

(2) SURFACE, COASTS, AND WATER-SUPPLY

Surface

The islands consist of little more than a series of volcanic peaks, some isolated, such as the islands of Abingdon or Pinta, Bindloe or Marchena, and Hood or Española, and others joined together by lava-flows to form larger islands. On Albemarle and Chatham

islands there are several volcanic peaks on a continuous ridge, and the lava-flows have spread wide enough to form a good deal of low-lying land. On the other hand, two of the larger islands, namely Indefatigable and Narborough, consist each of a single volcanic peak. Altogether there are about 2,000 craters in the group, but only a few of these are prominent. The highest elevations are on Albemarle Island, 4,700 ft.; Narborough Island, 3,720 ft.; Chatham Island, 2,490 ft.; Indefatigable Island, 2,296 ft.; and Charles Island, 1,780 ft. Albemarle and James Islands alone have active volcanoes at present.

There is little low-lying land, but the slopes on the larger islands are gentle until the interior is reached.

Coasts

The coasts are, for the most part, steep and rocky and fringed with sunken rocks, and off many points there are reefs. The channels between the islands, though not adequately surveyed, seem to be deep and free from dangers. Tagus Cove in Albemarle Island is the only landlocked harbour; its shores are steep and inaccessible. The other anchorages are open bays, but, owing to the continuous fine weather, are safer than they appear on the chart. Most of them have, however, a northerly exposure, and so are open to the heavy rollers that come from the north during the rainy season. The chief anchorages¹ are Wreck Bay on Chatham Island, Post Office Bay on Charles Island, and Conway Bay on Indefatigable Island, but there are many others, and, in the absence of swell, landing is possible in most places.

Water-Supply

The water-supply is poor and uncertain. Springs and streams are scarce; some islands have none, and on others they occur only during the wet season. The few springs that occur near sea-level are all brackish.

¹ See also *infra*, pp. 19-20.

Chatham Island is best supplied with water, and has a stream emptying by a waterfall into Freshwater Bay. There are also perennial springs on Charles Island, James Island, Indefatigable Island, and Albemarle Island.

(3) CLIMATE

The climate is, on the whole, warm and dry, but not excessively hot for a place situated on the Equator. The mean monthly temperature varies from 70° F. (21° C.) to 81° F. (27° C.). February and March are the warmest months, but even then the noon temperature at sea-level is seldom over 85° F. (29.5° C.). July to September is the cool season. The moderate temperatures of the islands are largely due to the cold Humboldt current which washes their shores.

The south-east trade wind blows regularly from May to December or January, but in other months is uncertain, and calms often occur with light day breezes.

The lower parts of the islands are very dry, and get showers only during the period from January to June, or in some years from January to March. This is called the spring season. It is irregular in its occurrence on different islands, and may even miss a year altogether. At higher altitudes the rainy season is from July to November, and the dry season from December to June. In some years there is a deficiency of rain.

(4) SANITARY CONDITIONS

The islands seem to be healthy, but in view of the scanty population no reliable information is available. If life at lower altitudes proved to be trying and enervating, the interior altitudes would probably provide ideal hill stations, the mean temperatures being some 10° F. (5.5 C.) lower than on the sea-coast.

(5) POPULATION

The islands were uninhabited until the arrival of small numbers of settlers in 1831, followed by the

foundation of a small Ecuadorean colony in 1832, and of an Ecuadorean penal settlement (which is said to exist no longer) in the following year. By the middle of last century the colony of 250 free settlers had virtually disappeared, largely owing to murders by the convicts. For many years the only inhabitants were occasional hunters of wild cattle, but recently colonization has begun again, and is now increasing in importance. In 1913 Chatham Island had a population of 675 Ecuadoreans, chiefly engaged in sugar-growing at the settlement of Progreso. Albemarle Island had 115 inhabitants at the settlement of Port Villamil in 1903. Later figures are not obtainable. Charles Island occasionally has a few cattle-hunters. The other islands are uninhabited.

The only two settlements are Progreso on Chatham Island, three miles from Wreck Bay, and Port Villamil on the south of Albemarle Island. Both settlements consist merely of a few huts. There is no garrison.

II. POLITICAL HISTORY

CHRONOLOGICAL SUMMARY

- 1535 The islands discovered by Tomás de Berlanga.
1546 Rediscovery by Rivadeneira. Charter for colonization applied for, but not granted.
1570 Galápagos Islands inserted in atlas of Ortelius.
1684-85 First survey made by Ambrose Cowley.
1709-20 Privateers refresh at the islands.
1793-94 Explored by Captain Colnett and partially surveyed.
1797-1800 Whalers begin to resort to the islands.
1813 Campaign of Capt. Porter (U.S. Navy) against English whalers.
1816 Privateers use the islands in the war between Spain and her colonies.
1822 Captain Hall, of H.M.S. *Conway*, conducts pendulum experiments at Abingdon Island. French explorers.
c. 1825 Discovery of *orchilla* lichen in Charles Island.
1831 Settlers on Charles Island from Guayaquil.
1832 The archipelago formally annexed by the new Republic of Ecuador. More settlers introduced by Villamil. Cattle and farming developed.
1835 H.M.S. *Beagle* visits and surveys the archipelago.
1841 Revolt against officer in charge at Floreana.
1854-83 Suggested occupation of one or more islands by the maritime nations.
1871 Valdizan obtains sole right of collecting *orchilla*.
1875 Captain Cookson's report to the Admiralty. Cobos and Monroy develop sugar-growing and cattle-raising in Chatham Island.
1891 Agassiz makes researches in the islands.
1891-98 United States of America considers possibility of a coaling-station in the archipelago, and protests against its being given to another Power or neutralised.
1906 Alfaro Revolution in Ecuador. Protests against Garcia's suggestion of alienating any part of the national territory.

(1) *Early History*

The existence of these islands was first made known by Tomás de Berlanga, third Bishop of Castilla del Oro, in New Spain, who found them accidentally in March 1535, while voyaging from Panama to Peru. By right of prior discovery, and in accordance with the Papal Bull of 1493 as modified by the Treaty of Tordesillas (1494), they fell within the dominions of the Emperor Charles V in his character of King of Spain. This claim, though not specifically asserted, was not challenged till 1832, when the Republic of Ecuador took formal possession of the archipelago.

When discovered, the islands were without human inhabitants. In a letter¹ written by the Bishop to the Emperor, he described the parched and rock-strewn volcanic soil, the huge tortoises, iguanas, seals, and sea-turtles, the fearless birds, a saline spring, cacti, and other peculiarities, which, even apart from the evidence of the latitude observed by him, identify them as the Galápagos or Tortoise Islands.

In 1540 two ships were despatched from Guatemala to examine the islands, which had again been sighted and reported by a passing vessel; but bad weather prevented the explorers from landing. The second definite discovery was made in 1546, when Diego de Rivadeneira, fleeing northwards from Quilca in a small ship, to escape from Gonzalo Pizarro's insurgent forces, fell in with a group of thirteen islands unknown to his pilot, which, from their geographical position and from the description of the soil and fauna, were clearly identical with those discovered eleven years before. This occurrence was forthwith reported to the Spanish authorities in Guatemala, and by them to the Viceroy of New Spain.²

¹ Printed in the *Coleccion de documentos ineditos relativos a . . . América y Oceania*. See Pacheco, tomo XLI, 1884, pp. 538-544. See also the *Boletin de la Sociedad Geográfica de Madrid*, XXXI, 1891, pp. 352-55.

² *Boletin de la Sociedad Geográfica de Madrid*, XXXI, pp. 356-362.

Francisco de Castellanos, Treasurer of Guatemala, appealed to Prince Philip (afterwards Philip II) for permission to explore and settle the islands,³ but no powers seem to have been granted, and in 1585 the islands were again accidentally met with by one Alonso Niño.⁴ They had, however, already found a place on some maps, of which the earliest appears to have been that of Ortelius (1570). They are mentioned in the "Observations" of Sir Richard Hawkins (son of Sir John), as known in 1593, though he does not seem to have visited them.⁵ They were regarded as barren, and also had the reputation of being enchanted.⁶ There is mention of some Spanish castaways being rescued by a Spanish vessel in 1605,⁷ from "an island" called *de los Galápagos*.

(2) *Buccaneering Period*

In 1684 various parties of buccaneers and filibusters, mostly under British commanders, made use of the islands. William Dampier was one of these.⁸ In 1684 and 1685 the ship *Batchelor's Delight*, commanded by John Cook, visited the islands; and Ambrose Cowley, who was her sailing master, made the first general survey of the islands. Cowley's charts⁹ and journal,¹⁰ the latter of which has been twice printed,¹¹ are preserved in the British Museum. On her second visit, the *Batchelor's Delight* spent three months at the islands, and some of the particulars of this visit were recorded by her surgeon, Lionel Wafer.¹²

³ *Boletin, loc. cit.*, p. 364.

⁴ Cabello de Balboa, M. *Miscellanea Austral.* MS.

⁵ Hawkins, Sir R., *Observations of Sir Richard Hawkins, Knight, in his Voiage into the South Sea*, p. 179.

⁶ Cowley, W. A. *A Journal of the Voyage of W. A. Cowley*, MS., fol. 12.

⁷ Pinelo, *La Vida de Santo Toribio*, p. 417.

⁸ See Knapton, *A Collection of Voyages*, vol. I.

⁹ Sloane MSS., 45.

¹⁰ *Ibid.*, 54.

¹¹ In Knapton's and Hacke's *Collections*.

¹² See Knapton, *A Collection of Voyages*, vol. III.

Abundance of tortoise and iguana meat, fish also, and some fresh water were found; and one of the islands formed a convenient base for careening the ships, storing flour and other necessaries, treating the sick and wounded, and concerting future plans without being spied upon by the Spaniards. A good many Portuguese, Flemish, and French adventurers took part in these and similar proceedings.

On the other hand, Captain Woodes Rogers, a privateer, complained, in 1709, of a lack of wood and water.¹³ Nevertheless, he returned to the islands a second time. Other Englishmen (Clipperton¹⁴ and Shelvocke¹⁵) were there in and about 1720. The islands were also occasionally visited by Spaniards, who gave them Spanish names and made rough charts. There is still some confusion amongst the names given at various times by Englishmen and Spaniards; and more recently by the Ecuadoreans, at the celebration of the four hundredth anniversary of the discovery of America by Columbus. (See Appendix II, p. 25.)

(3) *Whaling Period*

After the buccaneers and their occupation had disappeared, the Galápagos Islands lapsed into oblivion for several decades, and only began to serve the purposes of man again when the South Sea whaling enterprise came into vogue. In 1793-94 they were twice visited and examined by Captain Colnett in the *Rattler*, despatched by a leading firm of whale-ship owners to extend the knowledge necessary for whaling in the South Seas. Colnett made a rough survey of the islands, and described their rocky shores, abundance of seals, convenient anchorages, and vicinity to favourite resorts of the right kind of

¹³ Rogers, Woodes, *A Cruising Voyage, &c.*, pp. 205-211, 261-265.

¹⁴ Betagh, W., *A Voyage Round the World, &c.*, p. 144.

¹⁵ Shelvocke, G., *A Voyage Round the World, &c.*, *passim*.

whales.¹⁶ Another partial and inaccurate survey of the islands was made in 1793 by Lorenzo Vacaro, "master" of the Spanish frigate *Santa Gertrudiz*.¹⁷ Vancouver, in H.M.S. *Discovery*, sighted some of the islands in 1795, but did not come to anchor.

