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U. S. DEPARTMENT OF LABOR

JAMES J. DAVIS, Secretary

CHILDREN'S BUREAU

GRACE ABBOTT, Chief

CHILD WELFARE
IN THE INSULAR POSSESSIONS OF
THE UNITED STATES

PART I
PORTO RICO

BY
HELEN V. BARY



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LETTER OF TRANSMITTAL.

UNITED STATES DEPARTMENT OF LABOR,
CHILDREN'S BUREAU,
Washington, September 19, 1923.

SIR: There is transmitted herewith a report on Child Welfare in the Insular Possessions, Part I, Porto Rico.

This study was undertaken at the request of the Department of Education of Porto Rico and took the form of a Children's Year survey, in which demonstration was combined with investigation. The survey was in charge of Helen V. Bary, of the Children's Bureau staff, and she has also written the report.

As this report of developing activities shows, the interest in child welfare touches every branch of the government as well as the private organizations in Porto Rico. The Children's Bureau has never undertaken any piece of work in which the cooperation was more genuine and desire for improvement greater than in Porto Rico.

Respectfully submitted.

GRACE ABBOTT,
Chief.

HON. JAMES J. DAVIS,
Secretary of Labor.

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CHILD WELFARE IN THE INSULAR POSSESSIONS OF THE UNITED STATES.

PART I: PORTO RICO.

INTRODUCTION.¹

Porto Rico, in area the fourth and in population the third largest of the West Indies, was acquired from Spain by the United States in 1898 following the Spanish-American War. Civil government was organized by the Foraker Act in 1900; and in 1917, by the Jones Act, the islanders were granted United States citizenship. The island now has a limited degree of self-government. The legislature and local officials are elected by popular vote, the governor is appointed by the President, and the insular officials are appointed either by the President or by the governor. The island has an elected Resident Commissioner in Washington who has a seat in the House of Representatives but no vote.

Porto Rico² has the oldest European settlements now under the American flag. The island was discovered by Columbus in 1493, was conquered by Ponce de Leon early in the sixteenth century, and remained Spanish territory until 1898. Under Spain the island was governed mainly by military governors. During the periods when Spain was under constitutional and not absolute rule (1812-1814, 1820-1823, 1870-1874, and 1877-1897) Porto Rico had direct representation in the Spanish Cortes, and a few months before the island was taken over by the United States the principle of autonomy was extended to it.

The history of Porto Rico is comparatively uneventful. The early Spanish records state that Ponce de Leon found the island well populated by peaceful tribes of Indians, whom he enslaved in the exploitation of its meager gold deposits. These deposits were soon exhausted, and thereafter Porto Rico served mainly as a military post to guard the Virgin and Mona Channels into the Caribbean Sea. Few settlements were made. Sugar cane was early brought to the island, but this and other agricultural resources were

¹ Historical data here given are from the Census of Porto Rico, 1899 (made by the U. S. War Department); *Historia de Puerto Rico*, by Salvador Brau; and other sources made available through the courtesy of the commissioner of education of San Juan.

² The Indian name of the island is Boriquen. Originally the Spanish named the island San Juan Bautista (St. John the Baptist) and the first settlement Puerto Rico (rich port). When this settlement was moved across the bay the name of San Juan was applied to the city and the island became known as Puerto Rico. By congressional act the name of the island is officially, though incorrectly, spelled Porto Rico.

very little developed until the arrival, beginning in 1815, of Spanish refugees driven out by revolutions in Venezuela, Colombia, and other Spanish colonies, who brought to the island capital, industry, and a knowledge of the cultivation of sugar and coffee.

The Spaniards who came to Porto Rico made the island their home to a far greater degree than those who went to most of the other Spanish-American colonies. After the early Castilian military men came settlers from Andalusia, Galicia, the Asturias, and the Basque Provinces, peaceful people devoted to the monarchy, the church, and stable institutions. The purpose of ruthlessly amassing fortunes to take back to Spain, which caused unrest and rebellion in the other Spanish-American colonies, was held in less degree by the colonists of Porto Rico. The general aspect of Porto Rican civilization was that of a Catholic colony leading a patriarchal life. The attitude of the Spanish Crown toward the island was liberal. With the exception of the gold which Ponce de Leon sent to the King and a few grants to assist in times of war, Porto Rico made no contribution to the mother country. In fact, for years Spain diverted revenue from Mexico and Venezuela to defray the expenses of the government of Porto Rico.

The United States census of 1920 gives the population of Porto Rico as 1,299,809, this number including 948,709 whites, 301,816 mulattoes, and 49,246 negroes. No Indians, classified as such, exist on the island at the present time.³ The early Spanish records state that through war, disease, emigration, enforced labor, and intermarriage the Indians as a distinct race had disappeared within 50 years⁴ of the coming of the Spaniards. Their influence still persists, however, and the Indian cast of features is to-day by no means uncommon.

As early as 1530 a few negro slaves were brought to Porto Rico, and their numbers were slowly increased. There resulted a considerable mixture of races. In Porto Rico the proportion of colored people is less, and relationships have been more free from racial distinctions, than in any of the other West Indies.⁵ The Spaniards permitted the negroes to purchase their freedom upon reasonable conditions, and at the time slavery was abolished,⁶ in 1873, the 257,709 colored population included only 31,635 slaves.

To the Spaniards, Indians, and early negroes have been added French, chiefly refugees from Haiti; a considerable number of Corsicans; negroes from the Virgin Islands; and small numbers of British, Germans, Syrians, Chinese, West Indians, and South Ameri-

³ The Federal census lists no Indians. Insular statistics occasionally classify persons under this heading.

⁴ In 1542 the few remaining Indians were freed by royal decree.

⁵ For a considerable period few Spanish women were brought to Porto Rico.

⁶ By decree, with indemnification of owners (total paid 11,000,000 pesos), and with the provision that the freed slaves enter into contracts to remain in the employ of their former owners or other persons or the State for three years.

cans.⁷ At the present time the commerce of the island is principally with continental United States and this has brought continental Americans, although the number in 1920 (1,617) was less than the number in 1910 (2,303).

While some families have prided themselves upon preserving their blood unmixed the population in general is a product of the mixture of races. The prevailing type is Spanish, with occasional evidence of the addition of Indian or negro blood.

The area of Porto Rico is 3,435 square miles, and its present number of inhabitants makes it one of the most densely populated sections of the country. The accompanying graph shows that of the States only Rhode Island, Massachusetts, and New Jersey, whose inhabitants are supported chiefly by manufacturing, are more thickly settled.⁸ In respect to density of rural population the contrast is especially striking. Virtually without industries, and with a high birth rate, Porto Rico faces a serious problem of overpopulation. The Porto Rican is not a wanderer, but the search for opportunities has sent thousands to the States. A colony of 7,364 is located in New York City, and 4,447 more are scattered through the States. Colonies have been sent to the sugar-cane plantations of Hawaii and Cuba, but not with entire success, as many were sent who had not the pioneering strength to make their way in a new country. Some have gone to Santo Domingo, which is not thickly settled and whose resources have not been exploited. The total number who have emigrated is small compared with the increase in population.

Porto Rico to-day is known to the American people mainly as a tourist resort—an island of great beauty, quaint customs, and old-world charm. The island is little more than 100 miles long and 35 miles wide, but the mountains cut it into picturesque, distinctive valleys and create greater diversity of climate and scenery than is usually to be found in a far larger territory. Around the edge of the island circles the railway. Across the island go splendid highways, winding through the mountains and bringing the rural sections close to the cities. Telegraph and telephone wires bind together the towns and villages, and across the streams have been built bridges that would do credit to any community.

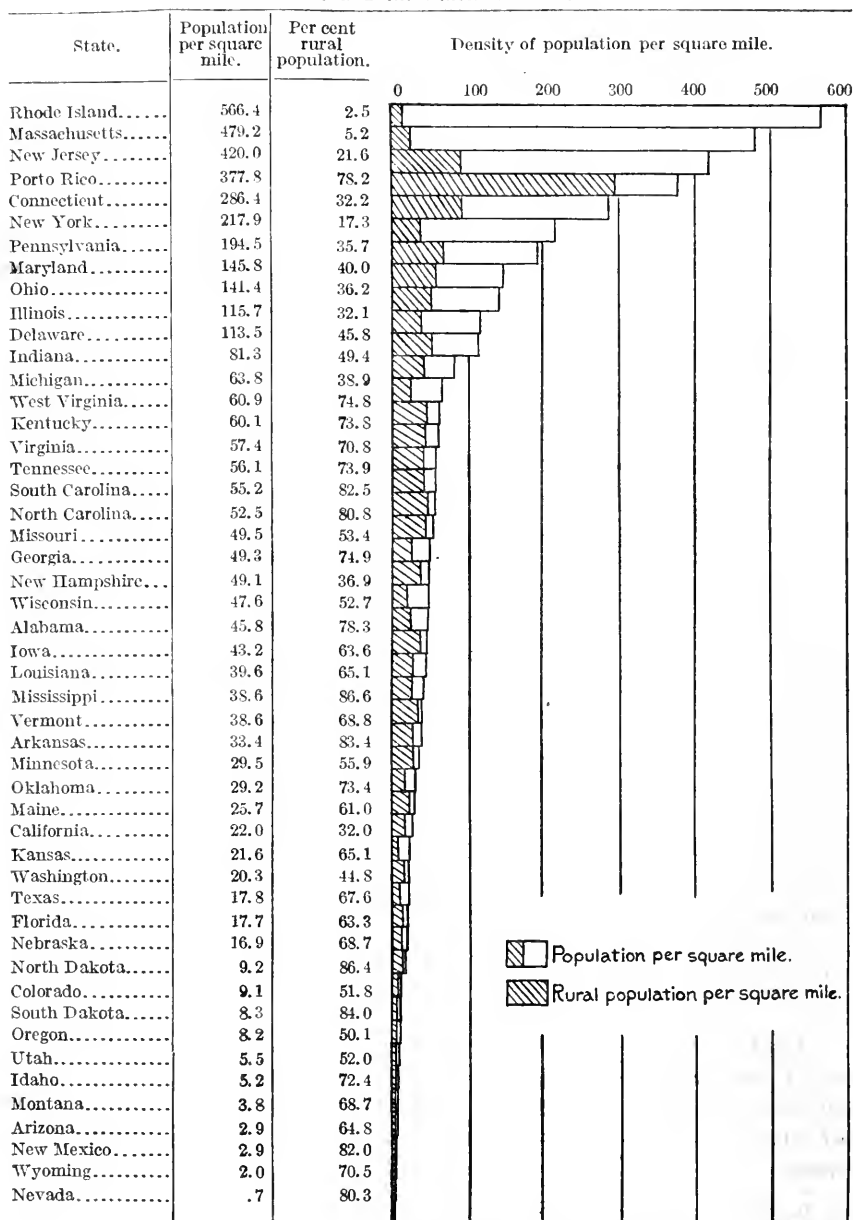
Quickened evolution has made present-day Porto Rico a land of sharp contrasts. Motors of the latest type drive past thatched huts such as were described by the early Spanish explorers, and the finest of continental culture may be found next door to tropical primitiveness.

⁷ In 1920, according to the United States census, Porto Rico had a total foreign-born population of 8,167, and its total population included 8,858 persons claiming Spanish citizenship and 4,136 citizens of other nations.

