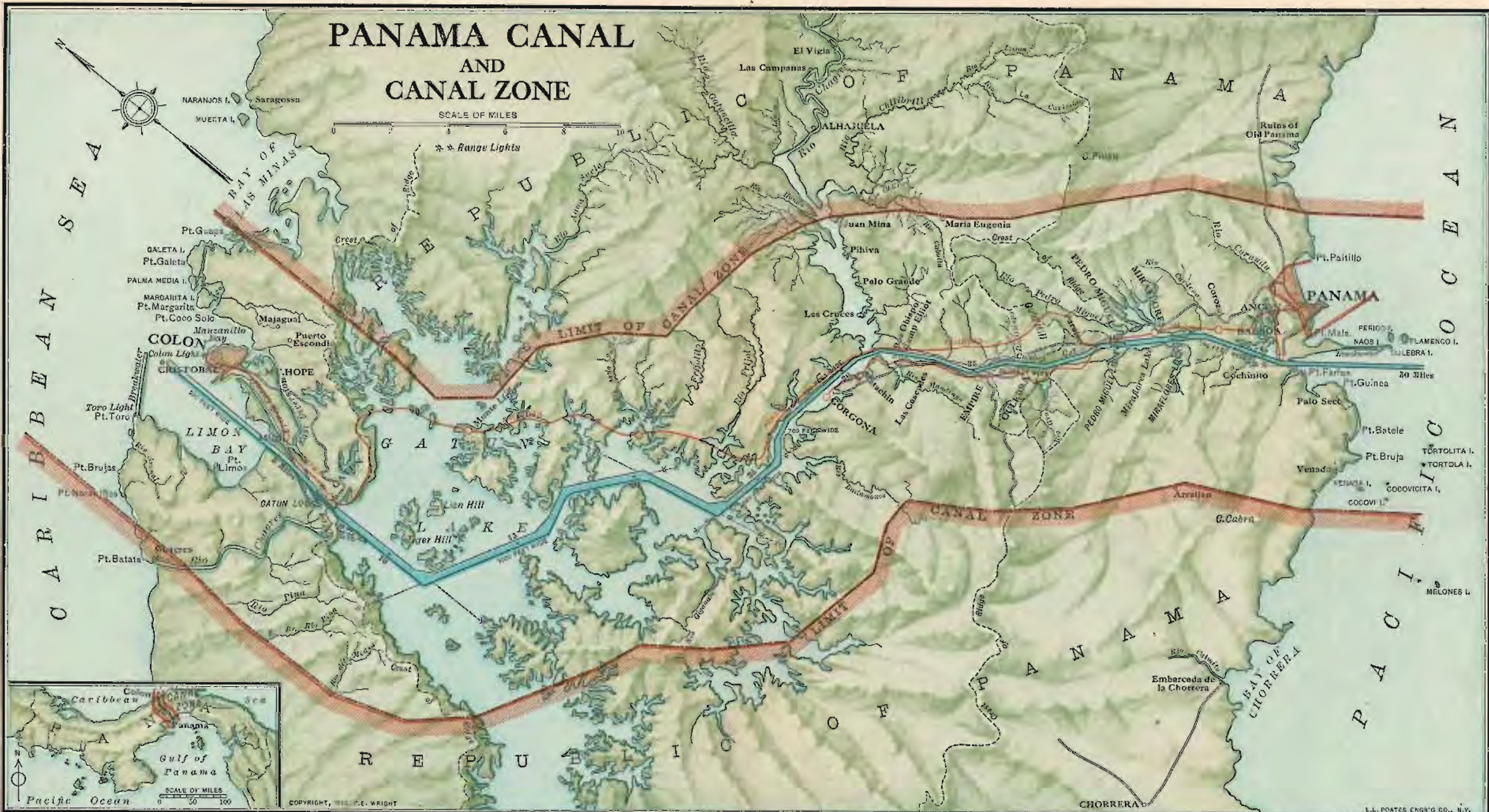


PANAMA CANAL AND CANAL ZONE

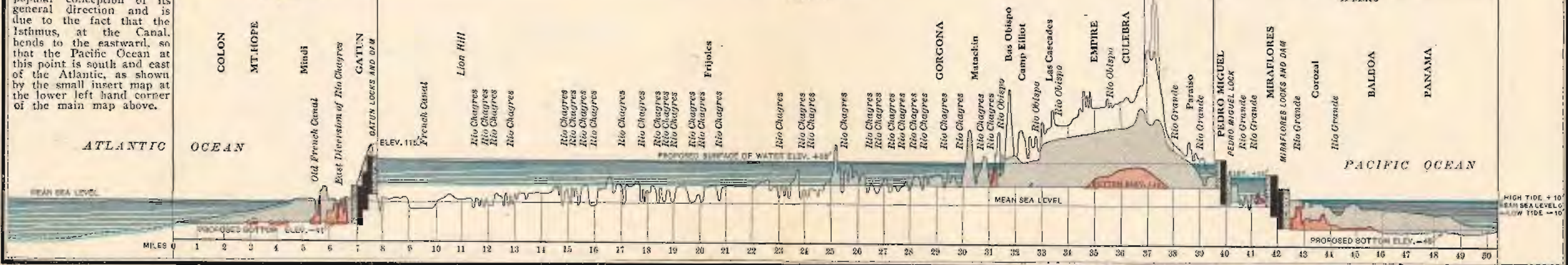


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Note: From its Atlantic end at Colon, the Canal runs for 10 miles due south; then its general course is to the eastward into the Pacific. This is quite contrary to the popular conception of its general direction and is due to the fact that the Isthmus, at the Canal, bends to the eastward, so that the Pacific Ocean at this point is south and east of the Atlantic, as shown by the small inset map at the lower left hand corner of the main map above.

ATLANTIC DIVISION 7.7 Miles CENTRAL DIVISION 31.7 Miles PACIFIC DIVISION 11 Miles



HIGH TIDE + 10'
MEAN SEA LEVEL 0
LOW TIDE - 10'

THE PANAMA CANAL

AN ILLUSTRATED HISTORICAL NARRATIVE
OF PANAMA AND THE GREAT WATERWAY
WHICH DIVIDES THE AMERICAN CONTINENTS

By
WILLIS J. ABBOT

Author of
The Story of Our Navy
American Merchant Ships and Sailors, Etc.

Beginning With the Time When Columbus First Searched for a Natural Waterway
to the Pacific Ocean, Through the Centuries of Revolution and War-
fare, and on Down to the Realization of the Greatest
Achievement Known to Man