In 1797, 1800, 1813, 1819, and 1825 there were violent volcanic outbreaks, which did not, however, prevent British and North American ships from frequenting the islands to obtain wood and water. The eruption of 1800 was witnessed by Amasa Delano, an American shipmaster,¹⁸ that of 1819 by Captain Fanning,¹⁹ and that of 1825 by B. Morrell, junior.²⁰ To this time belongs the story of the wild Irishman, Patrick Watkins, who for five years lived alone on Charles Island (Floreana), made money out of the visiting whalers, and escaped with it to Guayaquil.²¹

In 1813, during the war between England and the United States, Captain Porter, of the United States frigate *Essex*, made the islands an American base, and compelled twelve English whale-ships to surrender. Porter witnessed and described an eruption of the volcanoes in Albemarle and Charles Islands.²²

During the war between Spain and her colonies the islands were used by privateers that preyed on Spanish commerce. When, however, the independence of the colonies was established, a change was not immediately

¹⁶ Colnett, J., *A Voyage to the South Atlantic, &c.*, pp. 47-61, 137-161.

¹⁷ Jiménez de la Espada, in the *Boletín de la Sociedad Geográfica de Madrid*, XXXI, pp. 398-402, and Fuentes, M. A., *Memorias de los Virreyes*, vol. VI.

¹⁸ Delano, A., *Narrative*.

¹⁹ Fanning, E., *Voyages*, pp. 407-410.

²⁰ Morrell, B., *A Narrative of Four Voyages to the South Sea . . . &c.*

²¹ Du Petit-Thouars, A., *Voyage autour du Monde sur la frégate La Vénus . . . &c. Relation*, vol. II. pp. 279-323; Dominy de Rienzi, *Océanie*, vol. III; and Coulter, J., *Adventures in the Pacific*.

²² Porter, David, *Journal of a Cruise made to the Pacific Ocean . . . &c.*, vol. II.

made in the political status of the Galápagos, and they continued for a time to be *terra nullius*.

(4) *Annexation by Ecuador*

During the next few years several distinguished persons visited the islands. These visitors included Captain Basil Hall, of H.M.S. *Conway*, who conducted pendulum experiments at Abingdon Island (1822); Captain Lord Byron, of H.M.S. *Blonde* (1825); and Captain Duperrey, of the French frigate *Coquille*. But the epoch-making event in the history of the archipelago was the discovery, probably by a Spaniard, of *orchilla* or dyers' moss (*Rocella tinctoria*) on some of the islands, especially Charles Island. On this circumstance becoming known the Republic of Ecuador decided to annex the group. A politico-commercial syndicate was formed, with a certain Don José Villamil for its president, and to this syndicate a concession or charter was granted. Villamil was a native of Louisiana, who had migrated to South America, and greatly distinguished himself in the war between Ecuador and Peru, from which he emerged with the rank of General. He had been chiefly instrumental in bringing the islands and the *orchilla* enterprise to the notice of the Ministry, and, in return, was appointed Governor of the new colony, with ample powers for administering its internal affairs. A preliminary exploring party was despatched from Guayaquil in October 1831, and small batches of settlers followed. On February 12, 1832, Colonel Ignacio Hernández, representing the Government of Ecuador, took formal possession of the Galápagos Group: and at Charles Island, thenceforward called Floreana, after President Flores, the administration was handed over to Villamil and another representative, Señor Lorenzo Bark.²³

²³ Villavicencio, M., *Geografía de la República del Ecuador*, pp. 475-481; and Vidal Gormaz, in the *Boletín de la Sociedad Geográfica de Madrid*, XXXI, p. 156.

(5) *Development of Resources*

General Villamil, having persuaded a few younger men of good family in Guayaquil to join him, set vigorously to work to develop the resources of the islands. He imported cattle, horses, swine, asses, goats, cats, and fowls, some of which were distributed from Floreana to other islands. Household vegetables were cultivated, and small plantations of sugar-cane, coffee, and various sub-tropical fruits established. The products were sold in considerable quantities to the whaling captains; and it was probably at their instance that the settlers took to killing off the tortoises ruthlessly for the sake of their oil. In the course of a few years, the giant tortoise became extinct at Floreana and on some of the other islands.

Unfortunately the Governor did not reside at Floreana continuously; and the settlers, a heterogeneous medley of characters largely recruited from unsuitable classes and occupations, proved wanting in perseverance and industry. Meantime, the Ecuadorean Government found it convenient to rid themselves of political opponents and military delinquents by relegating them to Floreana, under a pretext of furnishing the original settlers with the needed labourers; and it was not long before these malcontents were supplemented by a number of common criminals, so that the island became by degrees a loosely administered convict settlement.

In 1835 H.M.S *Beagle*, commanded by Captain Robert FitzRoy, with Charles Darwin on board as surgeon-naturalist, paid a prolonged visit to the islands. The journals of both these officers are full of interesting matter bearing on the physical features of the islands, and their natural products; but contain little history. There were about 200 persons domiciled at Charles Island when the *Beagle* was there, and a few others were met with collecting tortoise oil at James Island. One Englishman and one Ecuadorean were then at Chatham Island supplying fresh provisions to

whalers.²⁴ In 1838 Captain Aubert Du Petit-Thouars, of the French frigate *La Vénus*, visited several of the islands, and wrote a good account of them.²⁵

(6) *Domestic Troubles and Decay*

By that time Villamil's "colonists," including convicts, had been scattered over several islands, and in 1837 the General resigned his Governorship. He was succeeded by a Colonel José Williams, whose violent character provoked a revolt (1841), ending in his flight. In 1842 Villamil returned to adjust matters, but found few occupants and no established authority. In 1845, there were still about forty persons in the islands, living a life of independence, but of penury and squalor; and by 1849 no more than twenty-five remained. In 1852 a band of convicts, led by a man named Briones, on hearing that the Flores Government had been overthrown by a revolution, murdered General Mena (who represented Villamil at Chatham Island) and piratically seized a whale-ship, in which they proceeded to Guayaquil, only, however, to be arrested, tried, condemned to death, and shot by the rebel Government there.

Depravity and insubordination seem to have prevailed for some time after these events, and the population became gradually dispersed. In 1853 some few survivors of the convict settlers still remained; but they were so completely left to their own resources that, by 1868, they had dwindled to less than a dozen individuals living in a state of semi-savagery.

In 1875 the number of whale-ships visiting the group did not exceed fifteen in a year, whereas, in the

²⁴ FitzRoy, R., *Narrative of the Surveying Voyages of H.M.S. Adventure and Beagle . . . &c.*, vol. II, pp. 485-505; and Darwin, C., *Journal of Researches . . . &c.*, vol. III, pp. 453-478.

²⁵ Aubert Du Petit-Thouars, A., *Voyage autour du monde sur la frégate La Vénus . . . &c. Relation*, vol. II, pp. 279-323.

early part of the century, as many as fifty used to resort to it annually. The whaling industry in those seas has since almost died out; and the profit that used to be made out of it by settlers in the Galápagos Islands has correspondingly fallen away.

(7) *Partial Revival*

The cattle, originally imported by Villamil in 1832, were supplemented and partly redistributed by him in 1845; they multiplied greatly, so that their number at Floreana alone, in 1858, was estimated at 4,000, all more or less wild. There were many others at Chatham and Albemarle Islands; and asses, goats, and pigs on some of the rest, notably a fine breed of half-wild asses at Indefatigable, and of wild pigs at James Island.

Ships of war of various nations continued to call at intervals; and scientific parties busied themselves in collecting information and specimens in the group. The reports of their proceedings afford some information about the social, political, and commercial conditions they found there. Among such visitors were H.M.S. *Herald* and *Pandora* in 1846,²⁶ the *Eugénie*²⁷ (Swedish) in 1852, H.M.S. *Zealous* in 1870, and *Chameleon* a year later. Professor Louis Agassiz was there in the U.S. ship *Hassler* on a scientific mission in 1872; Commander Cookson, of H.M.S. *Petrel*, submitted a full and instructive report to the Admiralty in 1875; and Dr. Theodor Wolf, who visited four of the islands in that year, did the same for the Government of Ecuador.²⁸ Dr. Habel, a naturalist, collected birds in the archipelago in 1868; and finally, Professor Alexander Agassiz examined it

²⁶ Seemann, B., *Narrative of the Voyage of H.M.S. Herald* . . . &c., chap. IV, 1853.

²⁷ Salvin, O., *On the Avifauna of the Galápagos Islands*, in *Transactions of the Zoological Society*, vol. IX, 1877, p. 426.

²⁸ Wolf, Dr. T., *Apuntes sobre el Clima de las islas Galápagos* . . . &c., *passim*, 1879.

during his visit in the U.S. steam-vessel *Albatross* in 1891.²⁹

A company was formed in 1858 called the "Orchillera Company," to work the *orchilla*. Among its most active promoters were Sres. José Monroy and Manuel J. Cobos, who reserved to themselves the right to colonize Chatham Island. *Orchilla* was still fitfully exported in 1868, as well as small quantities of salted fish, some tortoise oil, and a few hides. But the company was dissolved in 1870, and its concession as regards *orchilla* was taken up by Sr. José de Valdizan, who then removed to Floreana and established a homestead and a food plantation for the requirements of his collectors. By 1878³⁰ Valdizan's enterprise was in a fair way to flourish; but in July of that year the proprietor was murdered by one of his labourers, and Floreana was again abandoned.

In 1893 Sr. Antonio Gil went to Floreana and planted a new settlement there—the third since Valamil's attempt—but it only survived until 1897, when the founder decided to abandon it in favour of Albarmarle Island, now called Isabela. There he created a village, called Santo Tomás; and a population of some 200 persons, living in 60 or 70 huts, gathered round him to work the deposits of sulphur in the island. They are reported to have prospered fairly well, down to 1907 or 1908 at least; and the wild cattle at Isabela are understood to be still Sr. Gil's property. The sulphur was shipped to Guayaquil from a cove named Puerto Chico, situated opposite Brattle Island.³¹

Sres. Cobos and Monroy, in the meanwhile, laid the foundation of their settlement at Chatham Island with a roll of thirty-seven persons. Sugar-cane, maize, root crops, and tropical fruits were planted, and *corrals* established for dealing with the cattle. By 1879 Cobos

²⁹ Agassiz, A., in the *Boletín de la Sociedad Geográfica de Madrid*, vol. XXIII, 1892.

³⁰ One account says 1875.

³¹ *El Ecuador: Guía comercial, agrícola e industrial, &c.*, Guayaquil, 1909.

had decided to settle permanently, and in 1881 considerable plantings of cane were undertaken. Five years later a factory with steam power was erected. Coffee plants were subsequently introduced, and by 1889 the community numbered 287 persons. The officer charged with the civil administration of the islands was then Don Pedro Jaramillo, who was assisted by a secretary, an inspector of police, a schoolmaster, and a light-keeper.