⁸ Figures for population per square mile, according to the United States census of 1920, are as follows: Porto Rico, 378; New Jersey, 420; Massachusetts, 479; and Rhode Island, 566.

A tropical standard of values is necessarily very different from a northern standard, and a Spanish background different from an American background. In justice Porto Rico must be viewed in a

CHART I.—Comparative density of population and density of rural population in Porto Rico and the States in 1920.



different light from a typical American community, with appreciation of the large cultural contribution the island can make to the Nation as well as of the responsibility of the Nation to Porto Rico.

GENERAL CONDITIONS AFFECTING CHILD WELFARE.

EDUCATION.

From the time when Porto Rico came under American administration great efforts have been made to extend educational facilities as rapidly as possible to all the people. In 1899 only 21,873 of the children on the island were in school, there were no public-school buildings at all, 426 rural barrios (small districts) were without school facilities of any kind, and the rate of illiteracy among those 10 years of age and over was 79.9 per cent. By the year 1921-22 the school enrollment had been increased to 188,959, 621 school buildings had been built,¹ and not a single barrio was without a school. According to the latest available figures,² the island's expenditure on education is larger in proportion to its resources than that of any of the States, although, because of the comparatively small revenues of the island, this represents a smaller amount per inhabitant than that of any of the States.

Until 1921 all the commissioners of education were from the States. They had small staffs of American supervisors and teachers, but the great bulk of the work has been performed by Porto Ricans.

The department of education was organized as a strongly centralized unit, and this plan of control still continues. The island is divided into 41 districts, each in charge of a supervisor responsible to the department. These supervisors have charge of the general management of the schools, the courses of study, and the teachers, who are appointed by the insular department. By means of this machinery it has been possible to establish schools and institute standards much more rapidly and effectively than if more initiative had been expected of local groups. In addition to district supervisors the department has special superintendents of different subjects—such as agriculture, manual training, physical education, home economics, and various academic studies—who travel from district to district strengthening the teaching of their special subjects. In this manner it has been possible to give supplementary training to the teaching force, the majority of whom have not had normal-school training, and gradually to raise the requirements of the profession.

¹ In addition, the schools were renting 1,584 buildings.

² Figures in regard to expenditures of the States in comparison to their wealth in Biennial Survey of Education, 1917-18, U. S. Bureau of Education Bulletin, 1919, No. 90; estimate of the per capita wealth of Porto Rico in 1911 in the Porto Rico Register of 1912; and figures as to the island's expenditures on schools in 1912 in the Report of the Governor, 1912.

The effort to lift the mass of the people out of a state of illiteracy has made the school system the center of a great impulse for progress. The extension of education has been an adventure in service to the people for which the States afford no direct parallel. Young men and women went out into the rural districts, enduring many privations, and worked practically all their waking hours at a very low rate of remuneration. Among the professional and business men, and the women of the more prosperous class, the proportion who have taught in the schools is very large. This has created among the general public a keen interest in the activities and the conduct of the schools, and has also tended to the development within the school system or in close cooperation with it of social activities which in the States are usually developed independently.

At the present time school facilities are still far from adequate, not only in the rural districts but in the towns and cities as well. A compulsory education law has been enacted but can not be enforced until funds are provided for additional buildings and teachers. All over the island children asking for education have to be turned away. For a time practically all applicants were admitted, but the classes were so large that instruction was virtually impossible. Now the double-enrollment plan is generally in use and the number of pupils is limited to 40 for each session. Thorough instruction is not possible under this arrangement, but the plan serves as a means of bringing at least some opportunity for education to the maximum number of children.

In the United States as a whole the annual cost per pupil of public-school education has more than doubled in 20 years.³ In Porto Rico the cost per pupil per annum was \$15.46 in 1900 and has not been increased since that time.⁴ This difference is due largely to the concentration of expenditures on elementary schools,⁵ low salaries, and the increase of attendance by the double-enrollment plan. The total amount spent yearly by the insular government on education has been increased from \$288,098 in 1899 to \$2,929,944 in 1922.

The Federal census of 1920 showed 240,191⁶ children of school age (5-17 years inclusive) in Porto Rico not in school and classed 55 per cent⁷ of the population 10 years of age and over as illiterate.

³ Biennial Survey of Education, 1917-18, p. 54. U. S. Bureau of Education Bulletin, 1919, No. 90.

⁴ Report of the Governor of Porto Rico, 1919, p. 540.

⁵ Eighty-five per cent of all educational funds are spent on elementary education. Report of the Governor of Porto Rico, 1919, p. 539.

⁶ Fourteenth Census of the United States, Vol. III, p. 1208.

⁷ While 55 per cent of the total population 10 years of age and over were classed as illiterate, the effect of the recent improvements in educational facilities is shown by the proportions of the different age groups classed as illiterate, as follows: 10 to 14 years, 31 per cent; 15 to 19 years, 38.2 per cent; 20 to 24 years, 50 per cent; 25 to 34 years, 61.9 per cent; higher age groups, over 70 per cent. The illiteracy rate was higher among the female population than among the male, and higher among the colored than among the white population.



TYPICAL CITY SCHOOL.



TYPICAL RURAL SCHOOL.

The present percentage of illiteracy is not high compared with those of other Latin American populations, but it is far higher than that of any of the States and is a grave handicap to the operation of democratic institutions. For Porto Rico to provide elementary education for all and advanced education according to accepted American standards will necessitate greatly increased funds not available from the present insular revenues.

The general plan of education organized in Porto Rico was modeled after existing systems in the States. Whether this has been the wisest method of attaining the purposes of education has been questioned. Porto Rico is an agricultural country and will undoubtedly remain so. It has three basic problems—poverty, disease, and illiteracy. Under the given conditions a system of education aimed directly at eradicating disease, improving the mode of life, and bettering the methods of farming, as well as at reducing illiteracy, might accomplish greater results than the customary academic training which deals with these other factors only incidentally.

The school buildings in Porto Rico, whether large or small, are as a rule the finest buildings in the community. There has been developed on the island a modern and practical type of building which preserves the distinctive features of Spanish architecture, so well suited to warm climates. Practically all these buildings have assembly rooms which, used for community as well as for school purposes, help to make the school the center of all community activities. The spirit of the people is shown by the fact that in the erection of school buildings land, service, and money have in many instances been donated. In four years the number of sites donated was 58.

The general plan as to language medium in the Porto Rican schools is as follows: In the first four grades instruction is given in Spanish, and English is taught as a special subject; in the fifth grade the language medium is sometimes Spanish and sometimes English; beyond the fifth grade English is used and Spanish is taught as a special subject. Occasionally criticism has been made of this preservation of Spanish in the schools, but with limited funds for education it has been necessary to give the children education in Spanish. All the teachers have some knowledge of English, as have also a considerable number of persons in the cities, although of the whole population 90.1 per cent are unable to speak English.⁸

Naturally, this inability to use English freely restricts communication and understanding between Porto Rico and the mainland. With one exception the newspapers⁹ are published in Spanish, and they reprint less from American journals than they would if trans-

⁸ Fourteenth Census of the United States, Vol. III, p. 1207.

⁹ Nine daily newspapers and several weeklies are published in Porto Rico.

lation were not necessary. A large public library has been established in San Juan and smaller public libraries are found in other cities, in addition to a few excellent collections of books belonging to private organizations. Excepting in the Carnegie Library of San Juan the books are mainly in Spanish. This situation has slowed the process of social development, as the literature on social subjects in Spanish is meager. Very few of the national organizations carrying on public-health and other educational work include Porto Rico in their programs, and their publications, being in English, are not available for general use there; and of the foreign-language material issued in the States very little is in Spanish. This obstacle of language has kept Porto Rico from becoming an integral part of the Nation and from being accepted in spirit as such. The development of the island educationally will and should be along bilingual lines. More English is very much needed; but with the cultural wealth of the Spanish language and traditions and the commercial possibilities of Latin connections, the sacrifice of the Spanish language would be an irreparable loss.

The rural schools cover the first four grades. In the towns work is continued to the eighth, ninth, or tenth grade, and 12 of the cities have high schools. At Rio Piedras is located the University of Porto Rico, which, in addition to its main work as a normal school, has departments of the liberal arts, education, pharmacy, and law, and a college of agriculture and mechanic arts at Mayaguez. For professional training, aside from pedagogy, young people from Porto Rico are now going mainly to the States. A generation ago the trend was to Spain and France. In 1921 the department of education listed 386 students in American institutions, of whom 94 were studying medicine, 58 business, 53 engineering, 30 dentistry, 21 pharmacy, 18 law, 13 the liberal arts, and 3 agriculture, the balance being engaged in elementary, secondary, and miscellaneous collegiate courses. A few years ago large groups of Porto Rican teachers were sent to Harvard and Columbia for summer-school work. In 1922 a large group of teachers of Spanish went from the States to Porto Rico for summer work in Spanish.

HOUSING.

For their better-class houses the Porto Ricans have adapted to local needs the best features of Spanish and American architecture, and the results are attractive and practical. The older houses, following the Spanish type, were constructed of solid masonry and covered with plaster in beautiful colors, with high ceilings, tiled floors, and in the center of the house the characteristic patio. The newer houses consist largely of modern bungalows. The majority of the people, however, are primitively housed.

Three-fourths of the people of Porto Rico live in rural districts not even classed as villages, and very few own any land. Most of them live on the land of some plantation, the great majority in thatched huts, which they themselves build from material on the plantation. So long as they work for the landowner they may have possession of the huts and are considered owners, which explains the census figures showing one home owned for every 10 inhabitants of the island. The classification of virtually all of these homes as free from mortgage does not indicate a condition of general prosperity, but is due to the fact that these thatched huts are so cheap and perishable that they can not be mortgaged. The cost of a hut represents a small amount of material and a few days' labor, the total being valued at about \$20. As work in the principal crops is seasonal, many families are forced to migrate at the end of a few months, and their huts revert to the landowner. This system of housing the workers on the plantation brings the worker nearer to his work and is convenient for the landowner, as it gives him a greater measure of control over the services of the people. On the other hand, with no chance actually to own his home the worker has no sense of permanence and no incentive to improve or beautify his dwelling.

The commonest type of rural house is the thatched hut. The thatch is made of long, tough grass or from the leaves of the palm, the walls are of thatch or are made from the bark of the royal palm, and the floor is of boards raised 1 or 2 feet from the ground. The hut may be roughly partitioned into a sleeping room and a living room, but often it has only one room. The cooking is done on the ground in the rear of the hut, sometimes under shelter and sometimes in the open air. The furniture usually consists of a hammock or two instead of beds, and boxes for chairs. Sleeping on the bare floor is not uncommon. Dishes and utensils are made from gourds. When the huts are new they offer protection from heat and rain, and being raised from the ground they are easily kept clean. However, they are made from unsubstantial material, soon become infested with insect life, and deteriorate rapidly. The early Spanish priests in writing of the life of the Indians described them as living in huts of this character. The Spanish settlers who moved into the mountain districts—practically all of the inland dwellers are white—took up the same mode of life, and have continued it to the present day.

