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Narrative of the Circumnavigation of the Globe by the Austrian Frigate *Novara*

Joined by seven eminent natural scientists, including Karl von Scherzer (1821–1903), the Austrian naval expedition of 1857–9 was remarkable for its globe-spanning scale. During the course of the voyage, the naturalists collected an abundance of samples which contributed to several scientific discoveries, including the isolation of cocaine in its pure form. Some of the investigations also revolutionised knowledge in such fields as geology, oceanography, hydrography and geomagnetism, and are still being studied by modern-day researchers. Prepared by Scherzer and first published in English in 1861–2, this is a compelling three-volume account of the mission, remaining relevant to scholars interested in naval exploration and the history of science. Opening with the guidance given by Alexander von Humboldt prior to the expedition, Volume 1 covers the leg between Europe and India. It includes notes on the social structure of the populations encountered, and on the local flora and fauna.



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Narrative of the Circumnavigation of the Globe by the Austrian Frigate *Novara*

Undertaken by Order of the Imperial Government, in the Years 1857, 1858, & 1859

VOLUME 1

KARL VON SCHERZER





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THE

VOYAGE OF THE NOVARA.





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NARRATIVE

OF THE

Circumnavigation of the Globe

BY THE AUSTRIAN FRIGATE

NOVARA,

(COMMODORE B. VON WULLERSTORF-URBAIR,)

Undertaken by Order of the Imperial Government,

IN THE YEARS 1857, 1858, & 1859,

UNDER THE IMMEDIATE AUSPICES OF HIS I. AND R. HIGHNESS

THE ARCHDUKE FERDINAND MAXIMILIAN,

COMMANDER-IN-CHIEF OF THE AUSTRIAN NAVY.

ВЪ

DR. KARL SCHERZER,

MEMBER OF THE EXPEDITION, AUTHOR OF "TRAVELS IN CENTRAL AMERICA," ETC.

VOL. I.



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то

SIR RODERICK IMPEY MURCHISON,

G.C.S.ST., M.A., D.C.L., V.P.R.S., G.S., L.S., F.R.G.S.,
DIRECTOR-GENERAL OF THE GEOLOGICAL SURVEY OF GREAT BRITAIN AND IRELAND,
TRUST. BRIT. MUS., ETC., ETC.,

THE GREAT PROMOTER OF GEOGRAPHICAL KNOWLEDGE,

These Pages are respectfully Inscribed,

IN RECOGNITION OF HIS VALUABLE EXERTIONS IN ADVANCING THE SCIENTIFIC OBJECTS

OF THE AUSTRIAN EXPEDITION,

AS WELL AS

IN GRATITUDE FOR THE HOSPITABLE RECEPTION SECURED TO THE NAVIGATORS

THROUGHOUT THE BRITISH DEPENDENCIES,

WHEREVER IT WAS THEIR GOOD FORTUNE TO CAST ANCHOR,

BY

THE AUTHOR OF THE FOLLOWING NARRATIVE.





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PREFACE TO THE ENGLISH EDITION.

A MEMBER of the scientific corps attached to the Expedition, which, under the auspices of that enlightened friend of science and liberty, the Archduke Ferdinand Maximilian, was despatched on a voyage round the globe, the high honour has been conferred upon me of having entrusted to my care the publication of the Narrative of our Cruise.

In this not more difficult than enviable task, I have been most liberally assisted by my eminent fellow-labourers—the whole literary material collected during the voyage having been kindly placed at my disposal. The comprehensive journals and reports of the venerable Commander-in-Chief of the Expedition, Commodore Wullerstorff-Urbair, as well as the various memoranda of the other members of the Scientific Commission, contributed materially to the elucidation of my own general notes, as well as my observations upon special subjects, which latter chiefly referred to the Geography, Ethnography, and general Statistics of the various countries visited.



vi Preface to the English Edition.