Their authority was supported by a military commandant, four non-commissioned officers and fifty men of the National Guard³²; but Sr. Cobos, being the employer of all the rest of the population, was popularly regarded as "King" of the Galápagos. By 1893 his establishment had increased to 334, and the settlement was deserving of its name, "Progreso." Water had been laid on at considerable cost, and a Decauville railway had been constructed. But on January 15, 1904, a revolt took place among the workers; Cobos himself and the Government Commissioner, Sr. Leonardo Reina, were assassinated; and the insurgents, to the number of 78, fled from the island in a vessel they seized, and reached the Colombian coast. The next Commissioner appointed was Sr. Juan Piño, who found 245 inhabitants when he took over the administration.³³ Their number has fluctuated between that and a little over 300 down to the time when the European War began.

³² *Diario oficial*, Quito, October 21, 1889, No. 151.

³³ Monograph at end of *El Ecuador: Guia comercial, agricola e industrial*, 1909.

III. SOCIAL AND POLITICAL CONDITIONS

(1) *Religious*

BISHOP Tomás de Berlanga has recorded that, when he accidentally discovered some of the Galápagos Islands in 1535, he used the occasion to celebrate Mass on shore there.³⁴ From that date the history of religious worship in the Archipelago is a complete blank until March 1832, when Dr. Eugenio Ortiz, who was the chaplain accompanying the annexation party from Guayaquil, celebrated Mass "for the second time in 300 years," it is said, at a spot in the isle of Floreana they named *El Asilo de la Paz*.³⁵

Since that time Floreana has been thrice colonized and thrice deserted; and it does not appear that the population settled there or at Chatham Island has ever provided itself with a church or a chaplain. At the smaller settlement, called Santo Tomás, in Isabela (Albemarle) Island, a church was built³⁶; but no particulars are available.

Roman Catholicism is nominally professed by the mass of settlers; but Ecuadorean law permits the practice of any form of worship not contrary to its institutions or moral principles, though several restrictions are, or were, in effect imposed. The islands, as a group, are included in the diocese of Guayaquil.

(2) *Political*

The government of the island colony since 1885 has consisted of an administrator, who was expected to apply the common laws of Ecuador; the islands having

³⁴ Pacheco, J., *Coleccion de documentos ineditos . . . &c.*, XLI, Madrid, 1884.

³⁵ *El Ecuador: Guia comercial, agricola e industrial*, 1909.

³⁶ *Ibid.*

been constituted, in 1832, a dependency (subsequently proclaimed a territorial part and parcel) of the province named Guayas, of which Guayaquil is the capital. In 1889 the administrator's authority was supported by five officers and fifty men of the National Guard, and an Inspector of Police.³⁷

In 1885 the National Congress passed an Act to exempt the colonists from taxation of all kinds, relieved them entirely from military service, fixed the area to be granted to settlers for cultivation free of rent, and created the post of "Jefe Territorial" or Resident Commissioner. A residence for this officer, with the nucleus of an administrative building, was erected at Chatham Island in the following year; and a leading light for shipping was installed at Puerto Chico.³⁸ By 1913 these buildings were in a state of decay beyond the possibility of repair. There were no quarters for the police, who consisted of twelve constables and an inspector, so that they had to be billeted in various private lodgings, to the detriment of their efficiency and independence. No police cells were provided by the Government; but two had been constructed of galvanised iron sheets, lent by the sugar factory for the purpose. The light-keeper's quarters were also in a ruinous condition; and the Commissioner's report for that year is devoted to lamentations that nothing was done for the colony by the Government of the Republic, and no regular or expeditious communications had been established, either with the mainland or with the other islands.

A sum of \$24,000, nevertheless, stood on the Estimates of 1912 for expenditure on Public Work in the group, officially named since 1892 "El Archipiélago de Colón." The report (No. 24), which reads like an appeal *ad misericordiam*, is signed by Sr. Caesar Aray Santos as Commissioner, and addressed to the Provincial Governor of Guayas.

³⁷ *Diario oficial*, Quito, October 21, 1889, No. 151.

³⁸ *El Ecuador: Guía comercial, agrícola e industrial*, 1909.

(3) *Educational*

Particulars of education in the Galápagos Islands are exceedingly few, because little or nothing has been done by the Republic or the Province to promote or assist such trifling efforts as have been made by the settlers and the factory at Progreso. The list of officers on the establishment of the islands in 1889 included a schoolmaster; but the list of buildings contains no mention of a school. In the latest available Report of the Commissioner,³⁹ printed as an Appendix to the Minister of Public Education's Annual Return for 1913, it is stated that a notable advance had been made, inasmuch as there then existed a mixed school, conducted at the Government's expense, at which 24 children, more or less, counting both sexes, attended daily "with real satisfaction to their parents." The school was situated, however, on land belonging to the factory at Progreso, and was hygienically defective. It also lacked a proper outfit. No other particulars of the school are supplied.

The Report (which in other respects is by no means an optimistic one) states, however, that the vicious element formerly so notorious among the settlers had almost disappeared; that in 1913 the existing population was a peaceful and industrious community, engaged in cultivating the soil; and that their social and material improvement now seemed assured. No figures or statistics are quoted in the Report.

³⁹ *Informe Anual del Ministro de Instrucción Pública, Quito, 1913.*

IV. ECONOMIC CONDITIONS

(A) MEANS OF COMMUNICATION

(1) *Tracks*

THERE are no roads, properly speaking, in the islands, but there is a track in Chatham Island from Wreck Bay to Progreso—a distance of 3 miles. Tracks have also been made in Charles Island.

(2) *Railways*

There is a light railway, 7 kilometres in length, from Progreso to the quarries, used for bringing sugar-cane to the mills at Progreso.

(3) *Ports*

There are no harbours, but there are various open bays where, owing to the continuous fine weather, anchorage is usually safe. Several of these might be transformed into good harbours by the construction of moles, but labour and most of the material necessary would have to be imported.

Chatham Island offers several good anchorages, of which *Wreck Bay* is the most important, because it is the port of the sugar factory at Progreso. The bay is about three-quarters of a mile wide at the entrance and extends for about half a mile; there is secure anchorage in 6 fathoms. A pier 150 yds. long extends in a north-westerly direction, and there is a storehouse at the head of the cove, where the track to Progreso begins. Fresh water has been brought in pipes to the end of the pier from a lake in the high part of the island. *Stephens Bay*, locally known as *Porto Grande*, is a larger anchorage with an excellent

landing place. There are other anchorages at *Terrapin Road* and at *Freshwater Bay*; at the latter place there is a good supply of fresh water, but the watering place cannot always be approached on account of the surf. This bay and Wreck Bay are the only watering places for shipping in the islands that can be depended upon.

Charles (Floreana) Island has one of the best anchorages in the archipelago, at *Post Office Bay*. The bay is of moderate depth and easy of access, but no fresh water is to be had. There is also good anchorage at *Black Beach Bay*.

In Indefatigable Island there is anchorage at *Conway Bay* in from 5 to 7 fathoms, with good landing for boats; there are also anchorages at *Baquedano Bay* and *Puerto Nuñez*. Water is obtainable at the last.

The best anchorage on James Island is in *James Bay*, where vessels can anchor in from 7 to 14 fathoms.

In Albemarle Island there is anchorage off the settlement at *Port Villamil* in $5\frac{1}{2}$ to $7\frac{1}{2}$ fathoms. There is, however, a heavy swell, and though a small mole has been constructed, landing is difficult, as access to it is obstructed by hidden stones near the surface of the water. *Tagus Cove* is a snug anchorage formed by an old crater, the width at the entrance being nearly half a mile. There are other anchorages at *Iguana Cove*, *Webb Cove*, *Isabel Bay*, and *Bahia Cartago*.

There is a fair anchorage off Abingdon Island, and landing can be effected a mile and a half to the northward of the anchorage. In Hood Island there is an anchorage on the north-east side, at *Gardner Bay*.

Free ports have been established in the islands, but it is provided that foreign merchandise transported from these ports to ports on the mainland shall be subject to customs duties, wharfage, &c., as if it had never entered the Galápagos Islands.

Trade with Guayaquil is carried on from Wreck Bay by a sailing schooner which comes to the island nominally once a month.

(4) *Wireless Communications*

In an article which appeared in *La Prensa* at Havana on February 8, 1918, it was stated that a wireless installation existed on Charles Island; and in September of the same year it was announced that the Marconi Company proposed, with the consent of the Government of Ecuador, to establish a wireless station on one of the islands.

(B) INDUSTRY

(1) *Labour*

It is provided by law that three-quarters of the colonists must be Ecuadoreans, and the executive is prohibited from contracting with foreign nations or foreigners for the colonization of these islands.

(2) *Agriculture and Products*

Though agriculture is the principal source of wealth in the islands, there are comparatively few people engaged in it, and only a small proportion of the land suitable for the purpose has been cultivated or cleared. Charles Island, which was the first to be settled, is now practically abandoned, and the settlements are in ruins, but it offers more advantages for farming than most of the other islands, as it has been partially cleared, and some tracks have been made.

The islands are fertile, producing fruit and vegetables, timber, and most sorts of grain except rice. Sugar-cane, oranges, and lemons ripen all the year round, and two crops of maize, coffee, and potatoes are obtained annually. Cotton is also found.

A product which was formerly important was *orchilla* or dyers' moss. Before the discovery of aniline dyes, this formed the basis for the manufacture of certain colours, and its collection was a profitable commercial undertaking.

A number of cattle, goats, horses, and swine were

landed on these islands by General Villamil, and have greatly increased. The number of cattle in Albemarle Island alone in 1911 was stated to be about 40,000.

Formerly the principal product of the islands was the terrapin or land tortoise. These huge tortoises at one time swarmed over the islands; some specimens were over 5 ft. long and weighed as much as 600 lb. The tortoises were easy to capture, and they supplied ships with fresh meat. Oil was also extracted from them. Cheaper substitutes derived from petroleum have taken the place of this oil, but the number of the tortoises had already been vastly diminished.

(3) *Fisheries*

The fishing grounds of the group have been famous for years. Cod are numerous in the vicinity, and clawless lobsters and oysters are found on the rocks surrounding the islands. There appears to be a considerable future for these fisheries. The sea is calm, tempests and fogs are almost unknown, the situation is near the markets of South America, and the good climate and fertility of the islands would assure the rapid development of fishing settlements. The large local deposits of salt could be utilized for an industry in salted fish.

Seals were formerly very numerous in the waters of the archipelago. In 1914 a company engaged in the fishing industry in Southern Chile petitioned the Government of Ecuador for permission to fish for whales in the waters of the Galápagos Islands.

(4) *Minerals*

The sugar factory at Progreso is stated to be worked by *coal* mined in the island, but this coal is said to be of no use for steam vessels.

Lime is obtained from the rocks round Wreck Bay, in Chatham Island, and is exported to Guayaquil.

There are large deposits of *salt*. There are also a number of *sulphur* deposits, as might be expected in

islands of volcanic formation; some investigators believe that these may prove to be a considerable source of wealth. In 1909 a sulphur mine was being worked on Albemarle Island.

(5) *Manufactures*

A sugar factory, using steam power, was established in 1886⁴⁰ at Progreso, on Chatham Island. Most of the inhabitants are employed in the factory, and the annual output is said to be as much as 3,000,000 lb.⁴¹ The annual production of coffee on the Progreso plantation is about 300,000 lb., and of alcohol about 14,400 litres. The production of vinegar is another industry which employs a few people.

(C) COMMERCE

Hides, sugar, rum, vegetables, and fruit are exported to Guayaquil. No figures are available. There is also an export of cattle. It is stated that in 1914 the Chilean Ecuadorean Society contracted with Sr. Antonio Gil⁴² for 5,000 head of cattle, to be delivered at Port Villamil for shipment to Chile.