The houses built by the sugar plantation owners for the workers are usually made of more substantial material, sometimes of concrete but commonly of lumber, with zinc roofs, and are usually painted. Houses built by the landowners are placed close together, which makes improvements in sanitation essential. These houses are ordinarily given to the workers rent free. Recently some of the

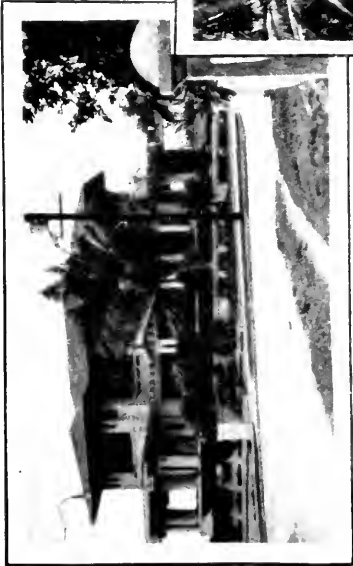
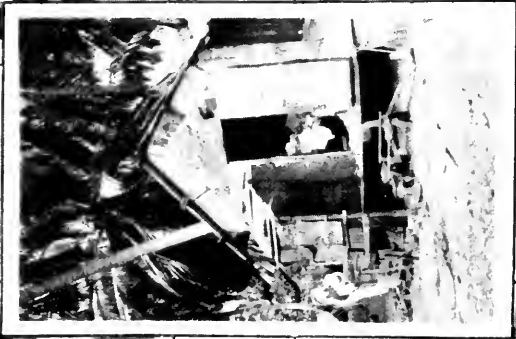
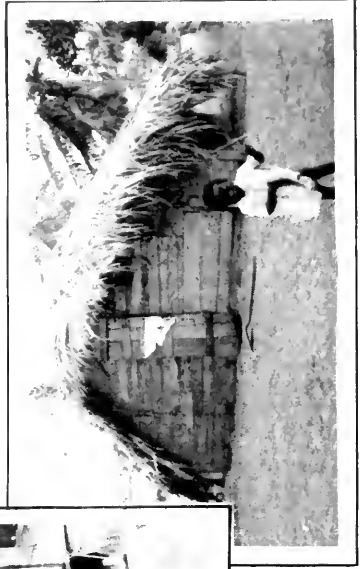
sugar plantations have been erecting excellent one-family houses of concrete of two, three, or four rooms each. The multiple-family plantation houses which were formerly built in order to house as many people as possible with the least expenditure are no longer being constructed, but many are still in use.

Left to himself, the jíbaro (country dweller) builds his hut away from other dwellings in the isolation which alone has made it possible for the people to exist without sanitary facilities. The development of villages means a general improvement in the mode of life. Every village has its school. Community life is started and contacts with the outside world are established. To bring to the scattered populations education, sanitation, medical service, and other essentials of modern existence, it will doubtless be necessary to make specific efforts to organize village life.

Whenever he has any land around his house, the Porto Rican usually plants some kind of garden, but very few make practical use of this land. The gay flowers around the huts are very attractive, but too often the garden consists wholly of flowers. There are several reasons for this. The people have not been educated to eat the green vegetables, which would make a most desirable addition to their present poorly balanced diet. Their sense of impermanence deters them from sowing where they may not reap, and they have no money to hire oxen for breaking the ground or to purchase proper implements for working the soil.

In the larger cities, notably San Juan, the tenement house of three, four, or five stories is found. Some of these old houses were formerly the dwellings of the wealthy. The rooms are large, the ceilings high, and the floors laid with fine Spanish tiles, but now only too often a whole family lives in a single room, cooking and washing in the central court. The usual dwelling of the poorer urban dwellers, however, consists of the one or two room shack, seldom larger than 10 feet square, made from cheap lumber, tin cans, and soap boxes.

Formerly the landowner in the city as well as in the country allowed laborers to occupy ground space without paying rent. In the cities and larger towns a system has grown up among the working classes of renting ground space on which to build their own shacks. In the past 20 years there has been a considerable movement of population from the rural districts into the cities. The landowners began to charge rent for ground space and have found it highly profitable. With the rapid changes in the cities land has acquired great speculative value, and so long as the owners can obtain large returns from renting they are unwilling to sell in small plots. This temporary and speculative condition has resulted in various evils.



TYPICAL GOOD AND BAD HOUSING.



SUGAR-PLANTATION HOUSING.



HOUSES BUILT BY THE MUNICIPALITY OF SAN JUAN AND SOLD ON LONG TERMS TO WORKINGMEN.

The rents charged are often exorbitant. The land is frequently managed by agents and subagents, all deriving profits from the poor renter. The houses are frequently crowded together with virtually no provision for sanitation, cleanliness, or order. The householder usually rents from month to month with no security against unreasonable or even confiscatory increases of rent. He has no incentive to improve his dwelling, as only too often any improvement means an increase in rent. If the landlord wishes to gain possession of the tenant's house he has only to issue an order to vacate the premises, and the tenant must either move the house away or sell for what the landlord chooses to pay.

Many of the municipalities own considerable land within their limits. To meet the needs of the poorer people they began renting this in plots at low prices, and in various instances they permitted "squatting." From this situation the island has advanced to the beginning of a public policy with reference to housing.

In 1917 the legislature passed a law providing that on any public land within a municipality there should be erected houses for working people, which should be built in accordance with all sanitary requirements and rented reasonably or sold on a long-term basis. The city of San Juan has availed itself of this opportunity to construct a modern workingmen's suburb. When these houses were completed the city attempted to abolish certain insanitary sections, but the pressing shortage of houses made this practically impossible. In more than one instance the condemned houses, torn down during the day by the police, were put together again at night by the inhabitants. Aguadilla also has built a workingmen's district, and Ponce has recently adopted a similar project. A cooperative building society is helping the general housing situation by erecting for its members many houses of a more expensive type.

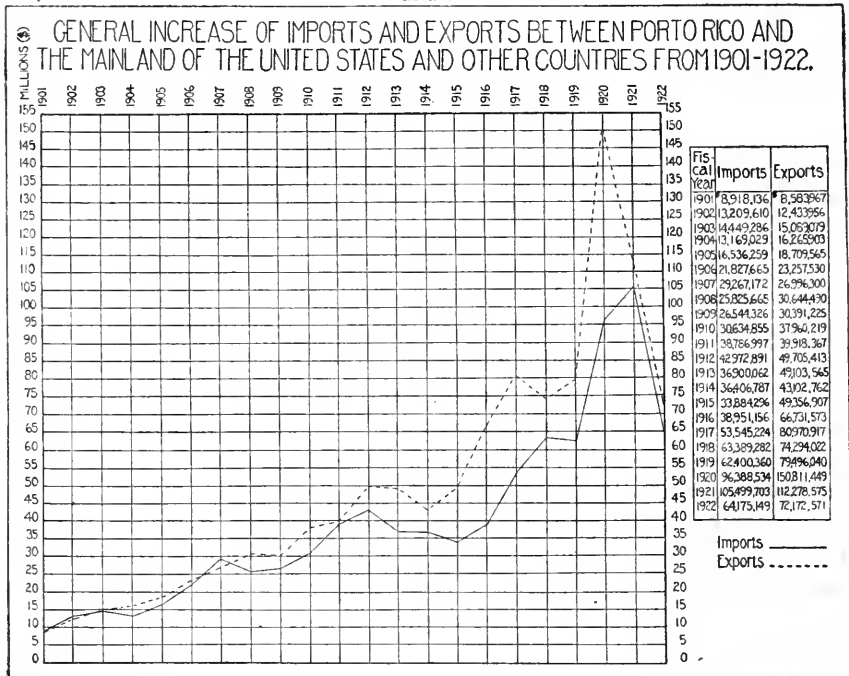
AGRICULTURE.

Porto Rico is essentially an agricultural country, and the great majority of the people depend for their living upon this type of work. In the past 25 years the general condition of primitive dwelling upon the soil has changed to one in which a large part of the land has been converted to the highly specialized cultivation of sugar and tobacco. This sudden evolution is graphically shown in the accompanying chart of imports and exports.

Before the development of sugar and tobacco larger quantities of sweet potatoes, yams, rice, corn, and bananas were grown, and the grazing lands were much greater. Some sort of food could be had for a little exertion, and money played a small part in the lives of the people. Most of the rural dwellers were poor to the point of

destitution, but they lived close to soil which produced food, where hospitality was the rule and the sense of ownership in the necessities of life not definitely established. With the development of sugar and tobacco, land values increased. Thousands of small farmers sold their lands¹⁰ for prices which seemed high, but with the sale of their farms lost their means of subsistence and when their small capital was gone found themselves in the ranks of day laborers.

CHART II



The situation has been rendered more acute by the fact that while the grazing and food-crop lands have been so much reduced the population has greatly increased.¹¹

As the exports of sugar and tobacco have increased the importation of food has also increased.¹² Foods, such as bananas, which formerly could be obtained merely by a little exertion, have now become articles of commerce. The agricultural worker must have money to purchase

¹⁰ The Porto Rican census of 1899, in which the cuerda (two-fifths of an acre) was used as the measure of area, showed 34,247 farms of less than 20 cuerdas (8 acres). By 1919 the number of farms of less than 10 acres had been reduced to 15,981, according to the United States census of 1920. The reduction in the number of farms owned by colored people was especially marked.

¹¹ The population of Porto Rico grew from 953,243 in 1899 to 1,299,809 in 1920, an increase of 346,566 in 20 years. Fourteenth Census of the United States, Vol. III, p. 1196.

¹² In 1920 Porto Rico imported 133,449,140 pounds of rice, 372,028 bushels of beans and dried peas, 30,182,518 pounds of meat and dairy products, and 29,383,671 pounds of dried fish.

his daily food, and unemployment means immediate privation and suffering.

Under existing conditions the cultivation of sugar and tobacco partakes more of the nature of industry than of that of farming. The development of these crops has taken place so rapidly that the transition has been accompanied by hardships difficult to overcome. Sugar is grown on the level lands around the edges of the island and tobacco in the inland valleys. For the harvest sugar requires approximately 150,000 workers and tobacco 40,000. For work between seasons the number of laborers required is far less. In periods of slack work during the season no occupation is open to agricultural workers in these districts on their idle days, and when these crops are harvested at least half of the laborers must make a complete change of residence in order to search for other work. Thousands of Porto Ricans have thus become migratory workers, with no homes and virtually no possessions. They are undoubtedly better off than the previous generation, but they have acquired new desires and higher standards of life. The education of children—impossible a generation ago—is now a possibility, but migratory life makes schooling difficult, and in the overcrowded condition of the schools the education of many children is completely neglected.

The development of sugar and tobacco has tended to the control of great tracts of land by a few individuals and corporations, in many instances by persons living away from the island. Congress attempted to check this tendency with a law prohibiting anyone from owning more than 500 acres; but sugar and tobacco plantations can be operated to far better advantage in large units, and it has been impossible to enforce the spirit of this law. In 1920 over one-third of the farm land was held in units of 500 acres or over.¹³

The situation in regard to coffee is radically different from that of sugar and tobacco. Coffee lends itself to small-farm cultivation. It is grown on hillside land which is comparatively cheap and the ownership of which is distributed among thousands of small proprietors. The industry in Porto Rico, as elsewhere, has been far from prosperous since the overdevelopment in Brazil threw out of balance the coffee industry of the world. In the past 10 years coffee exports from Porto Rico have decreased nearly 50 per cent, and among the coffee workers the utmost destitution exists.