THE ONE STANDARD VOLUME BEARING THE ENDORSE-
MENT OF LEADING PUBLIC OFFICIALS AND ENGINEERS
CONNECTED WITH THE GIGANTIC ENTERPRISE

WATER COLORS by E. J. READ

Unique Illustrations Consisting of More Than 600 Photographic Reproductions Interwoven
With and Accurately Portraying the Entire Text

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LONDON

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1914

PRONUNCIATION OF SPANISH NAMES AND PHRASES COMMON IN PANAMA

KEY TO PRONUNCIATION

ä	as in <i>fade, aid, eight, fare, where.</i>	ô	as in <i>form, cord, orb, abhor, cross.</i>
â	" <i>arm, father, calm, half, laugh.</i>	o	" <i>not, torrid, ontology, what.</i>
a	" <i>at, had, ran, shall, parrot.</i>	ö	" <i>moon, move, tomb, rule.</i>
ë	" <i>mete, we, see, near, marine, tier.</i>	oo	" <i>book, woman, wolf, full, push.</i>
ê	" <i>her, author, bird, word, murmur.</i>	ü	" <i>mute, union, new, hewn, yours.</i>
ë	" <i>met, men, merry, kitchen, bury.</i>	u	" <i>hut, drum, dull, current.</i>
î	" <i>mite, mine, height, my.</i>	ch	" <i>church, much, match.</i>
i	" <i>fit, pin, division, busy, abyss.</i>	g	" <i>good, give, dig, dagger.</i>
ô	" <i>home, load, snow, tableau.</i>	th	" <i>thin, worth, sympathy.</i>

