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Cover: Water plant, Bogotá, Colombia; Indian huts, Andes mountains; Reclaimed swamp, and air view of river basin, Brazil; Apartment house, Buenos Aires; cattle, São Paulo, Brazil; Scene in the Chilean lake region; Loja, Ecuador; Water front of Buenos Aires, Argentina. (Photographs courtesy of Dr. Mario Pinotti of Brazil; The Pan American Union; Dr. Henry Hanson, Traveling Representative, Pan American Sanitary Bureau; and various National Departments of Health.)
HEALTH AND LIVING CONDITIONS IN LATIN AMERICA*

The health and living conditions of any country depend on a great many factors: climate, including altitude; population, including density; education; industries; available food supply; ease of communications; economic situation; customs and traditions; and the amount of success which has been obtained in dealing with any factors which are unfavorable. This is true of Latin America as it is of any other part of the world.

Climate.—One of the greatest factors influencing health and living conditions is climate; and this in turn often depends on altitude. Whereas the North American continent has an enormous extent of wide, fertile, well-watered plain, in the temperate zone, much of Latin America is exceedingly mountainous, and the widest part of the continent lies on the Equator, so that the lower lands are tropical jungle. Below this area, in the temperate zone, there is indeed a region of fertile country much on the order of the United States east of the Mississippi—the coastal provinces of Argentina. Inland these are succeeded by treeless, dry plains where farming is not possible except in irrigated regions. The western part of this temperate zone is crossed by the highest ranges of the Andes mountains. The more or less barren plains and plateaus and the mountains extend on south, becoming always narrower, until the tip of the continent is reached—Tierra del Fuego and the Straits of Magellan.

The 20 countries constituting Latin America offer a good deal of individual variation. Mexico may be roughly described as having a dry northern and central region, with mountains on both edges. Her southern territory extends into the tropical areas of Yucatan and Quintana Roo. Guatemala, Honduras, El Salvador, Nicaragua, and Costa Rica, the Central American countries, offer the contrast of high mountain peaks and plateaus, with a pleasant and refreshing climate, and hot, tropical lowlands. This is also true of Panama, though the inhabited regions are not as mountainous. Colombia, Venezuela, and Ecuador offer every variety of climate, from the tropical coast areas to the high, cold plateaus of the interior. Bolivia's more settled region is high in the mountains—La Paz, at 12,700 feet above sea level, is one of the highest capitals, if not the highest, in the world—so high, in fact, that a second capital, Sucre, was founded at a lower altitude. Yet the southeastern part of Bolivia, down into the Chaco, becomes hot and tropical. Brazil's great area includes much tropical forest and jungle, cut up by rivers which form swamps near the sea. In the southern states there are grasslands suitable for stock-raising; and there is also a considerable extent of desert area in the central northeast. Peru, mainly mountainous, has a large, tropical inland lowlands region known as the Oriente; and a desert strip between her mountains and the sea, interspersed with fertile river valleys. The northern part of Chile is desert; the central part consists of mountains and fertile river valleys; and the southern part becomes more broken up by mountains, and is a forest and sheep and cattle country. Argentina, as already mentioned, has

* By Shirley Baughman O'Leary, Librarian, and A. A. Moll, Secretary, Pan-American Sanitary Bureau.
a fertile, low coast, dry central plains, and is bordered on the west by the Andes
mountains. Uruguay and Paraguay are fairly low, but the former enjoys a more
or less temperate climate. Paraguay extends into the hot forest regions of the
Chaco. The other three Republics—Cuba, Haiti, and the Dominican Republic,
are tropical islands whose climate is modified by the ocean and by mountains.

As may be imagined, mountains and jungle, swamps and desert, do not make for
ease of travel and communications, or for rapid settlement and development.
They also render extremely difficult the bringing of education and of health serv-
ices to the large numbers of native Indians inhabiting some parts of Latin
America, notably Mexico, parts of Central America, Ecuador, Bolivia, Peru,
Colombia, Brazil, and Venezuela.