Fruit growing is yearly becoming more important, particularly the growing of oranges, grapefruit, pineapples, coconuts, and alliga-

¹³ Of a total of 2,022,404 acres of farm land, 201,694 acres were held in units of between 500 and 1,000 acres, and 514,796 acres in units of 1,000 acres or over. (United States census of 1920.) These figures include all land, improved and unimproved. The percentage of improved land held in units of 500 acres and over is virtually identical. In 1899 nearly two-thirds of the cultivated land was held in units of less than 40 acres. (Census of Porto Rico, 1899, p. 355.)

tor pears. These crops will provide more labor but little more food, as they are grown for the export market.

The total land area of Porto Rico is nearly 2,200,000 acres, of which 1,000,000 acres is essentially nonagricultural and is now either idle or abandoned to brush. Officially much of this is classified as "timber and brush land," but the amount supporting commercially valuable timber is practically negligible. Originally Porto Rico was a well-forested country, covered with laurel, cedar, satinwood, and other valuable woods; but 400 years of unregulated exploitation has brought upon the island the most acute timber and wood famine that any country of the Western Hemisphere has suffered. All wood-using industries of any size have disappeared, and the island is entirely dependent upon importations of lumber for building. Almost all the people rely upon charcoal for fuel purposes, and the scarcity of this is such as to cause general and widespread privation. Much of the now unused mountainous land was originally covered with forests, and under a well-directed policy of reforestation these areas could relieve the shortage of lumber and fuel and also furnish employment to thousands. A beginning has been made by the establishment of the Porto Rico Forest Service, to work in cooperation with the United States Forest Service. Mangrove forest lands along various sections of the coast and some mountainous, nonagricultural lands have been set aside as insular forests.⁶ The mangrove is now being cut in a scientific manner and sold for fuel and other purposes, for which it finds a ready market. Tree nurseries have been started to provide stock for planting, and a considerable acreage has already been set out. To reach the general population an educational campaign has been started, chiefly through the rural teachers. In various towns the highways are bordered with trees planted by school children, and some school yards have been made into tree nurseries.

While sugar and tobacco are cultivated in an efficient manner under the direction of men technically well trained and equipped, general agriculture in Porto Rico has made comparatively little progress. Three-fourths of the people live in rural areas not even classed as villages. A large proportion of this rural population are illiterate.¹⁴ A generation ago it was generally possible for them to satisfy their simple needs by raising a few products in a crude and inefficient fashion. To teach this scattered and uneducated people to produce food in wider variety for a greatly increased population on a decreased amount of land is a task for which no

⁶ The public lands of Porto Rico include about 150,000 acres, most of which is mountainous or swampy or otherwise nonagricultural.

¹⁴ A rural school census taken by the Porto Rico Department of Education in 1919 showed that 59,502 parents out of 84,546 were unable to read and write. The census did not include those living in the less accessible districts. (Report of the Governor, 1920, p. 419.) The United States census of 1920 gives the general rate of illiteracy for all persons over 10 years of age in the rural areas of Porto Rico as 61.6 per cent.

adequate provision has yet been made. The leadership in scientific agriculture has been taken by the experiment station established at Mayaguez by the United States Department of Agriculture. The College of Agriculture of the University of Porto Rico gives collegiate and subcollegiate courses, and its graduates are rendering important service. The Porto Rico Department of Agriculture reaches many people through lectures, pamphlets, and inspection, and under its encouragement many farmers' leagues have been organized. The Porto Rico Department of Education has a general supervisor of agriculture, and instruction in agriculture is given in a large number of schools. Home gardens have been introduced and now over 38,000 of them are under cultivation. This work received great impetus under the food-conservation campaign during the war, and the Junior Red Cross, which functions as a part of the school system, has given hundreds of prizes to encourage these gardens. The schools have the confidence of the people, and offer the most advantageous machinery for reaching the parents.

THE FIGHT AGAINST DISEASE.

The Porto Rican laborer has often been characterized as lazy and thrifless, and his production is usually rated at not over 50 per cent of that of a northern worker. However, those who have had opportunities for knowing the agricultural workers have learned that to a large degree actual physical unfitness is responsible.

The physical condition of a people is reflected, in a general way, by the death rate. The death rate of Porto Rico in 1920 was 23.3 per 1,000 population,¹⁵ which was lower than the rates of earlier years but is nearly twice as high as that of the United States death-registration area for the same year (13.1). For the last 10 years of Spanish rule, 1888-1898, the average death rate was 30.2; for the following 10 years, 1899-1909, the average rate was reduced to 27.3, and for the 10 years 1909-1919 it was 24.1.¹⁶

To lower the death rate calls for fundamental improvement in the mode of life of the people. Sanitation, more urgently necessary in a tropical climate than in colder countries, has never been understood by the masses. Twenty years ago most of the people were dependent for water upon streams or cisterns subject to contamination, and three-fourths of all dwellings had no provision for sanitary closets or outhouses. The cities have progressed rapidly in providing water and sewer systems, but such improvements require large public outlays and much remains to be done. To reach the rural inhabitants and give them the necessary instruction so that they will understand and continue to use the requisite sanitary measures after they are

¹⁵ Report of the Governor, 1920, p. 6.

¹⁶ Report of the Governor, 1919, p. 133.

provided, will take much time. In this the sugar plantations have helped very much, as the concentration of workers in camps has made sanitation imperative.

The majority of the working people of Porto Rico live upon a diet restricted to rice, beans, coffee, bananas, codfish, and a few starchy root vegetables—of which all the codfish and most of the rice and beans are imported, and consequently must be paid for in money. Only too often the food of the poorer families consists entirely of black unsweetened coffee and a few tubers. Practically all northern vegetables can be grown in Porto Rico, as well as those peculiar to the Tropics; but at the present time only a few varieties of vegetables are used, including virtually none of the green or leafy ones. This situation is serious for two reasons—thousands of small parcels of land which could produce food are now unused, and the health of the people is suffering from a badly restricted diet. It has been found difficult to teach the people to use vegetables. Home-economics instruction is helping in this direction, but it needs to be extended far more widely.

The medical profession of Porto Rico are awakening to the injurious effects of the one-sided diet, but they are handicapped by the fact that few, if any, scientific studies have so far been made of food values of tropical products, and material on the preparation of foods comparable to that at the disposal of northern physicians is not available to them. The importance of diet has not been emphasized and the people depend upon medicine, often patent medicine, under circumstances in which northern physicians would prescribe improved diet.

Yellow fever—once the scourge of the island—has been eliminated, and smallpox virtually so. Bubonic plague has appeared twice in 20 years, but has been controlled. Typhoid is now but little more prevalent than in the States.

Of general diseases tuberculosis stands first as a cause of death, with malaria, "rickets," and anemia¹⁷ following in the order given. "Rickets" as it appears in the official statistics is not true rickets but usually marasmus or malnutrition, the confusion arising from the popular use of the Spanish term "raqúitico" to include any wasting disease. The seriousness of these diseases is shown by comparing, for the fiscal year 1919–20, the death rates per 100,000 population in Porto Rico and those of the United States death-registration area:

	Porto Rico.	United States.
Tuberculosis -----	186.0	114.2
Malaria -----	121.2	3.6
"Rickets" -----	108.9	0.6
Anemia -----	79.0	(¹⁸)

¹⁷ In Porto Rico the term "anemia" is used interchangeably with "uncinariasis" or "hookworm."

¹⁸ Negligible.

The death rate from tuberculosis is shown to be far higher in Porto Rico than in the States; the death rate from malaria, unimportant in the States, is higher in Porto Rico than that of tuberculosis in the States, and that from "rickets" only slightly lower.

In many districts virtually everyone has anemia, and many deaths attributed to other causes are indirectly due to anemia caused by hookworm. In other sections malaria is equally prevalent. Far-reaching experiments and demonstrations in the eradication of these two diseases are being made under the International Health Board (Rockefeller Foundation). The antimalarial work is still in the experimental stage. The antihookworm campaign is being conducted by Dr. R. B. Hill, who with a staff of assistants and inspectors is demonstrating the eradication of anemia in the northwestern corner of the island.

Soon after the American occupation a campaign was made to eradicate hookworm, under the direction of Dr. (Col.) Bailey K. Ashford. At that time treatment was given to nearly 300,000 persons. Facilities were not available for the necessary follow-up work, adequate sanitation was not provided, and the populace became reinfected. However, the treatment had lasting beneficial effects, the disease is now not so virulent as previously, and fewer deaths¹⁹ are now reported as due directly to anemia. In the present campaign, planned to cover a period of five years, sanitary conditions of living are required before treatment is given, and thorough follow-up work is done.

The improvement in general health and alertness of the school children who have been given the anemia treatment has been marked. Equal improvement has doubtless been made among the older population. The treatment has met with no opposition, and as it has progressed has gained the interest of the medical profession and the support of employers and the general public.

The general condition of inadequate or poorly balanced diet and overcrowded housing makes it particularly difficult for the health authorities to combat the high rate of tuberculosis. For tuberculosis patients the health department maintains a sanatorium at Ponce and a hospital at Yauco, and has recently erected a model sanatorium at Rio Piedras, for which many public-spirited citizens have contributed cottages. A visiting tuberculosis nurse, to work in cooperation with the Red Cross, has recently been procured in San Juan. These measures are helping to alleviate and to define the situation, but they are inadequate to control it. As an indication of the difference in resistance of Porto Ricans and continental Americans, Amer-

¹⁹ In 1900 uncinariasis was responsible for 30 per cent of all deaths in Porto Rico, according to Doctor Ashford. The First Report of the Porto Rico Anemia Commission, pp. 127-128. Senate Documents, vol. 59. Washington, 1911.

ican priests working among the poor report that they have found it necessary to give the last sacrament to patients whom on the continent they would consider in early stages of the disease.

INFANT MORTALITY.

The infant mortality rate of Porto Rico is much higher than that of any of the States. In 1922, out of every 1,000 babies born on the island 162 died before reaching the age of 1 year.²⁰ No special study of infant mortality in Porto Rico has ever been made. The studies made in various sections of the States have all shown that poverty and ignorance are accompanied by a high infant death rate; so the high rate in Porto Rico is to be expected, from the prevalence of illiteracy and poverty. To demonstrate this point the commissioner of health compiled separate figures for the poorest section of San Juan and for the districts where most of the people were able to provide fairly hygienic conditions. The infant death rate of the poorest section was found to be far higher than that of the other districts.

The main causes of the high death rate among babies less than 1 year of age are enteritis, congenital debility, infantile tetanus, "rickets,"²¹ and acute bronchitis, most of which are indicative of the lack of proper care and food.

The first month of life is always the most critical and shows by far the highest death rate. After this period the death rate should decline rapidly. In the States the death rate for the second year is about one-fifth that for the first year. The rate in Porto Rico shows no such rapid improvement, being nearly two-fifths as high the second year as the first year. The largest numbers of deaths in the second year of life are ascribed to diarrhea and enteritis and to "rickets," indicating improper and inadequate food.