⁴⁰ See above, p. 15.

⁴¹ The *Bulletin of the Pan-American Union* for November 1918 contains the latest information about the Progreso settlement.

⁴² See above, p. 14.

APPENDIX

I

DISTANCES FROM FLOREANA (CHARLES ISLAND)¹

(Galápagos Islands)

From.				Under steam.	Under sail.
				Miles.	Miles.
Plymouth	..	..	.	10,700	11,200
Valparaiso	..	..	..	2,130	2,130
Coquimbo	..	..	..	2,010	2,010
Callao	..	..	.	1,010	1,010
Guayaquil	..	..	..	660	660
Panama	..	..	..	910	980
San Francisco	..	..	..	2,850	3,180
Vancouver (island)	..	..	..	3,550	3,900
Honolulu	..	..	..	4,200	5,200
Suva, Fiji	..	..	..	5,400	6,540
Tahiti ..	..	..	..	3,570	5,100
Sydney, N.S.W. ..	..	..	..	6,910	7,250

¹ From a memorandum by the (late) Hydrographer, Sir Frederic Evans, February 10, 1879.

II

NAMES GIVEN TO THE GROUP AND TO INDIVIDUAL ISLANDS AT DIFFERENT TIMES

Collectively: Las Islas de los Galápagos; The Galápagos Islands; Islas Encantadas
or Enchanted Islands; Archipiélago de Colón.

Cowley's List in general use, 1684-85.	Old Spanish Names.	Other Stray Names.	Later List.	Torres and Vacaro's List.	Ecuadorean Names, 1892.
Chatham.	Santa María de la Aguada.	Grande.	—	—	San Cristóbal.
Hood.	Nuestra Señora de la Esperanza.	—	—	—	Española.
King Charles.	Mascarín.	San Marcos.	Floreana.	—	Sta. María.
Albemarle.	Santa Isabel.	—	—	Sta. Gertrudiz.	Isabela.
Narborough.	—	—	—	"	Fernandina.
James.	San Bernabe.	Carenero.	Olmedo.	Gil.	San Salvador.
Indefatigable.	Santiago.	Norfolk or Porter's Isle.	Chálvez or San Clemente.	Váldez.	Santa Cruz.
Barrington.	—	—	—	—	Santa Fé.
Abingdon.	—	—	—	—	Pinta.
Bindloe.	Diablo.	Quitasueño?	—	—	Marchena.
Tower.	Salud.	Eures.	Quitasueño?	Quitasueño?	Genovesa.
Culpepper.	—	Los dos	—	Guerra.	—
Wenman.	—	Hermanos.	—	Núñez Gaona.	—
Jervis.	—	—	—	—	Rabida.
Duncan.	—	—	—	—	Pinzón.
Brattle.	—	—	La Tortuga.	—	—
Crossman.	Tabaco.	—	—	—	—

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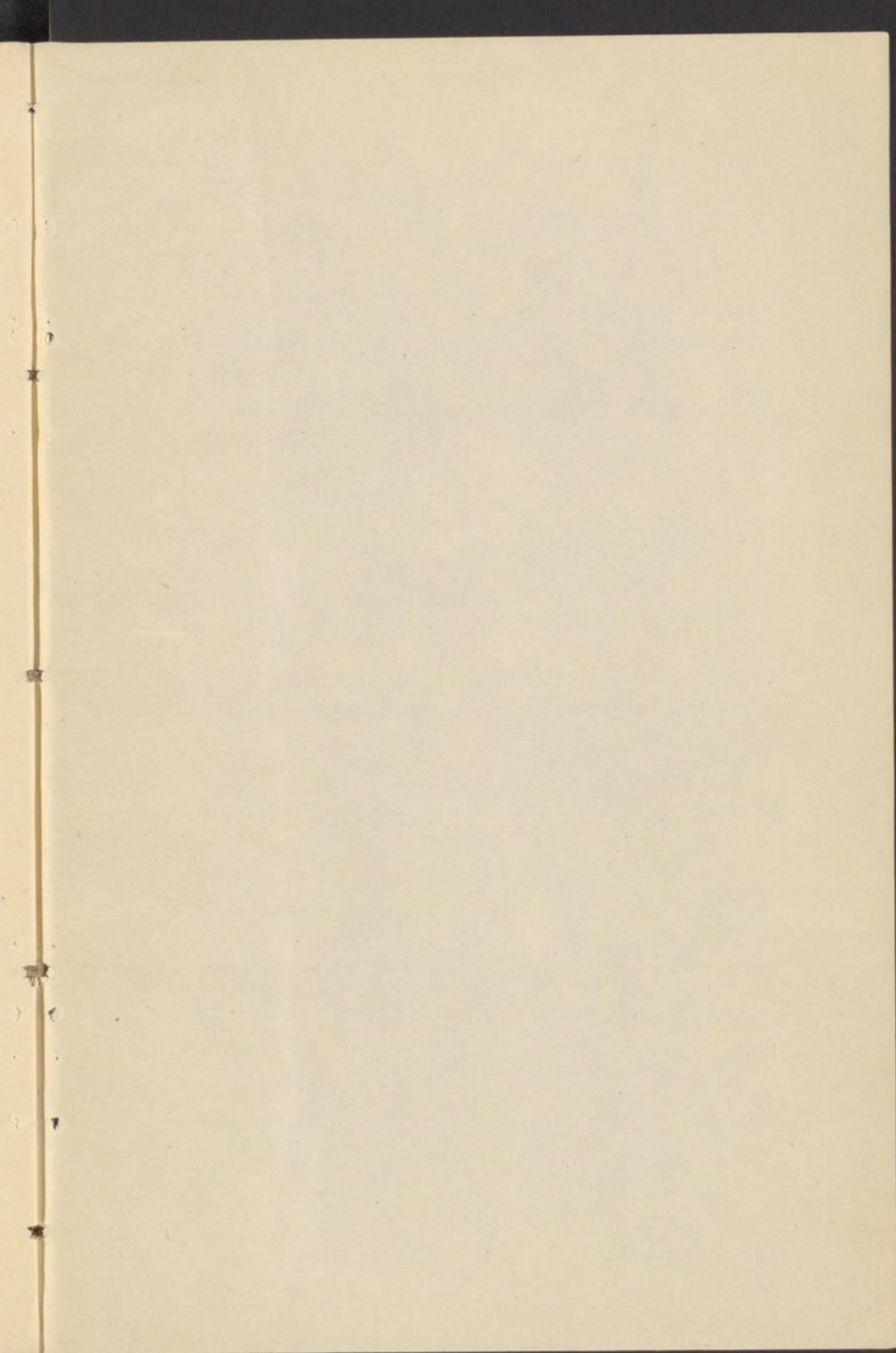
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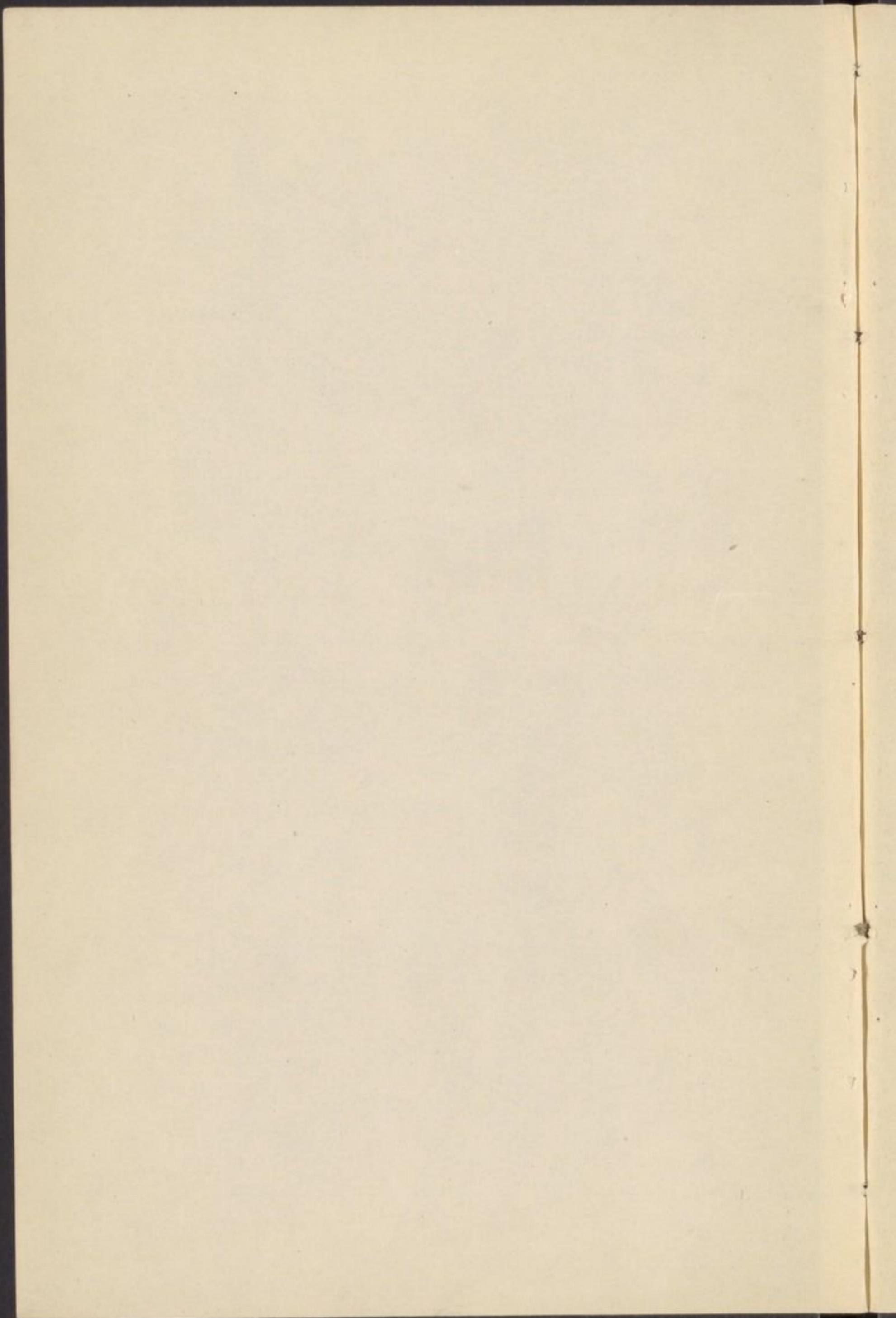
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MAPS

The Intelligence Division of the Naval Staff have issued a map of the Galápagos Islands, on the scale of 1:1,500,000, in connexion with this series.





JUAN FERNÁNDEZ

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I. GEOGRAPHY PHYSICAL AND POLITICAL

(1) POSITION AND CHARACTER

THE islands of Juan Fernández are three in number: Más-á-tierra (Spanish, 'landward'), about 400 statute miles west by south of Valparaiso; Santa Clara or Goat Island, adjoining the former; and Más-á-fuera (Spanish, 'farther out' or 'seaward'), about another 100 miles farther west. All three islands lie between $33^{\circ} 30'$ and $33^{\circ} 50'$ south latitude, the first two about 79° and the third about 81° west longitude.