Aguadulce: Äh-gwä-dool'-thay.	Guava: Gwä'-vä.
Alcedo: Al-thay'-dö.	Guayaquil: Gi-ä-kel'.
Alhajuela: Äh-lä-höö-ä'-lä.	Guaymi: Gwi'-më.
Almirante: Al-më-rän'-tä.	Herrera: Air-air'-ä.
Ancon: An-cön'.	Huertas: Wair'-tas.
Antigua: An-të'-gwä.	Iguana: Ig-wä'-nä.
Augustine: Äh-öo-göös-të'-nä.	Inca: In'-kä.
Avenida Central: Äh-vä-ne'-dä <i>Thän-tral'</i> .	Junta: Höön'-tä.
Avocado: Äh-vö-kä'-dö.	La Boca: Lä Bö'-kä.
Balboa: Bal-bö'-ä.	La Folie Dingier: Lä Fö-'lë Dang-glä'.
Bas Obispo: Bass (sound final s) O-bes'-pö.	La Merced: Lä Mair-thäd'.
Bayano: Bi-yä'-nö.	Las Bovedas: Läs Bö-vä'-däs.
Boca del Toro: Bö'-kä-del-Tö'-rö.	Las Casas: Läs Cä'-zäs.
Bogota: Bö-gö-tä'.	Las Cascadas: Läs Cas-cä'-däs.
Bohio: Bö-ë'-ö.	Limon: Lë-mon'.
Bouquette: Böö-ke't'.	Llano: Lyäh'-nö.
Buenaventura: Böö-ä'-nä-ven-töö'-rä.	Los Angosturas: Lös An-gö-stöö'-räs.
Cacao: Kä-kä'-ö.	Los Santos: Lös Sän'-tös.
Caldera: Kal-dä'-rä.	Macana: Mä-kä'-nä (Indian wooden sabre edged with sharp flint).
Campeche: Cam-pä'-chä.	Machete: Mä- <i>chet'</i> -ä (erroneously, mä- <i>chet'</i> .)
Capera: Kä-pä'-rä.	Mamei: Mä-mä'-ë.
Careta: Kä-rä'-tä.	Manzanilla: Man-thä-nël'-yä.
Caribbean: Kar-rib-bë'-an.	Mardi Gras: Mär'-dë Gräh (French final s not sounded).
Cartagena: Kär-tä-hayng'-ä.	Maria: Mä-rë'-ä.
Casa Real: Kä'-zä Rä-al'.	Matachin: Mat-ä- <i>chin'</i> .
Cassava: Kas-sä'-vä.	Mercedes: Mair-thäy'-dez.
Caterina: Kat-ër-ë'-nä.	Naos: Nä-ös'.
Cayuca: Ki-yü'-kä.	Nargana: När-gä'-nä.
Ceibo: <i>Thay-ë'-bö.</i>	Nombre de Dios: Nom'-brä dä Dë'-ös.
Chagres: <i>Chä'-gräs.</i>	Otoque: O-tö'-kä.
Chame: <i>Chä'-mä.</i>	Papaya: Pä-pi'-yä.
Chiapas: <i>Chë-ä'-paz.</i>	Pedrarias: Pä-drä'-rë-as.
Chica: <i>Chë'-kä.</i>	Pedro Miguel: Pä'-drö Më-ghel'.
Chiriqui: <i>Chë-rë-ke'.</i>	Penonome: Pä-nö'-nö-mä.
Choco: <i>Chö'-cö.</i>	Perico: Pä-rë'-cö.
Cholo: <i>Chö'-lö.</i>	Pizarro: Pë-thär'-rö.
Chorrera: <i>Chör-räy'-rä.</i>	Playon: Plä-on'.
Chucunaque: <i>Chöö-koö-nä'-kä.</i>	Plaza: Plä'-thä.
Cimarroon: Sim'-är-röön.	Puerto Bello: Pöö-air'-to Bel'-lö.
Cocle: Kö-klä'.	Quareque: Kä-rä'-kä.
Cocura: Kö-koö'-rä.	Quintana: Kën-tä'-nä.
Colombia: Kö-lom'-bë-a.	Remedios: Rä-mä'-dë-ös.
Colon: Kö-lon'.	Rey: Ray'-ë.
Comagre: Kö-mä'-grä.	Rodrigo de Bastides: Rod-rë'-go dä Bas-të'-daz.
Corozal: Kö-rö-thäl'.	Saboga: Sä-bö'-gä.
Cortez: Kor-täth'.	Sambu: Säm-böö'.
Cristobal: Kris-tö'-bl.	San Blas: Sän Blass (sound final s).
Cruces: Kröö'-thäys.	San Pablo: Sän Pä'-blö.
Cucaracha: Köö-kä-rä'-chä.	Sangre: Sän-grä'.
Culebra: Köö-lä'-brä.	Santiago: San-të-äh'-gö.
Cuna-cuna: Köö-nä'-köö'-nä.	Sapodilla: Sä-pö-dël'-yä.
David: Dä-vëd'.	Taboga: Tä-bö'-gä.
Diego de Nicuesa: Dë-ä'-gö dä Nö-kwä'-sä.	Tamale: Tä-mä'-lä.
Dolega: Dö-lä'-gä.	Torres: Tor'-räz.
Doracho Changina: Dö-rä'-chö <i>Chän-gë'-nä.</i>	Tortuga: Tor'-töö-gä.
Encisco: En-thiss'-co.	Tumaco: Töö-mä'-kö.
Espinosa: Es-pë-nö'-sä.	Tuyra: Twë-rä.
Felipe: Fë-lë'-pä.	Valdivia: Val-dë'-vë-ä.
Gamboá: Gam-bö'-ä.	Vasco Nuñez de Balboa: Vass'-kö Nöön'-yäh dä Bal-bö'-ä.
Gatun: Gä-töön'.	Venta Cruces: Ven'-tä Kroo'-thäys.
Geronimo: Hair-on'-ë-mö.	Vera Cruz: Vair'-ä Croöth.
Gorgona: Gor-gö'-nä.	Veragua: Vair-ä'-gwä.
Granada: Grä-nä'-dä.	