In 1920 among children under 5 years of age in Porto Rico 13,051 deaths occurred, which makes an average of over 65 deaths to each 1,000 children under that age.²² The seriousness of the situation is indicated by the contrast between this rate of 65 and the corresponding rate of less than 27 for the United States death-registration area.²³

²⁰ Birth registration is required by law in Porto Rico and is considered by the department of health to be nearly complete.

²¹ For an explanation of the term "rickets," as here used, see p. 16.

²² In the Fourteenth Census of the United States, Vol. III (p. 1199), the population of Porto Rico under 5 years of age in 1920 is given as 200,255. The figure for deaths of children under that age in 1920 in Porto Rico is taken from the Report of the Governor, 1920.

²³ On the basis of figures given in the Fourteenth Census of the United States, Vol. III, the population of the United States death-registration area under 5 years of age July 1, 1920, is estimated at 9,175,421. In Mortality Statistics, 1920, of the U. S. Bureau of the Census (p. 140), the figure for deaths of children under that age in the death-registration area during the year 1920 is given as 243,010.

Various factors in this high rate of mortality have repeatedly been pointed out by the insular health department. The island has not enough physicians²⁴ to meet the demand for medical services, and still the people, as a whole, can not pay even for what services they receive. Traditionally confinement cases have been left to midwives, and owing to the general shortage of medical service the physicians have taken over little of this work. Most of the midwives are illiterate and have had no training, and it has not been possible to enforce standards of midwifery. Expectant mothers are not given the necessary care and instruction. On account of these conditions the number of deaths of mothers from conditions related to pregnancy and childbirth is much higher than in the States.²⁵

On account of the inability of mothers to nurse their children it is frequently necessary to feed the babies artificially at an early age. The mothers have little knowledge of proper methods of infant feeding, and milk is scarce, expensive, and frequently adulterated. In view of the difficulty of educating the adult population, the insular health department has recommended the instruction of school-girls in the care of children and the hygiene of infancy. On the subject of the serious problem of milk the following is quoted from Dr. Jaime Bagué, of the Insular Experiment Station of the Porto Rico Department of Agriculture and Labor:

Milk is the foundation of children's welfare. The whole building up of the health and vitality of man depends on the amount of milk that he may obtain in his childhood. This is particularly so in the tropical climates, where light foods are in order all the year around. The milk situation in Porto Rico deserves careful study, because the children of the island are not getting all the milk that they need for their proper development.

Agricultural conditions affecting milk supply.—To understand the present milk situation we must review, in a few lines, the agricultural status of the country. From time immemorial sugar cane, tobacco, and coffee have been the mainstay of our farms. Together with these crops, big live-stock enterprises were scattered all over the island, and we were supplying all the milk and nearly all the butter and cheese that the inhabitants of the island were consuming. We used to export our surplus supply of animals, and we provided the Cuban market with plenty of steers for purposes of slaughter.

With the advent of the American flag quite a change took place in the agricultural activities of Porto Rico. Promoters from Wall Street started to push the sugar interests of the country; factories were established; and, little by little, our pastures faded away to give place to the big sugar-cane planta-

²⁴ Figures given in the American Medical Directory (published by the American Medical Association), 1921, as to the numbers of physicians in the States and Porto Rico indicate that the island has less than one-fifth as many physicians, in proportion to its population, as have the States.

²⁵ Mortality Statistics, 1920, of the U. S. Bureau of the Census (p. 112), and the Report of the Governor of Porto Rico, 1920 (the latter giving statistics for the fiscal year 1919-20), show the ratio of deaths from puerperal causes to total births and to total population as follows: Per 1,000 births, Porto Rico 9.1, the United States birth-registration area 8; per 100,000 population, Porto Rico 35.6, the United States death-registration area 19.2.

tions. Our live-stock population has been reduced slowly and steadily. A study of the following statistics is illuminating:

Table showing the actual increase in inhabitants and cane lands as compared with the decrease in live stock in Porto Rico.¹

Census year.	Cane lands (acres).	Pasture lands (acres).	Number of cows and heifers.	Number of inhabitants.
1899.....	21,503	450,834	104,538	953,243
1910.....	145,433	15,826	62,298	1,118,012
1920.....	227,815	20,409	61,864	1,299,809

¹ From data furnished by the United States census

The above figures need no further comment. They speak for themselves.

The decrease in live stock is in sharp contrast with the increase in population. If we consider that the city of San Juan has a population of 70,707 inhabitants and that only 15,000 liters (estimated) of milk come into the city daily, it is an outstanding fact that the per capita consumption of this food is very low. The report of the commissioner of health for 1918 makes this per capita consumption come as far down as 31 cubic centimeters.

The lack of supply and the increase in the demand caused an increase in price from 4 cents per quart, in 1875, to 25 cents in 1922, or an increase of 21 cents in 47 years. This increase in price is coupled with a heavy increase in the importation of condensed and evaporated milk, amounting to \$504,330 in 1919.

Handling and sanitation of milk.—It is impossible to study the present milk situation without taking into consideration the infant mortality reports. A perusal of the annual report (1917) of the commissioner of health, Dr. W. F. Lippitt, shows that the diseases of the digestive apparatus are responsible for the high rate of mortality among children. Doctor Lippitt lays particular stress on the fact that "the bad quality of the food supply" is the main cause of this alarming condition.

Dr. A. Ruiz Soler, commissioner of health, in his report for 1918 corroborates Dr. Lippitt's statement and calls special attention to the scarcity of milk, the temptation to adulteration caused by this scarcity, and the necessity for cleanliness and sanitation in dairies and depots for the sale of milk.

To meet the need for an adequate supply of good milk we should adopt the following essential measures:

- (1) Systematic improvement, through careful breeding, of our live stock to raise our average daily production of 3 quarts per cow to 15 or 20 quarts.
- (2) Scientific feeding and care of the herds, emphasizing tick eradication, on which the Department of Agriculture of Porto Rico is at present working.
- (3) Scientific, sanitary methods of handling milk to avoid contamination.
- (4) Instruction of the people in the right use of milk and the many ways in which it may be prepared.
- (5) Encouraging every farmer to keep a few cows to balance the agriculture of the island, which now is strictly one-sided.

PUBLIC MEDICAL SERVICE AND HOSPITALS.

In the attempt to eradicate disease over 50 public hospitals, some mere shacks, have been established in the past 20 years, and medical service, free to the poor, has been instituted. Most of the medical

work on the island is done as charity by the ill-paid municipal doctors. The working class does not and can not pay for medical services. Until 1922, excepting for the period 1914 to 1917, the municipal hospitals and services have been under the control of the separate municipalities, without central supervision. Of the difficulties and shortcomings of this work the commissioner of health says in his report for 1920:²⁶

The services rendered by the municipalities to the poor are: Medical assistance, medicines to the sick poor, first-aid stations, help to the sick poor, and hospitals.

Medical assistance.—The work of the physician is difficult because, first, he lacks a list of the poor of the municipality so as to avoid that persons who are not indigent receive the services that are only for the needy; second, the lack of hospitals, which does not permit the gathering in one place of serious cases that require the constant care and frequent observation of the physicians; third, the poor conditions of the first-aid stations, not provided with the necessary equipment and materials, with the consequent lack of facilities to cure even the slightest wound without loss of time and without danger of infection; and, fourth, the meager amounts appropriated for medicines oblige the physician to consider the cost of every prescription, so that the appropriation is not exhausted before the end of the year, when the materials are supplied by administration, or, if supplied by contract, so that the contractor does not deliver a smaller quantity than that prescribed or alters the formula, as it appears to occur frequently. These deficiencies are the reasons why the position of charity physician has excessive work and with few results.

Hospitals.—The hospital conditions in Porto Rico are deplorable. The buildings are not suited to the ends for which they are used, nor are they fitted with the most essential equipment, sufficient material, nor are well attended. Everything in them shows poverty, filth, and carelessness. As a rule, such are the conditions of these charitable establishments all over the island.

First-aid stations.—In each town there is a first-aid station in general established in the dirtiest room of the city hall. These first-aid stations are not intended only to give attention to the healing of wounds and other emergency cases, but also to receive sick persons and to serve as a refuge for invalids. These establishments, as a rule, lack all conveniences, light, ventilation, cleanliness, means for the sterilization of the instruments used in the minor operations performed, antiseptic material, water, etc. Very few first-aid stations are properly installed and equipped and well attended.

Administration of medicines.—The distribution of medicines to poor people in each municipality is effected either by a contractor or by the administration. By means of bids, the pharmacist engages to provide all the medicines prescribed by the doctor to the sick poor for the sum appropriated in the budget, except in some cases in which a limit of a certain number of prescriptions a day is fixed. The service in this form seems to be more economical for the municipality, but it has certain troubles. The medicines are prepared very hastily, with very little care, and as a rule are delivered in dirty receptacles uncovered. The appearance is such that sometimes the patient throws the medicine away instead of taking it.

In regard to the quantity, the poor often go back to the doctor telling him they have not received what he prescribed.

²⁶ Report of the Commissioner of Health, 1920, pp. 148-149.

Malaria patients return day after day to the doctor begging for medicines and are never cured, although quinine is prescribed in proper doses. For these reasons the poor have lost faith in the medicines provided them.

When the supplying of medicines is done by the administration the local drug stores, if the municipality has not its own pharmacy, prepare the prescriptions authorized or approved by the mayor at the regular prices, but in this way the appropriation is soon exhausted.

There is a widespread negligence for the sufferings of our people. Much of the population is born, grows up, and dies without having received any or scarcely any medical assistance.

The country people of Porto Rico almost everywhere have no help from science in their hours of pain and danger from illness, the result being many premature deaths, unnecessary, completely avoidable.

Good will is not wanting, the kindly feeling of the physician is of no avail. He, too, is a victim of the present state of things. He can not adequately attend to such a countless number of persons without adequate means nor those of surgery in such an environment as the homes of the poor can show without medicines. He receives a meager pay.

A few excellent hospitals have been established in Porto Rico by organizations in the States and have made notable contributions by improving the standards of nursing. Among these are the Presbyterian Hospital at San Juan, St. Luke's (Episcopal) at Ponce, and the Congregationalist Hospital at Humacao. On the whole, nursing as a profession has received little recognition in Porto Rico. Numbers of nursing sisters who had received training abroad have come to the island as members of the Servants of Mary and other Roman Catholic orders. These sisters have rendered intelligent and devoted service in their hospitals of limited capacity and also in doing bedside nursing among all classes of people. Porto Rico is mainly Catholic, and the opportunities offered by the church to those who wish to devote their lives to nursing have attracted the more earnest class of applicants; but the work of the sisterhoods has not served to improve the training and status of nurses in secular institutions. The requirements of applicants for nurses' training have been low. In many cases nurses have entered training with no more than elementary education, a foundation on which it is not possible to give the technical training of high-grade hospitals. Some years ago the Municipal Hospital of San Juan had a well-organized training school, and the influence of its work is still felt.

Beginning with the year 1921-22, the advanced classes in home economics in the public schools have been given instruction in home hygiene and care of the sick, and it is hoped and expected that this introduction to the subject of nursing may lead a better-educated group of young woman to enter nurses' training. Pioneer work in public-health nursing was developed during Children's Year, under the Red Cross, and its extension will undoubtedly bring into public-health activities the fine class of public-spirited women whose only avenue for service hitherto has been the schools.

MANUFACTURES.