Más-á-tierra is of irregular form, $12\frac{1}{2}$ miles in length from east to west, and $3\frac{2}{3}$ miles across at its widest part, and possesses several small bays, though only one is suitable for shipping. The middle and eastern portions of the island consist of ridges and crags alternating with valleys, which were formerly thickly wooded, but have been much denuded by forest fires and improvident felling. The highest point, El Yunque ('the Anvil'), attains a height of 3,005 ft. The western section is less elevated, and presents an almost barren appearance; there are no craters or other visible traces of recent volcanic action. As the island is high and watered almost daily by showers, there are many small streams, some of which never fail.

Más-á-fuera covers a slightly larger area than Más-á-tierra, being 9 miles long by 6 miles broad, and lies more nearly north-west and south-east. It consists of a huge massif of rugged eruptive rock, scored on its eastern face by nine *quebradas* or ravines, most of which allow of no passage to the summit. Each ravine has its watercourse. The highest elevation is the

Cerro de los Inocentes (6,560 ft.). The shores are generally inaccessible.

Santa Clara, which is separated from the southwestern extremity of Más-á-tierra by a strait one mile wide, is a small, desolate, rocky island between four and five miles in circumference, and about 1,230 ft. in height. It is almost treeless, but here and there is sufficient pasture to maintain a thousand goats. There is no permanent fresh water on it.

(2) CLIMATE

The climate of the islands is, speaking generally, temperate, healthy, breezy, and agreeable, though humid. The conditions vary considerably with the elevation; this is especially the case at Más-á-fuera, where fogs are frequent above 2,200 ft. and in the winter season frosts and snow occur.

The results of six years' observations at Más-á-tierra showed that the mean summer temperature was 67° F. (19½° C.), the mean winter temperature 54° F. (12° C.), the absolute maximum 93° F. (34° C.), and the absolute minimum 39° F. (4° C.). The wettest months were from May to August, and the mean annual rainfall was 40.5 in., while the monthly mean humidity varied between 74 and 81 per cent.

The prevailing winds are from the south and southeast in the dry season, and from the south-west in the rainy months. Gales from the north occur in winter.

(3) SANITARY CONDITIONS

There are no endemic diseases, and the general health of the population is good.

(4) RACE AND LANGUAGE

With the exception of a few individuals of European birth, the people are of the Hispano-American type and character generally met with on the South American

continent, from which the majority of the settlers and labourers are migrants. The only language in general use is a more or less corrupt Spanish.

(5) POPULATION

The whole population, which in 1916 numbered 300, is concentrated in the settlement at Cumberland Bay in Más-á-tierra, named San Juan Bautista. At Más-á-fuera there have rarely been more than fourteen persons resident at any one time ; usually none at all.

II. POLITICAL HISTORY

CHRONOLOGICAL SUMMARY

- 1563-74. Islands discovered by Juan Fernández.
- 1616-23. Visited by two Dutch expeditions.
1664. Visited by *Fr.* Diego de Rosales.
- 1665-1750. Terra nullius. Visits of Anson's squadron, Juan and Ulloa, Veas.
1749. Islands formally declared a Spanish possession.
1750. Más-á-tierra occupied by a Spanish garrison and colonists.
1751. Settlement overwhelmed by earthquake wave.
- 1752-1814. Settlement restored; it becomes a place of banishment for malefactors and political rebels.
1814. Más-á-tierra temporarily abandoned.
1817. Renewed evacuation of Más-á-tierra.
1819. Chile declared an independent republic. The islands pass into its possession.
1822. Más-á-tierra again abandoned.
1829. Penal settlement established.
1835. Another earthquake wave causes serious damage.
1837. Chilean garrison capitulates to Peruvio-Bolivian squadron. Más-á-tierra evacuated and exiles dispersed.
1842. Incorporated in province of Valparaiso.
1847. Lease granted to Pascual Cuevas.
1851. Rebels banished to Más-á-tierra; revolt of *déportés*.
1854. Final abandonment of penal settlements at Más-á-tierra.
1867. Lease granted to F. Flindt, a North American, but transferred to the brothers Fernández López.
1877. Lease granted to Alfred de Rodt.
1893. Lobster cannery established by Fonck Bros.
1895. Islands visited and examined by Chilean Colonization Commission.
1909. Penal settlement formed at Más-á-fuera.
1913. Penal settlement abandoned.
1915. German cruiser *Dresden* sunk in Cumberland Bay.
1916. The islands botanically explored by Dr. Skottsberg, of Upsala.

(1) DISCOVERY AND EARLY SETTLEMENTS

The islands of Juan Fernández were discovered by Juan Fernández, a Spanish or Portuguese navigator, when making the passage from Callao to Valparaiso,¹ at a date which can no longer be stated with exactitude, but certainly not earlier than 1563 nor later than 1574. The islands were then uninhabited, and no traces of any bygone human occupation have been found on them. Early Spanish writers allege that the discoverer seized the opportunity to land three or four goats at Más-á-tierra, and that he applied (through the President of Chile) for a patent of proprietorship.² The Jesuit Diego de Rosales, who wrote between 1660 and 1674, affirms³ that Juan Fernández himself was the first founder of a settlement at Más-á-tierra, and that he and certain Spaniards who accompanied him introduced seventy 'Indians' from the continent, brought the *nuclei* of future flocks and herds, built houses of timber and thatch, and made considerable profits by exporting sea-lions' oil⁴ and salted fish to Peru and the Chilean ports. But this early enterprise did not prove a lasting success; for the island was abandoned between 1580 and 1585, and Juan Fernández died at Quillota before 1604. He made over his island to a friend (not a relative) of his own name, one Juan Fernández Rebolledo. This person made no use of the gift; but, having in after life joined the Jesuit Order, he endowed the College of the Order at Santiago de Chile with all his worldly goods, including the island of Más-á-tierra. After his death certain 'other Spaniards went there to exploit the timber and the fishery, for a while; after which it lay deserted during many years'.⁵

¹ A. de Ulloa, *Relación histórica*, II, iv.

² Some accounts relate that a patent was granted him; others declare specifically that none was issued. It is probable that the negation represents the truth; and that the contrary, where stated, is merely an assumption.

³ D. de Rosales, *Historia de Chile*, vol. i, p. 285.

⁴ Elephant seals' oil.

⁵ Rosales, *op. cit.*

Meanwhile, the goats multiplied prodigiously, and pigs also thrived; for, when the Dutch explorers Schouten and Le Maire put in there in 1616, they noticed animals of both these kinds, and others which they could not identify at a distance.¹ These voyagers were the first of a long series of callers to make Más-á-tierra a port of refreshment on the voyage from Europe round Cape Horn. Other Hollanders, of the 'Nassau Fleet' under Jacques l'Hermite, visited the islands in 1623; and the historians of that enterprise were the first to mention sandalwood as one of the natural products of the island. Six of their men were permitted to remain in the island, of their own choice,² and thus became the pioneers of many small parties and single individuals who, from time to time, essayed to eke out an existence at Más-á-tierra. Popularly-known examples of these were 'William' (a Mosquito Coast native) from 1681 to 1684, and Alexander Selcraig (Selkirk) from 1704 to 1709.

In 1664 Diego de Rosales, then filling the office of Provincial of his Order at Santiago de Chile, paid a visit to Más-á-tierra with a view to the establishment of a settlement there 'in order that Religion might profit by whatever usufruct the island can yield';³ but no settlement resulted. A few sealers and fishermen seem next to have paid occasional visits to the island; and between the years 1679 and 1687 it was a favourite resort of buccaneers. These were followed by letter-of-marque ships, both English and French, in the early years of the eighteenth century. During the inroads made on Spanish commerce by these adventurers, several languid efforts were put forth by the authorities at Lima to counteract the utility of the islands of Juan Fernández to the enemy; but it was not until reports of Commodore Anson's sojourn there in 1741 were made public, and the benefits that his scurvy-stricken crews received from its resources became known, that the

¹ W. Schouten, *Journael*.

² A. Decker, *Journael*.

³ D. de Rosales, *op. cit.*

Court of Madrid was at length roused to take active measures for permanently occupying and fortifying the place. Up to this time it had been a 'no-man's-land', but on May 7, 1749, King Fernando VI signed a decree proclaiming Spanish sovereignty over the 'island' of Juan Fernández, and directed that it should be immediately colonized and placed in a state of efficient defence.¹

(2) PERIOD OF SPANISH SOVEREIGNTY (1749-1819)

The execution of the King's command was entrusted by the Viceroy to Don Domingo Ortiz de Rosas, the President of Chile, and the necessary measures were executed in 1750. But in the following May the settlement was overwhelmed by an earthquake wave, most of the buildings being destroyed; and the Governor, his family, and thirty-five other persons, were swept away and drowned. Steps were taken to relieve the survivors and rebuild the barrack and dwellings; and a new Governor was installed.²

From that time forward until 1817 the colony passed through many vicissitudes under the rule of fifteen successive Spanish Governors. From its original status of a protected industrial Crown Colony it was transformed into a military garrison; and from a mere military garrison it degenerated into a State prison of grossly irregular type, a condition it maintained with more or less variation until 1814. By 1810 the abuses, insubordination, and crime that prevailed at the island had become so notorious that murmurings against its continuance as a penal settlement were heard in Chile, where revolutionary sentiment was already gathering force. In 1814 *Más-á-tierra* was, in fact, abandoned, and the garrison and convicts were withdrawn to the mainland, Don Manuel de Santa María being its last governor under the Spanish Crown.

Chile was by this time involved in internal strife, and rebellion against the mother country was imminent.

¹ B. Vicuña Mackenna, *Juan Fernández*, p. 268.

² *Ibid.*

The battle of Rancagua, in which the royalists were victorious, was fought on October 2, 1814; and shortly afterwards, fifty selected 'patriots', that is, revolutionaries, were summarily deported to Más-á-tierra in circumstances of great hardship. Many others were similarly exiled during the two succeeding years. But the situation was reversed in 1817 by the success of the 'patriot' army at Chacabuco, which, among its more momentous consequences, led to the renewed evacuation of the island early in the same year.

Between the years 1797 and 1805, Más-á-fuera was much frequented by British and North American sealers. According to one shipmaster, not less than three million skins of the Antarctic fur-seal were carried from thence to Canton in those seven years; and it is even said that a million pelts once went to London in a single ship.¹ These proceedings were abruptly stopped in 1805 by the Viceroy Avilés of Peru, who dispatched the *Peruano* frigate to capture or expel the foreign sealing gangs.

Más-á-tierra, about this time and for several decades afterwards, was a good deal frequented by whalers, whose ships made it a port of call for water, wood, and refreshment. Sandalwood was also exploited at the island in those days, especially during the administration of Manuel Martinez in 1836, who made the sale of it one of the perquisites of his office.²

(3) FIRST PERIOD OF CHILEAN DOMINION (1819-67)

Chile proclaimed its independence in 1819, and the islands of Juan Fernández passed *ipso facto* into the possession of the Republic. Two years had scarcely elapsed (during which two Chileans and a Spaniard formed the entire population of Más-á-tierra) when the new Government resolved to make use of the island as a place of confinement for its political opponents,

¹ A. Delano, *Narrative*, p. 196, &c. Also E. Fanning, *Voyages*, pp. 108-18; and B. Morrell, *Narrative of four voyages*.