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INTRODUCTION

PANAMA. They say the word means "a place of many fishes," but there is some dissension about the exact derivation of the name of the now severed Isthmus. Indeed dissension, quarrels, wars and massacres have been the prime characteristics of Panama for four hundred years. "A place of many battles" would be a more fitting significance for the name of this tiny spot where man has been doing ceaseless battle with man since history rose to record the conflicts. As deadly as the wars between men of hostile races, has been the unceasing struggle between man and nature.

You will get some faint idea of the toll of life taken in this conflict if from Cristobal you will drive out to the picturesque cemetery at Mount Hope and look upon the almost interminable vista of little white headstones. Each marks the last resting place of some poor fellow fallen in the war with fever, malaria and all of tropic nature's fierce and fatal allies against all conquering man. That war is never ended. The English and the Spaniards have laid down their arms. Cimmaroon and conquistadore, pirate and buccaneer no longer steal stealthily along the narrow jungle trails. But let man forget for a while his vigilance and the rank, lush growth of the jungle creeps over his clearings, his roads, his machinery, enveloping all in morphyic arms

of vivid green, delicate and beautiful to look upon, but tough, stubborn and fiercely resistant when attacked. Poisoned spines guard the slender tendrils that cling so tenaciously to every vantage point. Insects innumerable are sheltered by the vegetable chevaux-de-frise and in turn protect it from the assaults of any human enemy.

Given a few months to reestablish itself and the jungle, once subdued, presents to man again a defiant and an almost impenetrable front.

We boast that we have conquered nature on the Isthmus, but we have merely won a truce along a comparatively narrow strip between the oceans. Eternal vigilance will be the price of safety even there.

If that country alone is happy whose history is uninteresting, then sorrow must have been the ordained lot of Panama. Visited first by Columbus in 1502, at which time the great navigator put forth every effort to find a strait leading through to the East Indies, it has figured largely in the pages of history ever since. Considerable cities of Spanish foundation rose there while our own Jamestown and Plymouth were still unimagined. The Spaniards were building massive walls, erecting masonry churches, and paving royal roads down there in the jungle long before the



Photo by H. Pittler. Courtesy American Geographic Magazine, Washington.
THE SENTINEL TREE

palisades and log huts of Plymouth rose on the sandy shores of Cape Cod Bay. If the ruins of the first city of Panama, draped with tropical vines, are all that remain of that once royal city, its successor founded in 1673 still stands with parts of the original walls sturdily resisting the onslaught of time.

It appears there are certain advantages about geographical littleness. If Panama had been big the eyes of the world would never have been fastened upon it. Instinctively Columbus sought in each of its bays, opening from the Caribbean that strait which should lead to far Cathay. Seeking the same mythical passage Balboa there climbed a hill where

"— with eagle eyes,
He star'd at the Pacific—and all his men
Look'd at each other with a wild surmise
Silent upon a peak in Darien."