Largely because of the absence of fuel, very little manufacturing has been developed in Porto Rico. What are classed as the main manufactures are the finishing processes in sugar, coffee, and tobacco. The sugar mills, which convert the cane into raw sugar for shipment, employ the largest number of persons. They are located in the center of the cane fields and their season corresponds with the period of the cane harvest. The sugar mills of the island employ a maximum of about 10,000 people in February and a minimum of about one-fourth that number in July. Practically no women and no boys under 16 are employed in the sugar mills. The customary working-day is 12 hours, the work being a continuous process.

The manufacture of cigars and cigarettes and the stripping of tobacco for export ranks second, employing nearly 10,000 persons in September and about 1,000 in March. This work consists of the sorting and preparation of tobacco leaves and the making of the cigars and cigarettes, all of which is handwork. Almost all of this work is done in a few large establishments in the cities. There still exist many small shops where a few workmen make cigars, but the tendency is toward standardized production in large units. In the past 10 years, although the value of the product has increased²⁷ the number of workers has decreased,²⁸ the proportion of women employees has increased,²⁹ and the general length of the working-day has been increased from 8 hours to 9.

Practically all the coffee raised goes through a partial or complete process of cleaning, hulling, polishing, and grading to prepare it for the market. Formerly this work was done in small establishments, but the use of modern machinery has concentrated most of the work in a few large plants. Women workers have superseded men to a great extent, and the general working-day has been reduced from 10 hours to 8. A maximum of about 2,000 persons are employed in December and practically none in August.

The remaining industries of Porto Rico consist chiefly of the necessary bakeries to supply bread and similar food products, newspaper and other printing, and miscellaneous and scattered workshops.

In addition to the recognized manufactures, during the past few years a large number of women and girls have been engaged in the making of blouses, underwear, and handkerchiefs, and other handwork. This work is given out by contractors from the States through

²⁷ Value added by manufacture: 1909, \$4,002,848; 1919, \$5,094,993. United States census of 1920.

²⁸ Average number in 1909, 7,025; in 1919, 5,098. United States census of 1920.

²⁹ In 1909, 17.9 per cent of all workers were women; in 1919, 29.7 per cent. United States census of 1920.

agents and subagents located in the towns and mountain villages. It consists mainly of hemstitching and the plain sewing required in blouse making. The number of women employed is dependent upon the general demand for moderate-priced handmade garments, and the demand fluctuates widely. A change in fashion stops one variety of work and may or may not create another variety. No accurate record of the number of workers is available, but estimates have ranged from 20,000 to 30,000. Earnings vary with the individual and the class of work; workers have reported earnings in some cases as low as 15 cents and in others as high as \$1.50 a day. Most of these women and girls, apparently, receive about 40 or 50 cents for a full day's work. Hours are also indefinite, as this needlework is done at home at times when the women are not engaged in their housework and is subject to irregularity and interruption.

For a long time fine needlework has been taught by the Catholic sisters to a limited number of girls, and the various Protestant missions have also taken up this instruction. Recently the public schools have added such classes in an endeavor to raise the general standard of sewing and to teach an occupation by which girls can earn their living.

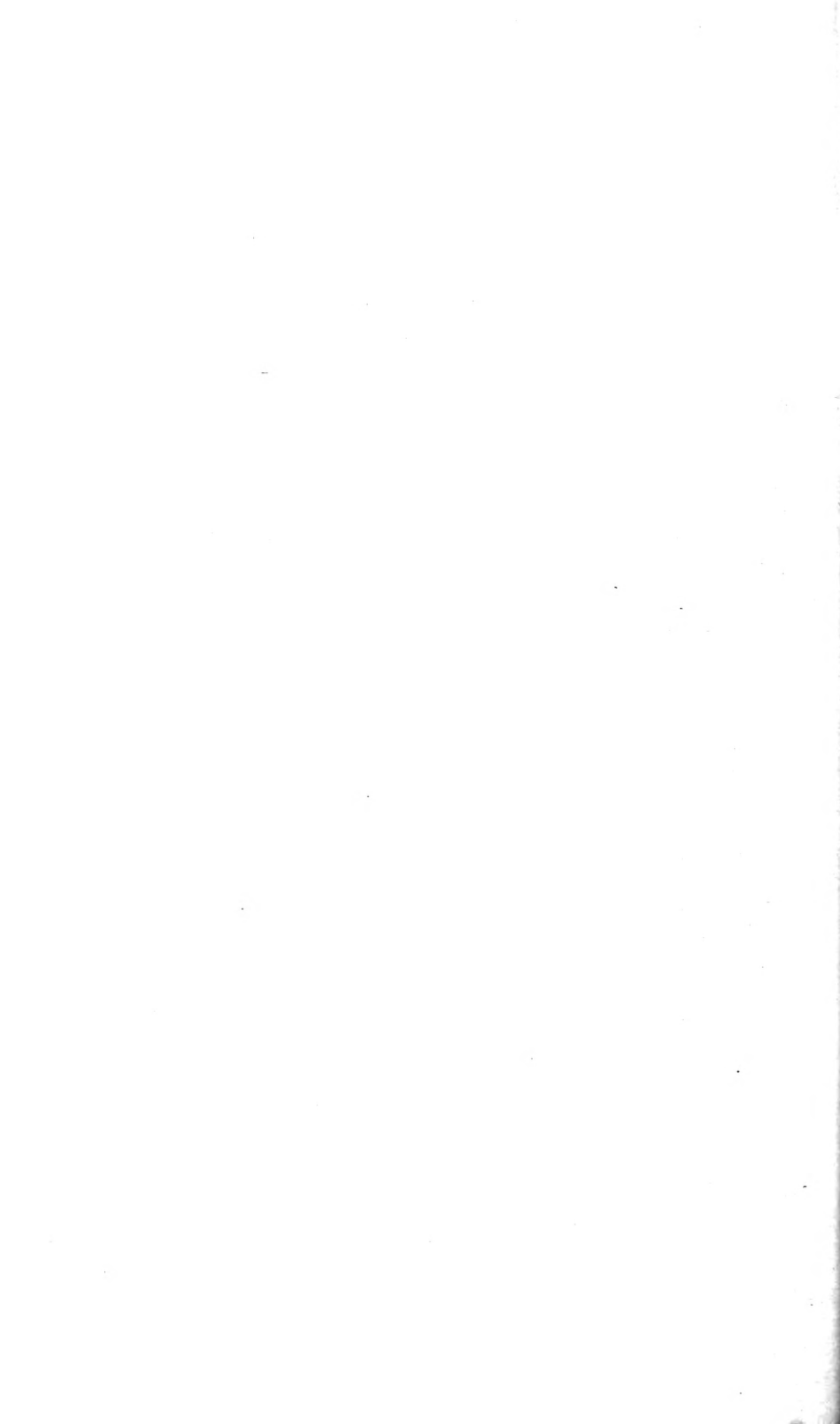
The making of inexpensive embroidered underwear has not been developed as it has been in the Philippines. While comparable figures as to earnings are not available, it appears that the prices paid for work are higher in Porto Rico than in the Philippines. Porto Rico has the advantage of being fairly close to the New York market, so that it is practicable there to give out work of a more changeable fashion.

The teachers of needlework in the convents and missions have made a specialty of Spanish drawn work, but the market for elaborate work has not been well developed. Lace making also has been taught by the sisters, the missions, and the schools; but no large amount has been made, as the work requires much skill and the earnings are less than for other forms of fine handwork.

The weaving of hats and baskets provides employment for a limited number of people in certain sections of the island where the raw materials are procurable. Some of the districts have introduced after-school classes in this type of work. The native industries, however, are unstandardized, and the markets are not dependable. Up to the present time these articles have been sold mainly to tourists as souvenirs and have not been produced as articles of commerce. An attempt was made to manufacture the finer types of baskets made in the Philippines, but the raw materials were not at hand and the importation and cultivation of the necessary plants involved more time and money than were available.



PRIMITIVE METHODS OF WORK.



WAGES.

The wages of common field labor, which during the war rose as high as \$2.50 a day, were reduced by 1919 to a level of 50 cents to \$1 a day. From this point they rose in 1922 to \$1 or \$1.25. Wages in the cities have also been lowered from the war-time level, those for the skilled trades averaging in 1922 about \$3 a day. These reductions were accompanied by numerous strikes, but the large amount of unemployment made it impossible to maintain better rates of wages.

In 1919 a minimum-wage law was enacted by the legislature, fixing a minimum of \$1 a day for women 18 years of age and over. The main purpose of the law was to meet the problem of the low wages paid in the manufacture of blouses and other handwork. The intent of the law has been evaded by the adoption of the home-work system, which renders it very difficult to determine the earnings of women in relation to hours. In general, work has been slack and the tendency of wages has been to drop below the legal minimum. The bureau of labor has prosecuted offending employers and secured convictions and small fines in a large number of cases, but with its limited staff it has not been able to maintain the legal standard in the face of the generally lowered wage levels.

POVERTY AND CHARITIES.

Poverty is a condition far more general in Porto Rico than in the States. There are persons of wealth on the island, but they represent a very small minority. Only 1 person in 269 in Porto Rico paid an income tax for the fiscal year 1921-22, whereas 1 person in 29 in the States paid one for the calendar year 1921.³⁰

Naturally, poverty does not entail the same hardships in the Tropics as in a northern climate, but the general state of poverty in Porto Rico renders difficult every effort for progress. Every crop failure or disaster threatens starvation, so narrow is the margin of resources. In 1898, a few months after the American occupation, a storm which destroyed the crops of the eastern end of the island made it necessary for the Government to care for 250,000 persons. The earthquakes of 1918, while not severe in comparison with other earthquakes, caused damage, much of which the owners were unable

³⁰ The income-tax law of Porto Rico is not identical with the Federal law, but it allows exemptions similar in effect, so that the income statistics of the island may be compared with those of the States. Both laws make a personal exemption of \$1,000 for a single person. The Federal law allows a personal exemption of \$2,500 for a married person living with wife or husband, or for a head of a family, with further exemption of \$400 each for other dependents. The Porto Rican law allows personal exemption of \$2,000 for a married person living with wife or husband, or a head of a family, and \$200 each for other dependents. The percentage of the population paying a tax in Porto Rico is so much less than the percentage in the States that any difference in the effects of the exemptions would not alter the general indications.

to repair without government aid. The influenza epidemic closed the schools. A storm in the western end of the island in 1921 brought thousands to the verge of starvation. In 1922, a fire which destroyed a block of houses in San Juan left over 400 persons dependent for months upon the charity of the municipality, the Army, and the Red Cross.

In everyday life the poverty of the mass of the people is shown by the practices of selling food by the cent's worth, of cutting loaves of bread into penny pieces, and of pricing eggs individually rather than by the dozen.

The northern visitor in Porto Rico is shocked at the institution of begging. The mendicants have their stations along the sidewalks or their regular routes through offices, restaurants, and residence districts. Saturday is "Beggars' Day." Shops and individuals put aside small funds of pennies, and the beggars make their rounds with businesslike regularity. The Latin spirit naturally tends to personal rather than organized charity, but begging has reached such proportions that its control has been repeatedly discussed—so far with little result, as the prohibition of begging could not be accomplished without fundamental economic and industrial changes.