Of the 20 Latin American Republics, only three, Argentina, Chile, and
Uruguay, may be regarded as lying in the temperate zone, and parts of these,
such as the northern tip of Argentina, extend into the tropics. The other 17,
including the Caribbean islands, are tropical or subtropical, except where the
climate is affected by high altitudes, as is particularly the case in some regions
of Colombia, Bolivia, Ecuador, Peru, Venezuela, Mexico, and Central America.
The ocean breezes also lessen the effects of tropical heat in many places.

Birth and death rates.—A great deal of difference may naturally be
expected in such indices of health conditions as birth and death rates.
The birth rate ranges from 19.9 in Uruguay to 43.05 in Costa Rica; the
general death rate from 10.3 in Uruguay to 24.6 in Chile; the infant
death rate from 95.6 in Uruguay to 267 in Bolivia, and the tuberculosis
death rate from 46.6 in Colombia to 276 in Chile, in the countries for
which figures are available for the country as a whole.¹

Care of Health.—Questions are constantly being asked as to what
health precautions should be taken by travelers in Latin America. It
is practically impossible to answer such an inquiry in a few words,
particularly since a great deal depends on the area to be visited and the
sanitary conditions there. It may be stated very generally, however,
that the chief factors to be guarded against are unsafe water and milk,
contaminated food, and disease-transmitting insects. The traveler
will therefore act wisely in getting vaccinated against typhoid fever,
boiling all drinking water or using bottled waters, avoiding the use of
milk when he is not certain of its purity, and preventing insect bites
through the use, for example, of mosquito netting. Vaccination against
smallpox is essential and is in fact required by nearly all countries, and
in the case of children, diphtheria inoculation must be considered.²

¹ These figures must in some cases be considered subject to correction, since it should always be re-
membered that vital statistics are affected by the completeness of local reports and by the accuracy of
population estimates. As compared with the United States as a whole, these rates (with a few exceptions,
such as the Uruguayan death rate) will generally be found to be higher, and in some cases, much higher.
Birth and general death rates are per 1,000 population; infant death rate, per 1,000 live births; tuberculosis
death rate, per 100,000 population. Figures are for 1938 or 1939. For the United States, 1938, the birth
rate was 17.8; death rate 10.6; infant death rate, 50.9; tuberculosis death rate (1937), 53.6. Brasil, Haiti,
and the Dominican Republic are not included in the range of rates because figures for the whole country
are incomplete. See Pan American Sanitary Bureau Publication No. 145, Vital Statistics of the American
Republics, 16 pp.

² See Publication No. 96 of the Pan American Sanitary Bureau: "Health Suggestions for Travelers
in the Americas," by B. J. Lloyd.
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Health problems.—Health problems in the temperate area of Latin America are somewhat similar to those of the United States. In tropical and semi-tropical countries they approximate most closely the situation in the Southern States, and include malaria, intestinal parasites, water-borne diseases (typhoid, dysentery), and of course tuberculosis and venereal diseases. In some countries smallpox, typhus, leprosy, yaws, carate or pinto, snake bites, Chagas' disease (American trypanosomiasis), and jungle yellow fever are also important health problems. Verruga Peruana, the "São Paulo wild fire" or epidemic pemphigus, onchocerciasis, and hydatidosis may be considered more or less regional diseases because of their limited extent to date; typhus fever, plague, and yellow fever are also confined to limited areas. In all regions, safe water and milk supplies are basic public health considerations. Child welfare and nutrition are also obviously of universal importance.

Chief causes of death.—The chief causes of death in Latin America as a whole are tuberculosis, diarrhea-enteritis (especially in children under two), heart disease, the pneumonias, and cancer, though in certain areas malaria and intestinal parasites head the list. Other important causes are disease of first infancy including congenital defects, cerebral hemorrhage, kidney and liver affections, whooping cough, measles, influenza, diphtheria, typhoid fever, syphilis, and diseases of pregnancy. In some districts accidents have risen to sixth or seventh place in the list. It may be of interest to note that in the United States, according to the Census Bureau, 72% of deaths are caused by one of 9 groups of diseases, namely: heart diseases, pneumonias and influenza, cancer, nephritis, cerebral hemorrhage, tuberculosis, congenital defects and diseases of first infancy, accidents, and diabetes.