Hope of a natural strait abandoned, the narrowness of the Isthmus made it the shortest route for Cortez, Pizarro and other famous Spanish robbers and murderers to follow in their quest for the gold of the Incas. As the Spaniards spoiled Peru, so the buccaneers and other pirates, belonging to foreign nations, robbed and murdered the Spaniards. The

gold fever filled the narrow Isthmus full of graves, and of moldering bodies for which there was not even hasty sepulture. In time the Peruvian hoards were exhausted, Spaniards and Englishmen, buccaneers and pirates vanished. Then came a new invasion—this time by a nation unknown in the days of the Great Trade and the Royal Road. Gold had been discovered in California, and now troops of Americans fought their way through the jungle, and breasted the rapids of the Chagres River. They sought gold as had Pizarro and Cortez, but they sought it with spade and pan, not with sword and musket. In their wake came the Panama Railroad, a true pioneer of international trade. Then sprung up once more the demand for the waterway across the neck which Columbus had sought in vain.

The story of the inception and completion of the canal is the truly great chapter in the history of Panama. Not all the gold from poor Peru that Pizarro sent across the Isthmus to fatten the coffers of kings or to awaken the cupidity and cunning of the buccaneers equals what the United States alone has expended to give to the trade of the world the highway so long and so fruitlessly sought. An act of unselfish bounty, freely given to all the peoples of the earth, comes to obliterate at last the long

record of international perfidy, piracy and plunder which is the history of Panama.

This book is being written in the last days of constructive work on the Panama Canal. The tens of thousands of workmen, the hundreds of officers are preparing to scatter to their homes in all parts of the world. The pleasant and hospitable society of the Zone of which I have written is breaking up. Vil-



SCENE ON OTOOQUE ISLAND, PANAMA BAY



THE RANK, LUSH GROWTH OF THE JUNGLE

lages are being abandoned, and the water of Gatun Lake is silently creeping up and the green advance guard of the jungle swiftly stealing over the forsaken ground. While this book is yet new much that I have written of as part of the program of the future will indeed have become part of the record of the past.

I think that anyone who visited the Canal Zone during the latter years of construction work will have carried away with him a very pleasant and lively recollection of a social life and hospitality that was quite ideal. The official centers at Culebra and Ancon, the quarters of the army at Camp Otis and the navy and marine corps at Camp Elliott were ever ready to entertain the visitor from the states and his enjoyment was necessarily tinged with regret that the charming homes thrown open to him were but ephemeral, and that the passage of the

first ship through the canal would mark the beginning of their dismantling and abandonment. The practiced traveler in every clime will find this eagerness of those who hold national outposts, whether ours in the Philippines, or the British in India and Hong Kong, to extend the glad hand of welcome to one from home, but nowhere have I found it so thoroughly the custom as on the Canal Zone. No American need fear loneliness who goes there.

In the chapter on "Social Life on the Canal Zone" I have tried to depict this colonial existence, so different from the life of the same people when in "the states" and yet so full of a certain "homineness" after all. It does not seem to me that we Americans cling to our home customs when on foreign stations quite so tenaciously as do the British—though I observed that the Americans on the Zone played baseball quite as religiously as the

British played cricket. Perhaps we are less tenacious of afternoon tea than they, but women's clubs flourish on the Zone as they do in Kansas, while as for bridge it proceeds as uninterruptedly as the flow of the dirt out of the Culebra Cut.

Nobody could return from the Zone without a desire to express thanks for the hospitalities shown him and the author is fortunate in possessing the opportunity to do so publicly. Particularly do I wish to acknowledge indebtedness or aid in the preparation of this book to Col. George W. Goethals, Chairman and Engineer in Chief, and to Col. W. C. Gorgas, Commissioner and Chief Sanitary Officer. It goes without saying that without the friendly aid and coöperation of Col. Goethals no adequate description of the canal work and the life of the workers could ever be written. To the then Secretary of War, Hon. Henry L. Stimson, under whose able administration of the Department of War much of the canal progress noted in this book was made, the author is indebted for personal and official introductions, and to Hon. John Barrett, one time United States Minister to Colombia and now Director General of the Pan American Union, much is owed for advice and suggestion from a mind richly stored with Latin-American facts.