The public charities maintained by the insular government consist of the Boys' Charity School, with accommodations for 400 boys; the Girls' Charity School, with a capacity of 300; the Hospital for the Insane, which cares for 500; the Leper Colony, which shelters 33; and the Asylum for the Blind, accommodating 100. In 1921 the cost of operating these institutions was \$346,358, or 27 cents per inhabitant of Porto Rico, and public funds appropriated for the care of tuberculosis patients amounted to about \$100,000.³¹

Almost every group which meets for any purpose in Porto Rico takes upon itself some charitable work. Wherever a few people gather together some one usually brings up cases of persons in need of employment or other assistance. How much assistance and charity are given in this manner is beyond computation. This informal handling of employment and aid has doubtless delayed the formal organization of such services. Also, the Catholic Church, to which most of the people on the island adhere, has taken upon itself much charitable work, and various orders of priests and sisters are working in many of the poorer districts. Missions have been established by several of the Protestant denominations, which, in addition to the hospitals and classes in handwork referred to elsewhere, conduct kindergarten and other school classes, dispensaries and clinics, and district visiting, and during the past year have added public-health

³¹ Report of the Governor, 1921, p. 206.

work and recreation. The American Red Cross started organized family case work in San Juan in 1921, but has found it necessary to restrict relief work to the families under the supervision of its mothers' and infants' clinics.

The Junior Red Cross, organized by the department of education in 1917, has headquarters at the department, and school officials act as its executive board. In each district the supervisor of schools is chairman of the local chapter. The Junior Red Cross thus functions as an official part of the school system, utilizing the well-organized school machinery and concentrating under one head the non-academic activities of the schools. Most of the membership dues are expended by the central board to promote activities supplementary to school work. In the past the "Juniors" have administered charity to many persons in various sections. Much was accomplished in an individual way, but the Junior Red Cross activities have now been restricted to definite lines of constructive work, such as dental clinics, child-health centers, school gardens, and loan scholarships.

A few years ago the school lunch—"comedor escolar"—was introduced, and so many children were found to be in actual need of food that the movement has spread very widely. The Junior Red Cross, the Catholic Church, the Masons, and other organizations have helped purchase equipment, and the current expenses are met by public³² and private subscriptions. Motion-picture theaters often give benefit performances, and many other entertainments help to keep going this important aid to the schools. The Zapato Escolar—Shoes for School Children—referred to elsewhere is also of fundamental aid to the schools. Both of these charities for school children have been organized and are administered with the assistance of the teachers in a well-systematized manner. The food and shoes are given to a child only in accordance with the teacher's report on the condition and the needs of the family. As so much of all community progress in Porto Rico is effected through the school system, the organization of charity may well come about as an outgrowth of these organized school charities.

Undoubtedly the money and effort now expended on general charity do not bring the utmost results. Better system and organization are necessary, but methods which have been found successful in the States will not necessarily prove applicable unless modified with understanding of the different conditions of Porto Rico and par-

³² The insular government appropriates \$25,000 a year to assist the local school boards in this work, and additional funds are given by many municipalities.

ticularly with appreciation of the existing great resources of kindness and personal ministrations.

JUVENILE COURTS.

According to law the juvenile courts of Porto Rico have jurisdiction over all dependent, neglected, or delinquent children under the age of 16, and jurisdiction over children who have come before the court continues until they become 21 years of age. The juvenile courts (established in 1915) are not separate courts, but are juvenile sessions of the seven district courts of the island, and the judges and officials of the district courts serve as officials of the juvenile sessions. The prosecuting attorneys and the judges of municipal courts are ex officio probation officers, and the district judges have power to appoint other persons as special probation officers. As the seven district courts of the island have jurisdiction over rural areas as well as cities and towns, all children in Porto Rico are within the jurisdiction of the juvenile courts. The provisions of the act are liberal, and no criminal precedent is established against children appearing before the court.

The difficulties in the operation of the law are that the district courts are already overworked and can ill spare the time for juvenile sessions; the prosecuting attorneys can hardly be expected to develop so different a field as probation, in addition to their other duties; and the facilities for caring for children who have come before the courts are discouragingly inadequate. An industrial school for delinquent boys has been established at Mayaguez but is too small to accommodate all the boys who should be committed to such an institution. Many times it is necessary to keep boys in penal institutions—although in wards separate from the adult prisoners—because of lack of any other institution to which they can be sent. For delinquent girls there is no institution. The attorney general's office has placed some delinquent girls in a separate ward of the women's jail at Arecibo, and the department of education has provided teachers of handicrafts as well as of elementary school subjects. The arrangements are excellent, but quarters are limited and facilities are far from adequate to meet the situation. The police, the juvenile courts, and the attorney general's office are constantly embarrassed by the lack of facilities needed to take care of urgent cases. Neglected and dependent children can be committed to the Boys' Charity School and the Girls' Charity School, but there also accommodations are far from adequate. There is no detention home in connection with any of the district courts.

In most of the cases brought before the juvenile courts the charges have been petty theft, neglect, and abandonment, offenses which are

largely traceable to poverty. Many of the children involved were homeless, and about one-third were illegitimate; about half had never attended school. The responsibility of parents for illegitimate children has not been definitely established, decisions on this point being in conflict.

Considerable interest on the part of public-spirited men and women has been shown in the development of the juvenile courts and particularly in that of probation work. It is hoped that regular probation officers will soon be appointed, or that the volunteers who now assist at times in investigations and probation work will become a regular part of the court and will also bring public opinion to bear upon the matter of providing the adequate facilities for children for which the attorney general's office has been asking year after year.

ACTIVITIES OF CHILDREN'S YEAR.

The second project included in the Children's Year program—that of cooperating with existing agencies in Porto Rico to stimulate activities for children—was undertaken by the Children's Bureau in conjunction with the Porto Rico Department of Education and the American and Junior Red Cross. Much general work was done in connection with various groups, but the specific activities of the year consisted of (1) the summer fresh-air camp, conducted by Miss Beatriz Lassalle, the expenses of which were paid by the Junior Red Cross, with assistance from the American Red Cross; (2) the encouragement of playgrounds, games, and athletics for boys and girls by specialists on the bureau staff, continuing through the year; (3) the introduction of health teaching in the schools by two Porto Rican teachers on the staff of the Children's Bureau, who worked practically throughout the school year; (4) the physical examination of school children by the municipal school authorities of San Juan; (5) the extension of dental clinics by the Junior Red Cross; (6) the introduction by the American Red Cross of mothers' and infants' conferences under the direction of Miss Kathleen d'Olier; (7) a campaign for the prevention of blindness by the bureau staff in cooperation with the National Committee for the Prevention of Blindness and the Porto Rico Association for the Blind; (8) the creation of the child-hygiene division of the Porto Rico Department of Health; (9) the celebration of Baby Week in San Juan by the bureau staff in cooperation with the Woman's Civic Club of San Juan, the municipal officials, the American and Junior Red Cross, the United States Army, and various other organizations; (10) the experiment made by the Junior Red Cross of the treatment of children in the rural schools by two traveling physicians; (11) a survey of homeless children in San Juan, Ponce, Mayaguez, and other sections of the island by Miss Lassalle, with the cooperation of the insular police; and (12) a survey of abandoned mothers made by the bureau in cooperation with the Woman's Christian Temperance Union.

For invaluable suggestions and assistance through the year the bureau staff was indebted to the following board of counselors:

Hon. Juan B. Huyke (chairman), commissioner of education.

Mrs. María A. de Pérez Almirot, president Woman's Civic Club.

Miss Kathleen d'Olier, supervisor American Red Cross Nursing Service.

Miss Rosa González, superintendent Presbyterian Hospital.

Mrs. Milagros Benet de Mewton, president Woman's Suffrage League.

Manuel V. Domenech, president Rotary Club.

Manuel Fernández Juncos, author and poet.

Dr. A. Fernós-Isern, president Porto Rico Association for the Blind; director of school hygiene, department of education, San Juan.

Dr. José Gómez-Brioso, Porto Rico Department of Health.

Hon. Salvador Mestre, attorney general.

Hon. Martín Travieso, mayor of San Juan.

Carlos Vicente Urrutia, superintendent of physical education, Porto Rico Department of Education.

Rev. Padre Vassallo.

Francisco Vizcarrondo, chairman Junior Red Cross.

VACATION CAMP.

The first vacation camp for children in Porto Rico was conducted by the Junior Red Cross, under the direction of Miss Beatriz Lassalle, in Barranquitas during July and August, 1921. A hundred girls and boys from the poorer district of San Juan, selected by the nursing service of the American Red Cross as being most in need of a vacation in the mountains, attended this first camp.

Porto Rico is fortunate in having within one or two hours' ride from any point of the island mountains high enough to afford a complete change of air. This first experiment in camping was made in cooperation with the school authorities of Barranquitas, who permitted the use of the schoolhouse as a dormitory and the school lunch accommodations as kitchen and dining room. Several teachers assisted Miss Lassalle in the care of the children. The American and Junior Red Cross provided clothes and shoes for all children. Physical examinations were given before the children left for camp, and the local physician and dentist cooperated by attending the minor ailments which developed in camp.

This experiment was beneficial to the children and valuable as a pioneer effort. Experience with the obstacles encountered will assist in directing future camps. One object of the camp was to try the effects of a better-balanced diet than is customary among the poor, particularly the addition of more green vegetables. In this the camp was not successful, as practically no green vegetables were procurable in the district and what could be bought were very expensive. What the children wanted was bread and coffee in the morning and rice, beans, and bananas for dinner and supper. The mountain air gave them such appetites that the facilities of the kitchen were taxed to the utmost to prepare enough of these foods, and the experiment in adding green vegetables to their diet was postponed. Considerable milk was given them, as well as soups, eggs, and meat. Many of the children came from families so poor that they had never had enough food, and their improvement in health after only a few days was plainly noticeable.

The use of school buildings as dormitories was found to be undesirable in dealing with children who have not been taught careful habits.

HEALTH TEACHING.

Health teaching was introduced into the public-school system of Porto Rico during Children's Year by two Porto Rican teachers on the staff of the Children's Bureau, who taught health as an official part of the school program in the districts of Bayamon, Catano, Ponce, Quebradillas, Comerio, and a small section of San Juan.

The work of these teachers was carried on in Spanish, as the great majority of the children reached were in the first four grades of school, in which Spanish is the medium of instruction. These health classes were given in all the grades from first to eighth and in some districts as far as the tenth. The ground covered was, in general, that outlined in the bulletins on health teaching issued by the United States Bureau of Education, with certain modifications of emphasis required by local needs. In the development of special points of emphasis the bureau received valuable assistance from Dr. (Col.) W. F. Lippitt, commissioner of health; Dr. A. Ruiz Soler, former commissioner of health; and Dr. (Col.) Bailey K. Ashford, head of the Porto Rico Institute of Tropical Medicine and Hygiene, under whose direction was carried out the first public-health campaign for the control of hookworm on the island.

"The Rules of the Health Game," in Spanish, were given to each child in the schools on a card on which were noted the child's height and weight. In translating these rules only one modification was made—that of changing the "bath at least once a week" to "daily bath." The Porto Ricans are an unusually clean people. Along every stream women are to be seen washing garments and bleaching them in the sun, and dwellers in little huts hundreds of feet above water think nothing of making the difficult descent to the river to bathe. In fact, bathing is so frequent and cleanliness so thoroughly the rule that in the local idiom one takes a bath "for refreshment" and not from the necessity of cleansing one's self.