Hookworm and malaria.—Those who know something of the hookworm and malaria problems in the southern United States, will realize that those Latin American countries with similar climatological areas have a real task before them. A great deal of work has been and is being done, including the installation of sanitary latrines, examination and treatment of school children, and health education of the public, to combat hookworm; and draining, oiling, filling in and otherwise destroying mosquito-breeding places, examination of school children and other groups, treatment, and education, in combating malaria.1

1 The Rockefeller Foundation has given effective help in hookworm control campaigns in several Latin American countries, and also in malaria work. (See Annual Reports, International Health Division Rockefeller Foundation.) The Malaria Committee of the Pan American Sanitary Bureau, which is composed of outstanding malariologists from Latin America and the United States, is working on a program designed to make the Committee a coordinating center for malaria information in the Americas. Mention may be made here of the intensive control campaigns in Brazil, Mexico, and Chile, resulting in the practical elimination of malaria from the two valleys in Chile where it existed, from a large river basin area in Brazil, and from certain old foci in Mexico. The work done in Brazil to prevent the spread of the Anopheles gambiae mosquito, a malaria carrier from Africa which is more dangerous than any native species, is of international importance. Argentina, Venezuela, Cuba, Costa Rica, Panama, and a number of other countries are doing good work.
Smallpox.—A number of Republics, among them Argentina, Chile, Costa Rica, Cuba, Guatemala, Panama, and Uruguay, have practically no smallpox, due to efficient vaccination and revaccination. Other countries are carrying on regular vaccination programs and have only occasional outbreaks, among individuals who have somehow escaped being vaccinated. Still others have a good deal of smallpox, mostly among Indians living in the interior whom the health department has been unable to reach.

Diphtheria.—Many countries in Latin America vaccinate their school children against both smallpox and diphtheria. The Dominican Republic was the first country in the world to make diphtheria immunization compulsory, and some Argentine Provinces also require it.

Tuberculosis.—Latin American countries are combating tuberculosis with sanatoria for the sick, preventoria for children who have been exposed to the disease, vacation colonies for weak and undernourished children, programs for the improvement of housing and nutrition (sometimes carried out in connection with the social security systems. See below), and case-finding surveys, with testing and X-rays of school children, industrial and other groups, and education. Strong and active tuberculosis societies (the oldest is the Brazilian, founded in 1900) supplement the efforts of governmental agencies. The Government of Brazil now has under way a vast program of sanatorium construction; Cuba is rapidly completing a similar program. Argentina and Venezuela are among other countries which have done and are doing a great deal in this field.

Venereal diseases.—The venereal disease control campaigns in Latin America include legislation requiring pre-marital examinations, in several countries; blood tests of pregnant women; establishment of diagnostic and treatment centers; education, and similar measures, much along the line of what is being done in the United States.

Yellow fever.—Those countries in which yellow fever is a potential menace maintain their important cities and their sea and air ports free of mosquito-breeding places, so that should a case of the disease, or an infected mosquito, be introduced, it could not spread. Personnel of airplanes have been vaccinated against yellow fever, as have also millions of individuals living in the area in which jungle yellow fever is found. Another measure is the establishment of “viscerotomy posts” in convenient locations, to which specimens of liver tissue from the bodies of persons who have died suddenly of a suspicious fever may be

4 The first vacation colony in Latin America appears to have been the one founded in Argentina in 1903, which was followed by others in Chile (1904), Cuba (1911), Brazil (1915), Colombia, Paraguay, Peru (1934), Uruguay, and Venezuela. The first preventorium for children who have been exposed to tuberculosis was opened in Uruguay in 1912, and one was established in Argentina in 1919. Other countries have followed suit.