² Vicuña Mackenna, *op. cit.*, pp. 569-70.

especially the followers of Carrera. The exiles were sent thither in June 1821, in the custody of Lieut.-Col. Palacios, and were treated with harshness. In three months' time Palacios was deposed and put under arrest by his own garrison. Anarchy, bloodshed, piracy, and escapes followed this event, with the result that by February 1822 the island was again abandoned, and the experiment ended.¹

Little happened in the islands after this until 1829, when the Government of the Republic again decided to use them as a penal settlement; but on this occasion an extraordinary scheme was adopted, by which the colony and convicts were farmed out to a private person, under what was termed a 'contract of lease', the lessee being described as *el empresario*, or contractor. The conditions were approved by Congress on January 30, and the document was signed four weeks later. The contractor was José Joaquín Larrain, of Santiago. He was bound to maintain one hundred prisoners in the island, or more if required, and was to receive a *real* per head per diem. He was granted the monopoly of their labour and exclusive right of trading in the island; and he was allowed to depute any person of his choice to reside there in his stead, and carry out the duties required of him under the contract. A guard of twenty-five soldiers under an officer was provided by the Government.² The inevitable result of this strange arrangement was a mutiny of the garrison, who put the deputy governor under arrest (Larrain himself not being in the island), seized the first whale-ship that called, and compelled the master to convey them, to the number of 13 soldiers, 104 convicts, and 7 women, to Copiapó and other ports on the mainland. Larrain revisited the island in 1832, but was soon back again at Valparaiso, where he was assassinated.

In 1833 a new Constitution was proclaimed in Chile,³

¹ Vicuña Mackenna, *op. cit.*, chap. xxii.

² The terms of the contract and the military orders of 1832 are printed in Vicuña Mackenna's work, pp. 492 *et seq.*

³ Cf. Appendix, p. 58.

under which the islands of Juan Fernández became definitely incorporated in the province of Santiago. But in 1842 they were joined to Valparaiso, when this province was reconstituted by an act of Congress, and from 1851 they were administered as a sub-delegation thereof.¹ This arrangement was confirmed in 1888² and still holds good.

The next three governors of the islands were Antonio Hurtado (1833-4), Colonel Latappiat (1834-5), and an English adventurer named Sutcliffe. The first of these proved a failure through ineptitude; each of the others brought about an insurrection among the guards and prisoners, and was deposed, after causing several illegal executions. Sutcliffe had the further misfortune to lose all his effects in 1835 through another inundation by an earthquake wave, which washed away nearly all the houses in the settlement, though without causing any loss of life. It was followed during the night by a remarkable submarine eruption of flames and smoke, about a mile from the beach, in deep water.³

In 1837 the settlement was suddenly called upon to surrender to a squadron of three Peruvio-Bolivian ships commanded by Don Trinidad Morán, and had to comply. The political exiles were immediately liberated, and most of them were given a passage to the continent in Morán's ships. The garrison and the few remaining persons soon afterwards abandoned the settlement; and during the ten years that followed Más-á-tierra was peopled only by occasional waifs and strays, and by a family, perhaps best described as 'free selectors', named Maurelio, who made a living by selling live stock and other provisions to whalers. In 1847 Don Pascual Cuevas, who had once lived in the island as a political exile, obtained a lease of it from the Government for purely commercial purposes; but he died soon afterwards, and his assets passed to the house of Soruco Brothers, Bolivian merchants of La Paz.

¹ Vicuña Mackenna, *op. cit.*, p. 663.

² A. Echeverría y Reyes, *Geografía*, pp. 165, 184.

³ A. Caldeleugh, pp. 25-6; T. Sutcliffe, *Earthquake*.

They sent a Chilean subject, by name Soto, as manager to reside at Más-á-tierra; and the Government conferred upon him the post of Sub-delegate (corresponding to Administrator or Resident Commissioner). But in 1851 the Government of Chile once more sent political offenders and other prisoners to the island. A contract for their maintenance, labour, and control was made with the Soruco firm; and Soto, in his triple capacity as sub-delegate, custodian, and caterer, treated his compatriots with leniency. Nevertheless, within a few months, the result was the same as before; vessels were seized, and the rebels, taking Soto with them (with or without his connivance), made their way to the mainland. Thus the island was again abandoned, save by a small handful of voluntary settlers.

Once more, in 1852, the Government peopled the settlement with *déportés*, and again they revolted. This time the conspiracy was denounced by one of its members, all of whom had been accomplices in Chile of the notorious Cambiaso. The leaders, to the number of four, were condemned and shot the next day.

In 1854 the military command was finally withdrawn; and the occupation of Más-á-tierra as a penal settlement came to an end.¹ It is stated, however, that the experiment was renewed at Más-á-fuera in 1909, but abandoned in 1913.²

Between the years 1854 and 1867 the history of the islands of Juan Fernández has little political importance; and, as Vicuña Mackenna remarks,³ their long period of romance and drama was brought to a close in 1868 with the erection, near one of the summits of Más-á-tierra, of a tablet in memory of 'Alexander Selkirk, mariner', by Commodore Powell and the officers of H.M.S. *Topaze*.⁴

¹ Vicuña Mackenna, *op. cit.*, chaps. xxxii, xxxiii.

² C. Skottsberg, in the *Geographical Review*, May 1918, p. 375.

³ *Op. cit.*, p. 832.

⁴ Vicuña Mackenna, *op. cit.*, pp. 737-8, 742; E. Albes, *Bulletin of the Pan-American Union*, 1914, p. 213 (photograph).

(4) SECOND PERIOD OF CHILEAN DOMINION
(1867-1914)

In December 1867 the Government granted a lease of the islands to Fernando (Hermann ?) Flindt, a North American ship-chandler, of Valparaiso, at a rental of \$500 annually. He seems to have entered into possession by his attorney, Robert Wehrdan, on January 7, 1868.¹ Failing to fulfil certain stipulations embodied in the lease, the house of Flindt transferred its interest in the islands to the brothers Miguel and Antonio Fernández López, sons of a Portuguese merchant at Valparaiso. This arrangement terminated in 1876 with the failure of the elder brother at Más-á-tierra, and the death of the other, who had settled and wasted his capital at Más-á-fuera.² When the Chilean corvette *Chacabuco* called at the islands in April of that year, her commander, Don Oscar Viel, found the community to comprise only 64 persons (29 men, 13 women, and 22 children); and 10 of these returned in his ship to the continent.³

The next disposal of the islands was by a lease granted by the Government in 1877, at an annual rental of \$2,500, to Alfred de Rodt, a man of Swiss birth. De Rodt was appointed Sub-delegate at Más-á-tierra, and must therefore have become a naturalized Chilean. De Rodt was personally known to the late Sr. Vicuña Mackenna, who testified to his character and honesty of purpose, and stated that he governed the people with fairness and consideration;⁴ but the results to himself of his venture are summed up in the Colonization Commission's report in 1895 as 'nothing, except the entire loss of his capital of \$65,000 of good money at forty pence the dollar'—a misfortune which was attributed to De Rodt's lack

¹ Vicuña Mackenna, *op. cit.*, pp. 743-4; *Chambers' Journal*, 1888.

² Vicuña Mackenna, *op. cit.*, pp. 746-8.

³ *Anuario Hidrográfico*, Año iv, pp. 17-23.

⁴ Vicuña Mackenna, *op. cit.*, chap. xxxvii.

of energy and initiative.¹ As Sub-delegate he filled all the subordinate civil posts in the island, doing duty as magistrate, customs officer, harbour-master, pilot, postmaster, and verderer.

The Colonization Commission was organized in 1895 to inquire into existing conditions in the islands of Juan Fernández (and certain other places), and to advise the Government on questions of administration, population, and commerce in respect of those localities. The members of the Commission visited Más-á-tierra; but those who went on as far as Más-á-fuera were unable, owing to rough weather, to land there. Their report² on the islands contains no recommendations of practical utility, and no serious action has resulted from it. They found 53 inhabitants at Más-á-tierra, but there were then none at Más-á-fuera. The chief industry was the 'cod' fishery, coupled with the lobster catch: the latter being in the hands of Messrs. Fonck Brothers, of Valparaiso, who founded it as a regular business in 1893. Dog-fish were also taken, for the sake of the oil which is extracted from their livers. A small number of goat-skins were cured annually for domestic use and for local sale; and a few fur-seals' pelts were got from the islet of Santa Clara, and at intervals from Más-á-fuera; but at this last island many of the kids and seals' cubs were annually destroyed by sea-eagles and wild dogs.

The police at Más-á-tierra were stated to be of no service, consisting only of four invalid pensioners; the population was nevertheless orderly, though its social life was morally discreditable.³ The Commission also reported that the natural timber supply of Más-á-tierra had been seriously diminished in the last sixty or eighty years by indiscriminate felling, failure to replant, and fires. The western portion of the island was never heavily wooded and is now virtually barren.

¹ *Memoria del Ministro*, p. 245.

² *Ibid.*, pp. 225-343.

³ *Ibid.*, pp. 237, 241, 254.

(5) SINKING OF THE 'DRESDEN' AT MÁS-Á-TIERRA ¹

The most notable occurrence in the islands of Juan Fernández since the outbreak of the European War was the sinking of the German cruiser *Dresden* in Cumberland Bay on March 14, 1915. That vessel was the last remaining ship of the enemy's squadron engaged off the Falkland Islands on December 8. After escape from pursuit on that occasion she took refuge in the Straits of Magellan, and succeeded in coaling at Punta Arenas, where she committed a breach of Chilean neutrality and overstayed the 24 hours' limit. She next lay concealed for more than two months in the maze of channels adjoining the Chilean archipelagoes south of Chiloé, and got into wireless communication with two German steamers with a view to their meeting her at Más-á-tierra.

On March 9, 1915, she sank the British ship *Conway Castle*, laden with grain, in the neighbourhood of Más-á-tierra. Arriving at Más-á-tierra on the same day her commander requested permission from the 'Maritime Governor' to remain there eight days, in order to make good alleged defects in machinery. This permission was refused, and the German was officially warned that he must leave within 24 hours or submit to internment of the ship and crew. At the end of the 24 hours the *Dresden* had not left; and the Chilean Governor, having notified her commander that he had incurred the penalty specified, immediately reported the situation to the Government of the Republic. On March 14 H.M. ships *Glasgow* and *Kent*, with the British transport *Orama*, appeared in the offing. Meanwhile, it is stated, the German had been in frequent communication by wireless telegraphy with her two confederates, the S.S. *Alda* and *Sierra Cordoba*, which thereupon immediately left Valparaiso, without permission from the Chilean authorities, laden with coal.

¹ The particulars of this incident are related from the telegraphic accounts and diplomatic notes published in *The Times* newspaper on March 16 and 19, and April 16 and 21, 1915.