While preparing the details of our voyage for publication in my own language, the idea perpetually presented itself that a translation of this narrative into English might prove not unacceptable to the British public. And although fully aware that a voyage round the globe, in the course of which little more than the coasts were visited of the various countries we touched at, could not pretend to offer much new information to the greatest of maritime nations, it seemed, nevertheless, that it might interest a people so eager in the pursuit of knowledge as the English, to know the impression which has been made upon travellers of education by the Colonies and Settlements of Britain throughout the world.

The English language, moreover, being spoken more or less over the greater part of the earth's surface, geographically speaking, the author who addresses his readers in that tongue is sustained by the flattering conviction that he will be understood by the majority of the nations of the globe! For it is not alone the educated classes of all countries that seek to master a language which possesses such a grand—all but unrivalled literature! The political and commercial development which Great Britain enjoys under the benign influence of liberal institutions, has made English the medium of intercourse among almost all sea-faring nations; nay, even barbarous tribes find it their obvious interest to get a slight inkling at least of the language of a people whose civilizing and elevating energies



Preface to the English Edition.

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they may not, it is true, understand, far less appreciate, but whose imposing power inspires them with awe, while they are more closely attached by the tie of material advantage.

The following narrative describes the most important occurrences and most lasting impressions of a voyage during which we traversed 51,686 miles, visited twenty-five different places, and spent 551 days at sea, and 298 at anchor or on shore.

As the purely scientific results of the Expedition will be published separately under the supervision of Commodore Wullerstorf and the other members of the scientific corps, I shall, in this place, only attempt to place before the reader a general outline of the countries and races visited during our cruise in different regions of the world.

In relating simply and concisely what was seen and experienced, I have endeavoured to avoid incurring the reproach, so frequently launched by English critics against German works of travel, of dryness and minute detail, such as render them distasteful to the English reader, and make it almost impossible to enlist his attention or evoke his sympathy.

If, as is specially the case with respect to natural science, many a doubtful point still remains undecided—if the ingenious "Suggestions" of the immortal Alexander von Humboldt (for the translation of which I feel particularly indebted to that profound scholar, my learned and esteemed friend Mr. Hardinger, whose name will be familiar to the



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Preface to the English Edition.

scientific world in Great Britain), could not be acted upon to the extent and in the effectual manner each of us could have wished, the reason for such deficiencies will be found in the peculiar mission of the Expedition, and in the arrangement of our route, which was specially laid out with reference to the numerous and widely different objects, which it was specially intended to keep in view throughout the voyage.

Among the more prominent of these, may be specified the opportunity thus afforded for the practical instruction of our young and rapidly-increasing navy; the unfurling of the Imperial flag of Austria in those distant climes, where it had never before floated; the promulgation of commercial treaties; the aid afforded to science in exploration and investigation, as well as by the collection of those objects of Natural History, the acquisition of which is all but impossible to the solitary naturalist, owing to the expense and difficulty of transport,* and the establishment everywhere of friendly

* Notwithstanding the short period at our disposal at each port, which concomitant necessity militates so much against the practical utility of a circumnavigation of the globe as compared with an expedition solely directed to one single centre of scientific observation, the collection of objects of Natural History made during the cruise are very extensive, and unusually rich in new or rare species. The zoological department alone embraces above 23,700 individuals of different kinds of animals: viz. 440 minerals, 300 reptiles, 1500 birds, 1400 Amphibiæ, 1330 fish, 9000 insects, 8900 Molluscs and Crustaceæ, 300 birds' eggs and nests, besides numerous skeletons. The botanical collection consists of Herbaria, seeds of useful plants, special regard being had to those best adapted for the various climates of the respective Austrian provinces, drugs, specimens of dye-woods, and timber, fruits preserved in alcohol, &c. The Geological and Palæontological Museums of our country have likewise been enriched with various rare and valuable specimens, particularly in consequence of Dr. Hochstetter, the geologist of the Expedition, having prolonged his stay in New



Preface to the English Edition.

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correspondence between our own scientific institutions and those in remote regions. I have considered it necessary to invite the attention of the British reading public to these circumstances, in order to make them more intimately cognisant of our various and manifold tasks, and thus make them the more readily disposed to overlook the deficiencies and discrepancies of this book, which I now respectfully commit to their perusal.