5 With the cooperation of the Pan American Sanitary Bureau and the Rockefeller Foundation. (See Annual Reports of both.) The long and efficient assistance of the Rockefeller Foundation in yellow fever research and control in Brazil and elsewhere, particularly Africa, is world-famous.
sent for examination to determine whether or not their illness was yellow fever. Protection-test surveys have been made of many areas in Latin America where it was thought that yellow fever might exist.

**Water supplies.**—The Latin American countries are combating water-borne diseases through the improvement of water and milk supplies (which has been so effective in the eradication of such diseases in the United States), through education, and, in the case of typhoid, through vaccination. Argentina and Uruguay have for years carried on water-supply improvement programs, so that most, if not all their larger cities today have safe and modern water supplies. A number of them have pasteurized milk, and modern sewage disposal systems. Mexico and Brazil (in the latter the State of Sao Paulo is particularly advanced in this respect) have concentrated on this problem in recent years, and are rapidly installing modern systems in their most important cities. Mexico is also developing several projects which will furnish good water to a number of small rural towns through a single system. (One such system supplies 18 towns.) Colombia has modern plants in several cities. Chile, Peru, and Ecuador are also working to improve their water supplies. Some of the Central American countries have modern installations. Costa Rica has recently adopted a law placing all public water supplies under national control.

The improvement of sanitary conditions in the large open-air markets in many Latin American countries, has received attention. Even travelers do not always realize the possibilities of infection in delicious-looking but fly-covered foods which have been exposed, not only for sale, but also to the dust of the street.

**Child and Maternal Welfare.**—The welfare of children and their mothers has been receiving constantly increasing attention in all of Latin America. Mother and child clinics, milk stations, day nurseries, hospitals, legislation assuring the working mother paid maternity leave and other protection, school lunches, visiting nurse services, and a great deal of educational work including special school programs, healthy child contests (In a recent Colombian contest, the first prizes for both boy and girl winners were fine cows—an award which will benefit the whole family), baby weeks, and similar measures, are all a part of the program.

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6 In some cities with good public water supplies, there is still danger because of the use by some persons of water from private, polluted wells or cisterns. The Pan American Sanitary Bureau has cooperated in the improvement of water supplies, sewage disposal systems, garbage removal, and markets, through the services of its Sanitary Engineers. (See Annual Reports of the Bureau.)

Nutrition.—Latin Americans are deeply interested in improving the nutrition of their people. Argentina, Chile, and Uruguay have taken the lead in this movement, but the other Republics are gradually joining them. Argentina's National Institute of Nutrition has been active for a number of years. A prominent Uruguayan has devoted much of his life to the promotion of better nutrition, not only in his own country, but in all America. An interesting feature of the nutrition programs in Latin America is the "popular restaurant," which furnishes balanced meals at low cost, and which is operated by the government, for instance, in Peru, Uruguay, and Venezuela. School gardens are receiving much attention, since it is realized that the school garden provides the child with some of the foods, particularly vegetables, which he needs, in addition to educating him in the ways of growing things which are good for him to eat. School lunches are a part of the nutrition as well as of the child-welfare programs. Latin Americans are trying to educate their people to make the best possible use of the native foods—many of which are nourishing but have never been a large part of the usual diet.

Social Security and Industrial Hygiene.—Few North Americans are aware that the oldest social security system in this hemisphere is that of Chile, inaugurated in 1924 and now embracing more than one-fourth of the population. Ecuador, Peru, and Cuba have social security programs inaugurated in 1935, 1936, and 1937, and other countries are studying the possibility of introducing such programs. Many of them have already put into effect certain features of such a program, including maternity and sickness assistance. There are private and public retirement pension systems in Brazil, Argentina, Uruguay, and other countries, some of them in existence for many years, and nearly all have some type of workmen's compensation laws. A good deal of attention is also being paid to industrial sanitation, accident prevention, medical care for workers, healthful housing, and other phases of industrial hygiene.