When the British squadron arrived off Cumberland Bay the *Dresden* was still at anchor there, about 500 metres from the shore, and the *Glasgow* at once opened fire upon her. The *Dresden* was hit, and hoisted a flag of truce under which an officer was sent from her to inform the commander of the [*Glasgow* that the German ship was in neutral territorial waters. The British commander is alleged to have replied by summoning the German to surrender, and to have warned him that, if he refused, the ship would be destroyed. The captain of the *Dresden* then sent his crew ashore and ordered the magazine to be exploded and the ship to be sunk, which was immediately done. Eight or nine Germans were killed and fifteen others wounded by the *Glasgow's* gun-fire, and considerable damage was done to the *Dresden's* hull. The wounded and the remaining 360 officers and men of the enemy ship were afterwards conveyed in the *Orama* to Valparaíso Bay, for internment at the island of Quiriquirina, near Talcahuano. The German Minister at Santiago submitted a statement of the incident to the Government of Chile, and, while representing that the *Dresden* was blown up and sunk by her own crew at the time they abandoned her, he entered a protest against what had occurred and made a claim for reparation. The Chilean Government immediately dispatched two of its ships to Más-á-tierra to investigate the facts; and, before the end of March, Notes were exchanged on the subject between the Chilean Minister in London and Sir Edward Grey, Foreign Secretary. The former, writing on March 26, related the details above recapitulated, and added that the Chilean Government had been painfully surprised by the act of hostility committed in Chilean territorial waters. They were convinced, he remarked in conclusion, that His Britannic Majesty's Government would give them satisfaction of a character to correspond with the frankly cordial relations existing between the two Governments.

Sir Edward Grey, in reply, pointed out that, so far as he then knew, it appeared that the commander of the *Dresden* had not accepted internment, that his ship was still flying the German war flag, and that she had her guns trained when the *Glasgow* opened fire. 'Nevertheless,' he added,

His Majesty's Government, after receiving the communication from the Chilean Government of March 26, deeply regret that any misunderstanding should have arisen which should be a cause of complaint to the Chilean Government; and, on the facts as stated in the communication made to them, they are prepared to offer a full and ample apology to the Chilean Government.

With this the incident was closed.

III. SOCIAL AND POLITICAL CONDITIONS

(1) RELIGIOUS

A CHAPEL was in course of being built at the settlement on Más-á-tierra, when, in the second year of occupation by the Spanish Crown, it shared in the destruction wrought by the earthquake wave of 1751. It was rebuilt in 1774, and again in 1811, but was finally ruined by the inundation of 1835 ;¹ and the Colonization Commission reported in 1895 that no permanent place of worship had since been provided. It was usual to appoint a *cura* or parish priest with each resettlement of the island ; but at the time of the Commissioners' visit there was no resident cleric, and only two couples were legally married, while of the 53 persons then constituting the population, 9 (all under eighteen years of age) had not been baptized. The only Protestant on the island was then Alfred de Rodt, the lessee and Sub-delegate in charge ; the other 43 baptized persons professing the Roman Catholic faith.

(2) POLITICAL

The history of the islands of Juan Fernández shows that the administration of affairs there was one long series of misgovernment and abuses during the Spanish occupation and far into later times. Not until after the middle of the nineteenth century did more reasonable and humane measures lead to quietude and order among the population. The Colonization Commission in 1895 reported that 'a competent, energetic, and industrious administration might convert the islands

¹ Vicuña Mackenna, *op. cit.*, p. 379 ; T. Sutcliffe, *Earthquake*.

into a rich and flourishing colony';¹ but in view of the limited nature of their internal resources, and their natural isolation from centres of trade, this must be regarded as an optimistic opinion. At present the population of Más-á-fuera is *nil* or negligible, and that of Más-á-tierra a mere handful of people. For their control a resident official termed a Sub-delegate is appointed, apparently by the Chief of the Province of Valparaiso, and he exercises the powers and performs the duties of all the Government official posts.

(3) EDUCATIONAL

It does not appear that any public instruction or private teaching has ever been given in these islands. The Colonization Commission found that the 21 children and young persons under 18 years of age were 'ignorant, for the most part, of the rudiments of knowledge'; and it was recommended that, if the Supreme Government should decide to establish a teacher at Más-á-tierra in the future, night-classes should be provided for the benefit of adults engaged in labouring occupations during the daytime.²

¹ *Memoria del Ministro*, pp. 324-5, 333-4.

² *Ibid.*, p. 319, &c.

IV. ECONOMIC CONDITIONS

(A) MEANS OF COMMUNICATION

(a) *Roads, &c.*

THE few roads that were made in the last century have been obliterated by storms, and Dr. Skottsberg states¹ that there remain only three narrow and miserable cattle-trails leading from Cumberland Bay to other parts of Más-á-tierra. One of these crosses the *portezuelo*, or pass, at 1,800 ft. above the sea.

There are no internal telegraphs or postal services.

(b) *Ports*

The only port is Cumberland Bay, on the north side of Más-á-tierra. It is rather more than a mile in width across the entrance, and extends inwards about two-thirds of a mile. The anchorage is not very secure, owing to the rapid shelving of the rocky bottom, and the violent gusts which descend from the mountain when southerly winds are blowing. The bay is exposed to the north. A small mole has been constructed, and there are facilities for taking in fresh water from an adjoining stream.

(c) *Shipping*

Three schooners, furnished with wells for the carriage of live lobsters, keep up communication with Valparaiso at irregular intervals, nominally once a fortnight, and bring the dry provisions, soft goods, and hardware required by the settlers. They also visit Más-á-fuera occasionally. Más-á-tierra is visited at intervals by vessels of the Chilean navy.

At present the shipping facilities seem to be adequate

¹ In the *Geographical Review*, May 1918.

to the needs of the islands, and there is not much scope for further development of trade. No doubt regular steam communication would be acceptable to the islanders and to Valparaiso merchants, but it could hardly be maintained without Government aid.

(d) *Wireless Telegraph*

On July 5, 1912, the Government of Chile ratified the Wireless Telegraphy Convention at London;¹ and in the *Bulletin of the Pan-American Union* of October in that year it was announced that the installation of a wireless station at Juan Fernández was nearing completion. But in the list of wireless stations maintained by the Government of Chile enumerated in the same *Bulletin* of September 1915, Juan Fernández was not mentioned; nor was it named, in the issue of March 1916, among those opened for public use.

(B) INDUSTRY

(1) LABOUR

The local supply is numerically negligible; the residents are all natives, and the services of the few men are indispensable to the fishing industry. The islands offer the means of living to a small number of industrious settlers, but nothing more.

(2) AGRICULTURE

(a) *Products of Commercial Value*

Vegetable Products.—The agricultural prospects of these islands are poor. In Más-á-fuera agricultural enterprise is out of the question; in Más-á-tierra it is possible in scattered areas, but has never met with much success, owing to the limited space available, the strong winds, the lack of system and capital, and the insecurity of tenure (see below, p. 56). Where the soil is deep it is fertile, and in such localities there is no

¹ *Bulletin of the Pan-American Union*, August 1914, p. 323.

scarcity of water. Experiments have shown that maize, wheat, and barley can produce 30-fold, 4-fold, and 8-fold respectively, but the crops that have flourished best are lucerne and a kind of chick-pea, for which there is only a small local demand and no possibility of export. Vegetables and subtropical fruits flourish. Nearly all the native families successfully cultivate gardens, in spite of occasional plagues of rats and caterpillars. There is no farming for commercial purposes.

Live-stock. — In Más-á-tierra farm-stock do well, except horses, which seem to degenerate. The chief animals kept are goats, donkeys, mules, sheep, poultry, and pigeons, but horned cattle also thrive in suitable places, though they cannot be kept in great numbers, owing to the lack of fences. Pigs would do well, if they were confined and properly fed.

In Santa Clara there are many goats, while in Más-á-fuera about 1,500 run wild on the heights, in spite of the fact that the kids are attacked by wild dogs and by *aguiluchos*, savage and voracious sea-eagles or buzzards peculiar to this island. (See also above, p. 47.)

(b) Forestry

Systematic arboriculture under Government inspection and control, with a view to judicious afforestation, has been officially proposed, and seems very desirable; but to plant on the exposed slopes would not be easy, for the soil is loose and scanty.

The most valuable of all the indigenous trees, *Santalum fernandezianum*, is now extinct in Más-á-tierra, though a few specimens are believed to linger in Más-á-fuera. Next in reputation is the *chonta* palm, *Juania australis*; but this also has become rare in the accessible valleys, having been ruthlessly cut and exported on account of its handsome wood, used for walking-sticks. It is now protected by a Government regulation

(c) Land Tenure

All the land is State property, and has usually been let as a whole to a single lessee. This practice, which the Government of Chile adopted in 1847, has no doubt discouraged agriculture. The leases, drawn for short terms of years, were liable to compulsory cancellation, and were terminable by agreement at six months' notice. Sub-tenants naturally refrained from expending capital or labour on land of which their tenure was not secure. The primary lessee usually turned his attention to cattle-raising rather than to planting, in order to have beef, pork, and goats to sell to whalers and other callers. He employed the settlers to cut and collect firewood recklessly for the same purpose, paying them for their labour in imported goods at extravagant prices, so that they were generally in his debt. His cattle wandered at large, so that no field cultivation was possible without fences, which it was not to his interest to provide, and which the people themselves could not afford to put up.

(3) FISHERIES

Down to the beginning of the nineteenth century the fur-seal and the sea-lion or elephant-seal frequented the shores of these islands in vast numbers. By unrestricted slaughter for the sake of their skins and oil, the elephant-seals have been exterminated, and the fur-seals have been reduced to a few thousands, even in the breeding season. Before they are able to swim the seal cubs are preyed upon at Más-á-fuera by the sea-eagles and wild dogs.

Fishing¹ forms the backbone of the island trade, the lobster catch being the most important. The Fernandian lobster is a large crustacean (*Palinurus frontalis*), perhaps the finest of its kind in the world, found only near these islands and near the desert cluster of San Félix and San Ambrosio, on the same suboceanic

¹ See above, p. 47.

bank, some 450 miles to the northward. This lobster attains a length of from 2 to 3 ft., and is much appreciated in Chile. The tails, which are especially esteemed, used to be exported dried, but a canning factory was established in 1893, and a second one more recently. The products of these factories, and also quantities of live lobsters, are exported to Valparaiso in the schooners already mentioned.

The fishery next in importance is for *bacalao*, a local variety of cod. Conger, bass, and dog-fish are also caught, these last for the sake of their oil.

(4) MINERALS

No minerals of any commercial value have been discovered, nor is the geological formation of the islands of a kind to make their presence at all likely.

(C) COMMERCE

The population in 1916 numbered 300, almost all of whom are employed in and dependent on the fisheries.

(D) FINANCE

No statistics are available. The Chilean currency is in circulation. The fisheries form the main field of investment.

APPENDIX

EXTRACT FROM THE ACT OF CONSTITUTION OF
THE REPUBLIC OF CHILE

CAP. I, ART. 1.—El territorio de Chile se extiende desde el Desierto de Atacama hasta el Cabo de Hornos, y desde las Cordilleras de los Andes hasta el mar Pacifico, comprendido el archipiélago de Chiloé, todas las islas adyacentes, y las de Juan Fernández.¹

(*Translation*)

CAP. I, ART. 1.—The territory of Chile extends from the Desert of Atacama to Cape Horn, and from the mountain chain of the Andes to the Pacific Ocean, and includes the archipelago of Chiloé, all the adjacent islands, and those of Juan Fernández.

¹ *Recopilación de Leyes y Decretos*. Santiago, 1888.