On the Canal Zone Hon. Joseph B. Bishop, Secretary of the Isthmian Canal Commission, Hon. Maurice H. Thatcher, Civil Governor, and Mr. H. H. Rousseau, the naval member of the Commission, were particularly helpful. Thanks are cordially extended to Prof. F. A. Gause, the superintendent of schools, who has built up on the Canal Zone an educational system that cannot fail to affect favorably the

schools of the surrounding Republic of Panama; to Mr. Walter J. Beyer, the engineer in charge of lighthouse construction, and to Mr. A. B. Dickson who, by his active and devoted work in the development of the Y. M. C. A. clubs on the Zone, has created a feature of its social life which is absolutely indispensable.

The illustration of a book of this nature would be far from complete were the work of professional photographers alone relied upon. Of the army of amateurs who have kindly contributed to its pages I wish to thank Prof. H. Pittier of the Department of Agriculture, Prof. Otto Lutz, Department of Natural Science, Panama National Institute; Mr. W. Ryall Burtis, of Freehold, N. J.; Mr. Stewart Hancock Elliott, of Norwalk, Conn.; Mr. A. W. French, and Dr. A. J. Orenstein of the Department of Sanitation.

The opening of the Panama Canal does not merely portend a new era in trade, or the end of the epoch of trial and struggle on the Isthmus. It has a finality such as have few of the great works of man. Nowhere on this globe are there left two continents to be severed; two oceans to be united. Canals are yet to be dug, arms of the sea brought together. We may yet see inland channels from Boston to Galveston, and from Chicago to New York navigable by large steamships. But the union of the Mediterranean and the Red Sea at Suez, and the Atlantic and Pacific at Panama stand as man's crowning achievements in remodeling God's world. As Ambassador James Bryce, speaking of the Panama Canal, put it, "It is the greatest liberty Man has ever taken with Nature."



RUINS OF OLD PANAMA

CHAPTER I

THE FRONT DOOR TO PANAMA



HE gray sun of a bitter February day was sinking in a swirling sea as the ship doggedly plowed its way southward along the New Jersey coast. One after another the beacons that guard that perilous strip of sand twinkled out, and one after another voyagers unused to ocean's stormiest moods silently disappeared into secretive cabins. "It may be a stern and rockbound coast," said one lady with poetic reminiscence, "but I wish I was on it!" For it must be set down as a melancholy truth that the voyage from New York to Colon is as a rule tempestuous.

Most who seek the Canal Zone as mere sight-seers will choose winter for the trip, at which time wintry gales are the rule as far south as the Bahamas—after which the long smooth rollers of the tropical ocean will sufficiently try the unaccustomed stomach even though the breezes which accompany them be as mild as those of Araby the blest. In brief, to reach in winter our newest possession you must brave the ordinary discomforts of a rough voyage, and three days of biting cold weather as well, unless you sail from New Orleans, or the terminus of Mr. Flagler's new over-sea railroad at Key West.

Despite its isthmian character, the Canal Zone, Uncle Sam's most southerly outpost, may be called an island, for the travelers' purpose. True it is bordered on but two sides by water, and thus far violates the definition of an island. But it is only to be reached by water. The other two sides are walled in by the tangled jungle where vegetation grows so rank and lush that animal life is stunted and beaten in the struggle for existence by the towering palms, clustering ferns and creeping vines. Only things that crawl on their bellies like the serpent accursed in Eden grow to their fullest estate in this network of rustling green. Lions there are, by the talk of the natives at least, but when you encounter them

they turn out to be mere stunted specimens of our northern wild cat. The deer, rarely met, are dwarfed but are the largest animals to be found in the jungle, though one hears reports of giant boas. Indeed the remnants of the age of reptiles are large to our eyes, though puny in comparison with the giants that scientists christened, long centuries after they were extinct and unable to protest, with such names as ichthyosaurus. You will still find lizards or iguana, three to five feet long, if your search of the jungle be thorough. The tapir, or ant eater, too, grows to huge size. But it is not dread of wild animals that keeps man from penetrating the jungle. The swift growing and impenetrable vegetation blocks the paths

as fast as cut, and he who would seek the Canal Zone must follow the oldest of highways, the sea.

If New York be the port of departure, several lines offer themselves to the traveler, and soon



TREE GROWING OUT OF A CHIMNEY IN JAMAICA