Dr. Justo F. González, who is a member of the Nutrition Committee of the Pan American Sanitary Bureau. The Committee was created in 1940, when the increasing volume of reports and emphasis on nutrition in Pan American Sanitary Conferences and in the work of the Bureau made evident the need for such a Committee. Its creation had been recommended by previous Sanitary Conferences. (See Annual Report of the Bureau, 1939-40).

School gardens date back to 1850 in Argentina; in recent years there has been a renewed interest. Cuba and the Dominican Republic have extensive programs, and other countries are contemplating similar action. Free milk for school children was furnished in many countries, and school lunches or breakfasts were provided, during the 1920s, and school lunch programs now operate in Argentina, Colombia, Chile, Ecuador, Costa Rica, Uruguay, Venezuela, and probably other countries. (See: "The Improvement of Child Nutrition in Latin America," Pan American Sanitary Bureau, in press.)

It may with reason be claimed that legislation for the protection of workers dates back to the early days of the Spanish conquest, when royal ordinances concerning the treatment of Indian labor were promulgated. The Ordinances of 1513 for Hispaniola and Puerto Rico provided that Indian women were to be given lighter tasks during the later months of pregnancy, and for several months after the birth of the child.
The social security systems, such as that in Chile exert a good deal of influence on health conditions, not only through the financial benefits to various classes of people, but also through the preventive medical care provided by the systems, with their diagnostic clinics, paid rest provisions, hospitals, sanatoria and educational work. Furthermore, many of them invest their funds in model housing projects. They are also interested in the improvement of nutrition, and most of them also carry on special campaigns against tuberculosis and venereal diseases.11

Hospitals.—The early Spanish colonists brought Spain’s tradition of welfare institutions with them, and hospitals were soon established in the various colonies both by the governmental representatives and by religious orders. The Dominican Republic had a hospital before 1503; Puerto Rico’s first was established about 1511; Panama’s about 1521, and many others followed. The oldest hospital in the Americas still functioning is that founded in Mexico City by Cortés in 1524. In contrast to the situation in North America, where hospitals are largely privately managed and supported, hospitals in Latin America are mainly governmental (national, state or municipal) institutions often financed by lotteries. Some of them are maintained in connection with social security systems. Treatment is nearly always free. It is recognized that the number of hospitals and beds needs to be increased, for several reasons, including an increased population, and a greater use of hospitals by classes which formerly regarded them as being for impoverished persons only. Argentina has long occupied a leading position both from the viewpoint of the number of hospitals in proportion to her population, and in regard to their up-to-date equipment. Other countries which have done and are doing a great deal in the way of improving existing hospitals are Venezuela, Brazil, Peru, Chile, Mexico, and Colombia. Some steps are being taken in all the Latin American countries.12

Physicians.—Practically all the larger cities of Latin America are well provided with competent physicians and dentists, some of whom speak English. The situation in the interior of many countries is less favorable, although various steps are being taken to bring medical attention to the rural areas. The establishment of rural hospitals and

11 See “Social Security in its Medical and Health Aspects” (Pan American Sanitary Bureau, August 1938, mimeographed.) In view of the growing interest in low-cost, healthful housing, it is interesting to recall that in 1903 the Director of Health of Peru appointed a special commission to study housing conditions and to present plans for the construction of workers’ dwellings. Argentina was also a pioneer in this field. The Pan American Housing Congress held in Buenos Aires in 1938 afforded evidence of the interest of Latin America in this problem. Among those countries in which the greatest amount of actual construction of model houses and apartments for persons with low incomes has been carried out are Chile, Peru, Mexico, Colombia, Argentina.

health centers with a well-trained medical and nursing staff is assisting in the solution of this problem.

Scientific Institutions.—While a number of Latin American countries had their own bacteriological laboratory, smallpox vaccine laboratory, and Pasteur (rabies) institutes long before 1900, the turn of the century saw the establishment of a number of scientific institutions which were to become world-famous, such as the Butantan and Oswaldo Cruz Institutes in Brazil, both originally established to manufacture antiplague serum, the Bacteriological Institute of Argentina, and the Institute of Hygiene of Mexico. More recent years have seen the opening of the Cancer Institute of Argentina (1923), the Institute of Biology of Mexico (1929), the Federico Lleras Institute of Medical Research in Colombia (1934), the Peruvian National Institute of Hygiene (1938) and the Institute of Public Health and Tropical Diseases of Mexico (1939), as well as the Bacteriological Institute of Bolivia, and numerous other institutions, some highly specialized, in these and other countries.