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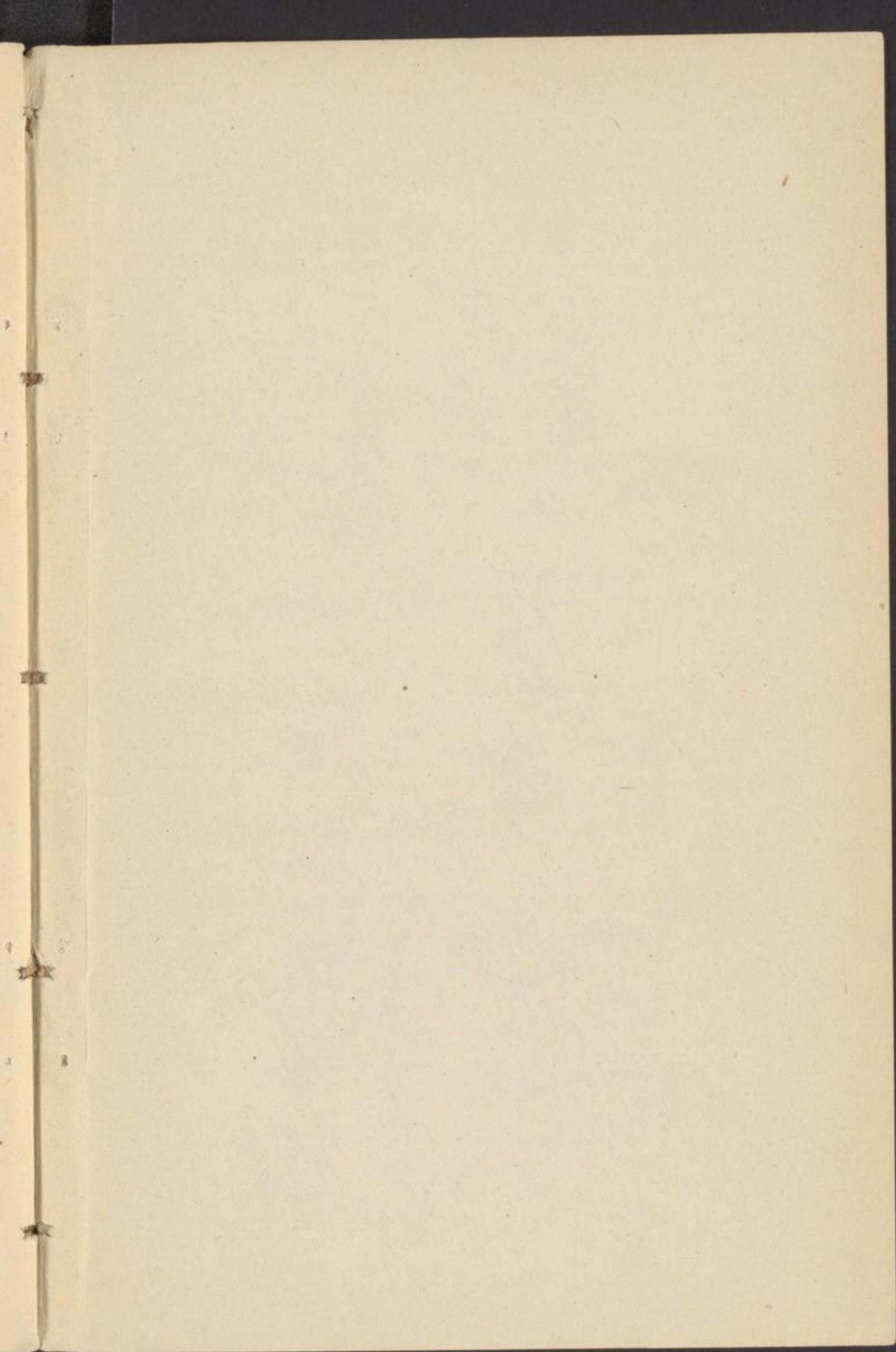
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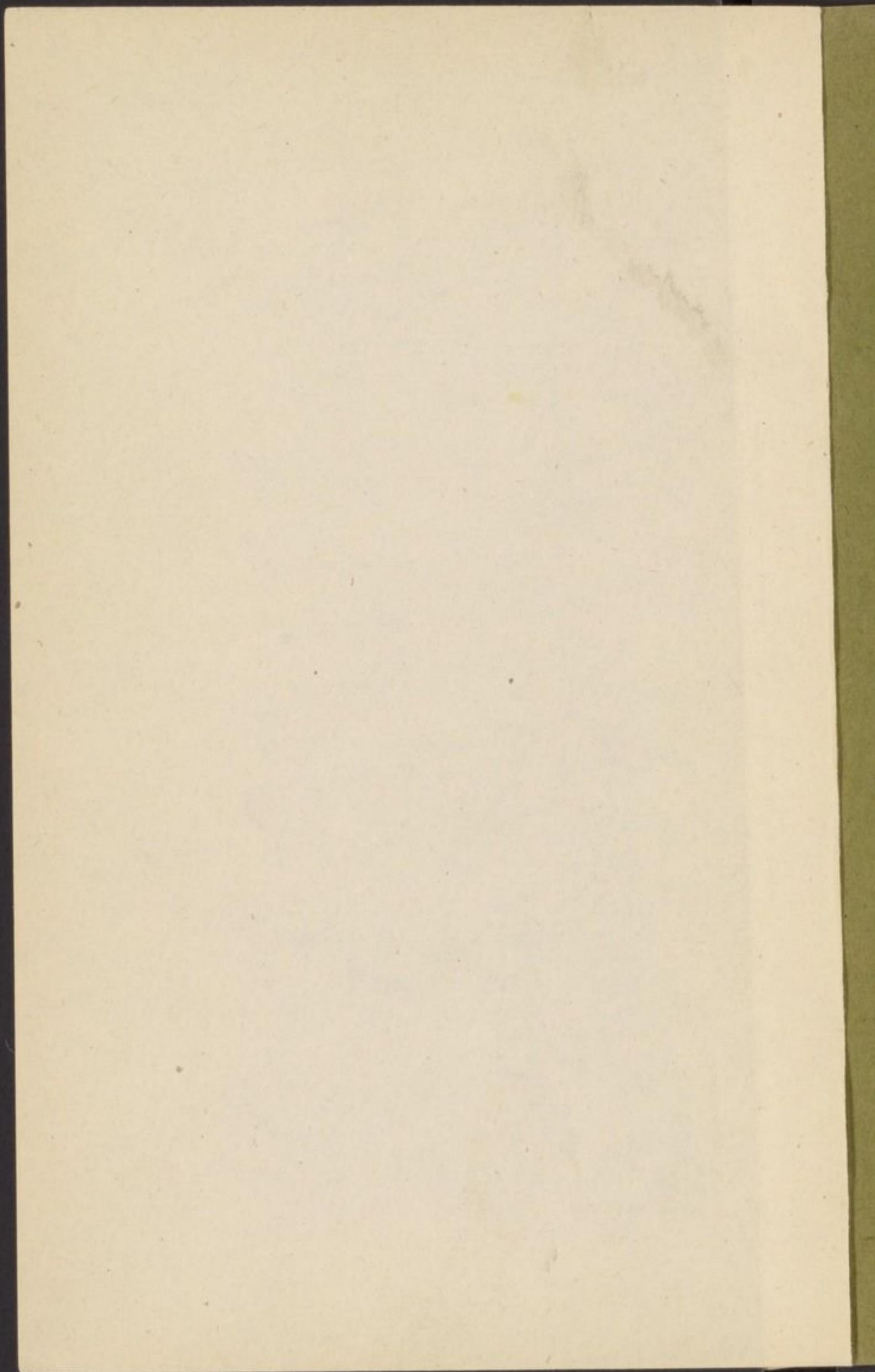
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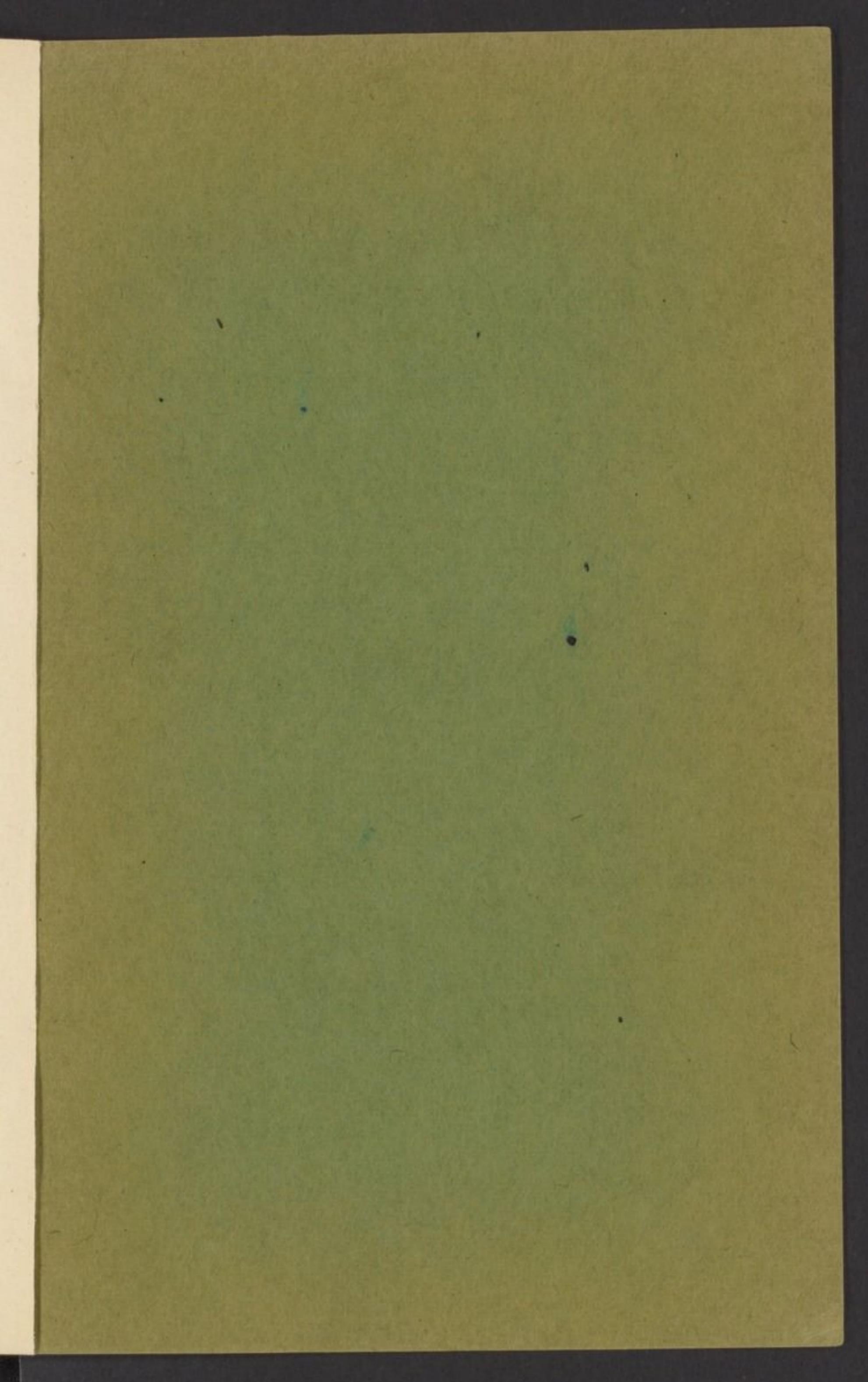
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¹ Many discrepancies and some mis-statements occur in most of these works.







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