Before concluding, I beg leave to express my hearty thanks to all those who have contributed in such various ways to aid my humble efforts—to specify some were invidious, as in so doing I must wrong others. To each and all I return the most heartfelt gratitude.

May the indulgent reader peruse the following pages with an approving eye—may they afford him as much satisfaction and as much interest as I experienced in committing to paper the descriptions and impressions therein set forth, since in so doing, I, so to speak, made the delightful voyage for the second time, and in thought visited once more the different localities, from every one of which I, and my fellow-travellers, brought away none but the most friendly and agreeable recollections.

It inspires a German traveller with a peculiar and lofty

Zealand, where, at the special request of the Colonial Government, he explored the province of Auckland. The Ethnographical and Anthropological collection consists of above 550 objects, among which are 100 skulls, representing the craniology of almost all the races of the globe.



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feeling of pride and delight that he can look upon himself as belonging to a race, to whom seems to have been reserved the diffusion of a New Life over the earth—whose special mission it appears to be to make even the most primitive tribes in the remotest corner of the world acquainted with the blessings of Christian civilization, of political liberty, of intellectual culture, and, standing triumphant on the ruins of slavery and despotism, to proclaim to the great family of universal mankind, the advent of a new, a vernal era of Faith, Freedom, and Happiness!

DR. KARL SCHERZER.

TRIESTE, 18th March, 1861.



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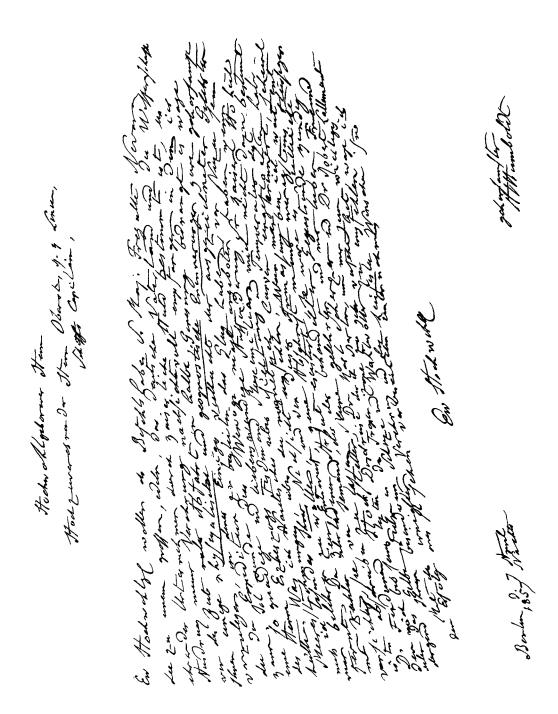


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PHYSICAL AND GEOGNOSTIC SUGGESTIONS,

В¥

ALEXANDER VON HUMBOLDT.

In compliance with the gracious invitation which H.I.H. the Archduke Ferdinand Maximilian was pleased to address to me from Trieste (December 12th, 1856), and as yet barely recovered from an indisposition, I jot down these hasty notes, without presuming to give definite instructions, such as those I drew up, conjointly with M. Arago, for the guidance of the French expeditions, or for Lord Minto, then First Lord of the Admiralty, on the occasion of the Antarctic Voyage of Discovery of Sir James Ross (1840-43). The following pages consist simply of hints which may possibly prove serviceable to the distinguished and highly informed gentlemen, who have the good fortune to sail on board the Imperial Frigate, Novara, under the command of Commodore With two of these savans, Dr. Ferdinand von Wüllerstorf. Hochstetter and Dr. Karl Scherzer, I have had the pleasure, here in Berlin, to agree verbally on various subjects.