Medical Schools.—The first chair of Medicine in the Americas was established in Mexico in 1580, although medicine had been taught in Santo Tomás University, Santo Domingo, since 1538, and in Mexico in two schools for Indians founded by Bishop Zumárraga and Pedro de Gante. A medical school was authorized in Lima, Peru, in 1551, but not opened until much later. Since that time other schools have been established, and today only two countries (Panama, Costa Rica) have no medical school, and some (Argentina, Brazil, Mexico, Bolivia, Colombia, Chile, Ecuador, Nicaragua, and Venezuela) have several.

Health organization.—The importance of public health in the development and progress of the nation is recognized throughout Latin America. Every Latin American country has a national department of health; three (Bolivia, Paraguay and Uruguay) have Ministries of Health, and in 12 others (Brazil, Colombia, Costa Rica, Cuba, Chile, Ecuador, Haiti, Mexico, Panama, Peru, the Dominican Republic, and...
Venezuela), the health department is a part of the Ministry of Welfare or Labor (Ministry of Health and Welfare, Ministry of Labor and Hygiene, etc.). A public health career service based on a merit system, has been or is being developed in several countries, and others are studying plans for such a service, since all realize that a change of public health administrative personnel with every national election is far from beneficial. The need for special training is also recognized. Several countries have established schools of public health; others send their physicians, nurses, and sanitary engineers abroad for special public health training. There are also some public health nursing schools.17

To enumerate the special measures taken against special problems of certain countries, such as leprosy, yaws, snake bites, and Chagas' disease, would take too long, as would a description of the antiplague campaigns18; suffice it to say that such measures are being taken. The campaigns successfully waged against such diseases as yellow fever, plague, typhus fever and hookworm disease, have made medical history.

Inter-American cooperation.—Latin Americans have shown an ability to cooperate with each other since the days of the wars for Independence, and several inter-American health conferences were held, usually more or less regional, before the turn of the century.19

Pan American Sanitary Bureau and Conferences.—Since 1902, when the first Pan American Sanitary Conference (which created the Pan American Sanitary Bureau) was held, in Washington, Latin Americans have greatly increased their cooperative health activities. At the Pan American Sanitary Conferences, held every four years in Latin America, and at the Pan American Conferences of Directors of Health (held every four years in Washington, alternating with the Sanitary Conferences), they meet and exchange experiences and views and learn at first hand how their problems are being met in other countries. They decide on what international measures shall be applied to prevent the spread of diseases from one country to another. They suggest ways in which their international institution, the executive organ of the Conferences—namely, the Pan American Sanitary Bureau—may expand its activities so as to be of the utmost use and benefit to all.

In the intervals between Conferences, the international cooperation and spirit of unity are maintained through the Bulletin of the Pan American Sanitary Bureau (Boletín de la Oficina Sanitaria Panamericana, with articles in Spanish, Portuguese, French, and English), which

17 Brief biographies of some of the Latin American health pioneers appear in Publication No. 159 of the Pan American Sanitary Bureau.
18 For a history, in English, of bubonic plague in the Americas, see the series by Moll and O'Leary in Bol. Of. San. Pan., 1940-41 (May 1940 and following issues. To be reprinted.) The Pan American Sanitary Bureau has long cooperated in antiplague work.
keeps its subscribers throughout the Americas informed of what is happening in public health and medicine in all parts of the continent (as well as of the latest developments in other parts of the world); through the Bureau's consultation service, by which queries on all sorts of matters connected with medicine and health are answered; and through its Traveling Representatives (physicians and engineers), who visit Latin America countries when requested to do so by their health authorities, and contribute their advice and assistance to the solving of health problems. Young physicians and nurses come to the United States on scholarships secured through the Bureau, to receive special training in public health or other subjects, and to return and take their places in the public health departments of their own countries.

The Pan American Sanitary Bureau also endeavors to make North Americans acquainted with the progress being made in public health in Latin America, and with the discoveries which are made there in regard to diseases and their treatment. The Library of the Pan American Sanitary Bureau, with its extensive collection of Latin American medical journals and other specialized publications, is a valuable repository of information in its field.

A summary such as this is but a very brief sketch of the "Health and Living Conditions in Latin America." A book could be written on the subject—but no such book has been written. A few suggestions as to where further information may be obtained are given below.

References

Public Health and Medicine

Pan American Sanitary Bureau publications, including:

Boletín de la Oficina Sanitaria Panamericana. Monthly. Free of charge to physicians, nurses, health workers, etc. Available in medical school, University, or public libraries of the larger cities of the U. S. Contains regular reports by national health officers on health conditions in their countries; vital statistics; information on specific diseases, on child welfare, water, milk, and so on. Summaries in English. Most of the material is in Spanish, French, or Portuguese, but serial articles in English on certain subjects are published.

Publication No. 95: Health Suggestions for Travelers in the Americas. 16 pp.
Pub. No. 129: Summary of Proceedings, Tenth Pan American Sanitary Conference. 14 pp. Shows health progress as reported in the more important discussions at this Conference.
Pub. No. 155: Pan American Public Health Quiz, with Answers. (Issued in honor of Pan American Health Day, December 2) Primarily for medical students, but also available to others interested in public health.

See the history mentioned in Note 19; Moll's paper cited in Note 14; and references below.

HEALTH CONDITIONS IN LATIN AMERICA

Pub. No. 159: Some Pan American Pioneers in Public Health. Illustrated. (Carrión, Carter, Chagas Cruz, Espejo, Finlay, Flores, Liébana, Morquio, Penna, Rangel, Reed, Ribas, Unanue, Vargas, Wyman. A mimeographed article on Gorgas is also available.)


Typewritten memoranda on health conditions are available for separate countries, upon request to the Pan American Sanitary Bureau. The country for which information is desired should be specifically named:

Information on tropical diseases and hygiene may of course be found in the standard works in this field such as Manson: "Tropical Medicine"; Stitt: "Diagnostics and Treatment of Tropical Diseases," and Rosenau: "Preventive Medicine and Hygiene"; and in the biographies of such men as Gorgas ("William Crawford Gorgas, His Life and Work"), Ashford ("A Soldier in Science"), Finlay ("Carlos Finlay and Yellow Fever"), and others. "Brazilian Medical Contributions," by Leonidio Ribeiro, contains biographies of outstanding Brazilian scientists, as well as accounts of the work which has been done in several fields.

Climate and Living Conditions


Pan American Union booklets, including "American Nation Series," and "American City Series." Booklets, beautifully illustrated, each descriptive of a Latin American country (or city), including its climate, geography, educational facilities, public buildings, etc. Several of the booklets contain a section on public health prepared by the Pan American Sanitary Bureau. They are five cents each. Address: The Pan American Union, Washington, D. C. Information on cost of living, rates of exchange, products, and so on may be secured from the Division of Financial and Economic Information of the Pan American Union; and on travel, from the Travel Division. The Union also has a Division of Labor and Social Information and other divisions.
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No. 9.—La Profilaxis del Hidroptoeide. 10 páginas.
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No. 28.—Tifoidea: Su Causa y Profilaxis. 4 páginas.
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No. 45.—La Declaración Obligatoria del Embarazo. 10 páginas.
No. 49.—El Diagnóstico de la Fiebre Amarilla. 14 páginas.
No. 51.—Milk. 8 páginas.
No. 52.—Summary of Proceedings, II Pan American Conference of National Directors of Health. 14 páginas.
No. 53.—Vacunación Antidifftérica. 8 páginas.
No. 55.—La Lucha Anti-Larvaria no Impaludismo. 6 páginas.
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