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xviii Physical and Geognostic Suggestions,

As I do not exactly know what course it is intended the *Novara* shall follow in navigating the Atlantic, nor in what meridian it is proposed to cross the Equator, (in conformity with the sound and useful directions of my friend Lieut. Maury, of Washington), on her voyage to Rio de Janeiro, nor how near she shall keep to Cape San Roque and Fernando de Noronha, I must content myself with inviting the attention of the voyagers in a general way to the temperature of the sea, as also to the variations and aberrations of the magnetic curves, and their currents.

A lower degree of temperature is usually observed W. of the Canaries, and Cape Verde Islands, commencing with the Salvages, the thermometer indicating as low as 72° 7′ Fahr. This has been already ascertained by Mr. Charles Deville, in his chart of temperature on the voyage "aux Antilles, à Ténériffe et à Fogo." I consider this diminution of temperature results from the North Guinea current, bringing with it cold water from the north southwards as far as the Bight of Biafra and the River Gaboon, at which point it is encountered by an opposite current flowing northwards along the south-western coast of Africa from Loando and Congo.

In 1825, Captain Duperrey had accurately laid down the point of intersection of the magnetic, with the terrestrial equator. In 1837, we learned from Sabine's investigations of magnetic inclination near the Island of St. Thomas (on the Equator, adjoining the above portion of the coast of Africa),



by Alexander von Humboldt.

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that this point of intersection had already shifted four degrees to the westward. A period of twenty years having elapsed since Sabine's expedition for determining observations with the pendulum, it would be most desirable that fresh investigations should be made in that neighbourhood, for the purpose of verifying the secular changes of all magnetic curves, especially with regard to their variation. In 1840, the line of no declination in America began 9° 30' E. of South Georgia, whence it ran to the S.E. coast of Brazil, near Cape Frio, thus traversing the mainland of South America only between the latter point and the parallel of 0° 36′ S., when it leaves the continent a little to the east of Gran Parà, near Cape Tigioca, cutting the terrestrial equator again, but in 50° 6' W. According to Bache's Map of Equal Magnetic Declination, it reaches the coast of North America near Cape Fear, to the south-west of Cape Look-This line, along which the magnetic declination is nil, extends to a point in Lake Erie, 2° 40' W. of Toronto, where the declination is already 1° 27' W.*

It is evident from the observations of Captains Beechey and Findley, and still more particularly from those of the French Captain Kerhallet, that the remarkable subdivision of the main equinoctial current, flowing from east to west into two branches, one directed to the N.W., the other to the S.S.W.,

b 2

^{*} Wherever, in this paper, it is not precisely expressed to the contrary, the scale of the Centigrade Thermometer, the longitude from the Meridian of Paris, the French foot (pied du roi=12.79 inches English), and the geographical mile, 15 to a degree of the Equator, measuring 3807 "toises," are meant.



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Physical and Geognostic Suggestions,

commences at a considerable distance from the Capes of St. Roque and St. Augustin. This bifurcation has always, and with good reason, been ascribed to the protruding convexity of the South American continent at these two It would be an important step gained in promontories. verifying the theory of currents, could the precise distance be ascertained by chronometer. It is apparently like an "actio in distans," probably a phenomenon of what is known as "packing." As the frigate, on leaving Rio de Janeiro is to make for the Cape of Good Hope, the opportunity will present, should she steer sufficiently southerly, for many interesting observations with respect to the connecting current W.N.W. and E.S.E. which encounters that from Madagascar and Mozambique, close to the Cape, more especially with regard to the temperature of the sea.

If the frigate is intended to approach the small cluster of islands of Fernando de Noronha, E. of Pernambuco (Lat. 3°, 50 S.), I would recommend to that excellent geognostic, Dr. Hochstetter, the hornblendic phonolithe rock found there, far from a volcanic crater, but with trachytic dykes and basaltic amygdaloid. The flat little island of St. Paul (Peñedo de San Pedro), 1° N. Lat., singular to say, is not volcanic at all, containing, like the Malouin or Falkland Islands, slaty green-stone passing into serpentine.

Should the frigate alter her course and cross the Equator more to the eastward, without touching at Rio de Janeiro, she might possibly fall in with the Marine Volcanic region,