Classroom weight charts were posted in each schoolroom, and the interest of the teachers and children was enlisted in repeating the weighing at monthly intervals. Subsequent inspection showed that the weighing was continued, and once the children's interest in reaching the "ideal" weight was aroused this matter no longer required urging.

Scales have been purchased for some of the larger city schools, but not for the smaller city schools nor for schools in the towns and rural districts. The merchants can always be counted upon to cooperate in any work pertaining to the schools, but their scales are not always

suitable for weighing children. No general campaign for weighing and measuring children can be undertaken until proper scales are provided.

The health teachers gave general instruction as to personal hygiene, diet, sleep, elimination, and play. In this great care and patience were necessary in order to overcome such superstitions as that of the dangers of night air. Most Porto Ricans sleep with all the doors and windows closed, and the task of teaching the children and their parents to have fresh air at night was no simple one. The teachers also emphasized the need for drinking more milk, and, for the purpose of increasing the milk supply, the care of goats. The chief veterinary inspector assisted in this work by preparing a simple leaflet on the milk goat (*la cabra de leche*). The chief of the experiment station at Rio Piedras has made important experiments in the breeding of goats, and his experience in improving the breed of goats in Porto Rico will be made available to the schools.

The care of the teeth was particularly emphasized by the health teachers through toothbrush and dental-floss drills. Teeth have been greatly neglected in Porto Rico. It is not uncommon to see young people with no front teeth, and among the poor the possession of more than a very few teeth in later life is unusual. The common habit of chewing a stick of sugar cane, as well as inadequacy of diet in general, is probably responsible for much of this loss of front teeth. The poorer class do not clean their teeth and never have had toothbrushes.

The most troublesome problem in health teaching was to procure toothbrushes. The attempt was made to have the children provide their own as far as possible. Brushes were bought at wholesale prices (6 and 7 cents) and sold to the children on the installment plan, a cent at a time. Where the children were too poor to buy them, the Junior Red Cross assisted. In certain districts poverty was so widespread that three-fourths of the pupils could not buy their brushes.

Handkerchief drills, which seemed to be as much needed as toothbrush drills, were given in all the grades.

In addition to their specific work the health teachers assisted the people in the various districts to develop other activities for the benefit of children. In Bayamon they helped in conducting the weekly baby conference. This was held in a building adjoining the school and was very much a school activity. Interesting the children in the care of the babies spread the influence of the baby conference and promoted closer relations between the parents and the school. The physicians of the city became interested in the health work and volunteered one day a week for physical examinations. These examinations proved particularly important, as a serious prevalence of trachoma was discovered. The insular department of health

took charge of the situation and prevented what might otherwise have been a dangerous spreading of the disease.

In Quebradillas the physician in charge of the International Health Board's demonstration of hookworm eradication had spread the doctrine of sanitation. The town was conspicuously clean. Hookworm, which had once been found in over 86 per cent¹ of the inhabitants, had been virtually eliminated, and the schools were noticing the improvement among the children in alertness and general health. Health teaching was made easier by this foundation in sanitation, and the health teacher on her part was able to explain and emphasize the necessity for not growing careless. The local health officer of Quebradillas volunteered one day a week for physical examination of children, and corrective treatment was given free of charge to various children who were unable to pay.

In Ponce interest had been aroused in the need for a baby conference, and when the health teacher began to draw attention to the health needs of children the baby conference materialized. The local health officer provided medical services, the insular department of health furnished a full-time public-health nurse, the Red Cross gave her special training in the health station in San Juan, and the Junior Red Cross met the expense of equipment. The public officials, as well as many private individuals, contributed services and funds.

Under the unofficial protection of the Masonic order the society Zapato Escolar (Shoes for School Children) was organized for the purpose of providing shoes for needy children to enable them to go to school. There is no rule in the island that a child must wear shoes to school, but the attempt has been made to set that standard. A child can get along in Porto Rico without shoes, although the cold rains of winter and the hot pavements of summer make it very uncomfortable to do so. However, aside from the matter of comfort, shoes are most important as a means of preventing hookworm infection through the feet, and they have come to be a sign of progress. The first society was formed in San Juan, but a similar society was organized in Ponce by the health teacher.

The work of the Zapato Escolar has been developed in close cooperation with the teachers, who make recommendations as to needy children and investigate family conditions. An allotment is made to each school of so many pairs of shoes per week, and the teachers designate which children shall receive the shoes. The children take their tickets to the meeting held Sunday morning and are measured, and on the following Sunday return and "purchase" their shoes for 5 cents. At these meetings some public official or prominent citizen usually talks to the children on citizenship or opportunities or a

¹ Annual Report, International Health Board, 1921, p. 78.

similar subject, or some one tells them stories. Holidays are especially commemorated, and in many thoughtful ways the children are made to feel themselves a vital and responsible part of the community.

In Comerio health teaching immediately uncovered a condition of conspicuously neglected teeth. The Junior Red Cross responded promptly by engaging a dentist to remove all hopelessly decayed teeth at once, and later arranged to establish a dental clinic in connection with the schools to do systematic preventive work as well as emergency work during the next school year, the municipality agreeing to continue the service after the first year.

Under the direction of the supervisor of schools the town celebrated a "children's week," in which the educational and health authorities, local and insular, assisted in drawing the community together to consider the needs of children.

Monday was the "day of little mothers." All the schoolgirls above the third grade were gathered for a talk and demonstration of the proper bathing, dressing, and care of babies, conducted by nurses from the department of health and the Red Cross. The interest was so great that the demonstration had to be repeated with a second infant. Almost all the little girls have younger children to care for, and though they are uniformly kind they have only a very limited knowledge of proper care. Raising these tasks to a dignified and professional status was a new idea, but one which was received enthusiastically. After the demonstration health stories and the film "Our Children" were given. On this day the schoolboys canvassed the town and posted a blue cross on every house containing a baby, with a gold heart if the child's birth had been registered. If the birth had not been recorded the boys explained the necessary steps, and in some instances they personally escorted the parents to the recorder's office.

Tuesday was "mother's day." Under the direction of the division of child hygiene of the Porto Rico Department of Health physical examinations were given to babies. Of the 94 babies examined all but 6 had defects. A committee of prominent citizens was formed to assist in certain of these cases. (This committee later developed into the Comerio Child Welfare League, whose efforts have been greatly strengthened by the detailing from the insular department of health of a public-health nurse for child-health conferences and home visiting.) In the evening a meeting of parents was addressed by prominent health officials on different aspects of public health, and films were shown. Hookworm is prevalent in this district, and the people were especially interested in the film showing the development of the hookworm and methods of eradication. During the



SCHOOL DENTAL CLINIC.

week this film was shown over and over again by general request, and the visualization of the hookworm problem made a profound impression.

Wednesday was "clean-up day." Under the supervision of several sanitary inspectors from the insular department of health the older schoolboys were organized into squads which cleared every alley and back yard in the community. The damage done by rats, flies, and mosquitoes was thoroughly explained and the breeding places of these pests were cleaned up.

Thursday was the "day of little children." The domestic-science classes, assisted by nurses from the department of health and the Red Cross, gave an exhibition of what constitutes desirable and undesirable clothing for children. Demonstrations were given of the preparation of artificial food for babies, the care and cleaning of bottles and other utensils, and the laundering of baby clothes. These demonstrations were for the mothers as well as for the older school-girls.

Friday, "school day," closed the celebration with a parade of school children, largely in costume, carrying banners with all manner of health mottoes. A toothbrush drill and a calisthenic drill were given in the historic plaza of the town, followed by other exercises. In the evening another meeting of parents was held for the discussion of other aspects of public health.

Throughout the week the schools were decorated with health posters. Some of these were loaned from the States, but the most interesting were the original posters which the children had made, using illustrations cut from magazines to visualize well-selected or poorly balanced diets, good and bad habits, and the general and specific needs of children. The most significant feature of the week was the complete cooperation of the health and educational authorities, the health officials utilizing the school machinery for teaching the children, and through them the parents, the fundamentals of health and sanitation.

HEIGHTS AND WEIGHTS OF CHILDREN.

As a part of their routine work, health teachers weighed and measured all the children in the common schools of Bayamon, Catano, Comerio, Ponce, and Quebradillas, and a small number in San Juan. To these records have been added records of measurements taken by the examining physicians in San Juan schools. In all a total of 7,632 measurements have been tabulated for comparison with corresponding figures obtained in the States. The figures of average heights and weights of boys and girls from 6 to 17 years of age are given in Table I.

TABLE I.—Average heights and weights of children 6 to 17 years of age, by sex and age.

Age.	Boys.				Girls.			
	Number.	Average stature (inches).	Number.	Average weight (pounds).	Number.	Average stature (inches).	Number.	Average weight (pounds).
6 years.....	37	43.34	37	41.05	49	43.32	49	41.43
7 years.....	95	45.28	95	45.86	115	45.29	115	44.81
8 years.....	374	46.66	274	47.77	431	46.41	429	47.05
9 years.....	449	48.87	443	52.97	323	49.01	323	52.22
10 years.....	467	50.51	465	57.78	355	51.09	353	58.57
11 years.....	420	52.43	419	62.97	343	53.20	341	64.32
12 years.....	522	54.45	519	69.87	409	55.55	408	72.65
13 years.....	454	56.37	454	76.44	458	57.81	458	82.86
14 years.....	428	59.10	429	87.96	446	59.37	446	91.06
15 years.....	312	61.74	312	99.56	338	60.48	338	96.90
16 years.....	203	63.89	203	107.77	207	60.89	207	101.73
17 years.....	111	65.25	111	113.66	78	61.66	78	101.01

The four accompanying graphs give comparisons of the heights and weights of Porto Rican boys and girls with Bowditch's ² figures for average heights and weights of Boston school children.

According to this comparison Porto Rican boys average about 1 inch less in height and Porto Rican girls average from $\frac{1}{2}$ to 1 inch less in height, respectively, than boys and girls of the same ages in the States. The comparison of weights shows the Porto Rican children averaging from 5 to 8 pounds lighter than children of the same ages in the States, the girls more nearly approaching the standards of children of the States than do the boys.

A comparison of the heights and weights of the boys and girls in the different communities was made, and is shown in Table II. According to this table children of Bayamon, Catano, and Quebradillas average less in height and weight than the whole group. The children of Ponce and Comerio were both taller and heavier than the average—which was to be expected, as these communities have a generally higher standard of living conditions. The San Juan boys' average weights exceeded the general Porto Rican for their ages, but their heights were under the average, as were both the heights and weights of the girls of San Juan. The figures for San Juan were taken in schools in the poorer districts attended by children from homes below the general standard of the city. Complete figures for San Juan would undoubtedly show higher averages.

It is interesting to note in connection with the averages for the children of Quebradillas that this is the district where the International Health Board has been conducting its campaign against hookworm. More than 86 per cent of all the people of that community were found to have the disease, and this may be a cause contributing to the lower average in heights and weights.

² Bowditch's figures include weights of clothing without shoes, as do the Porto Rico figures.

CHART III.—Average weights of Porto Rican boys 6 to 16 years of age, as compared with Bowditch's figures.
Pounds.

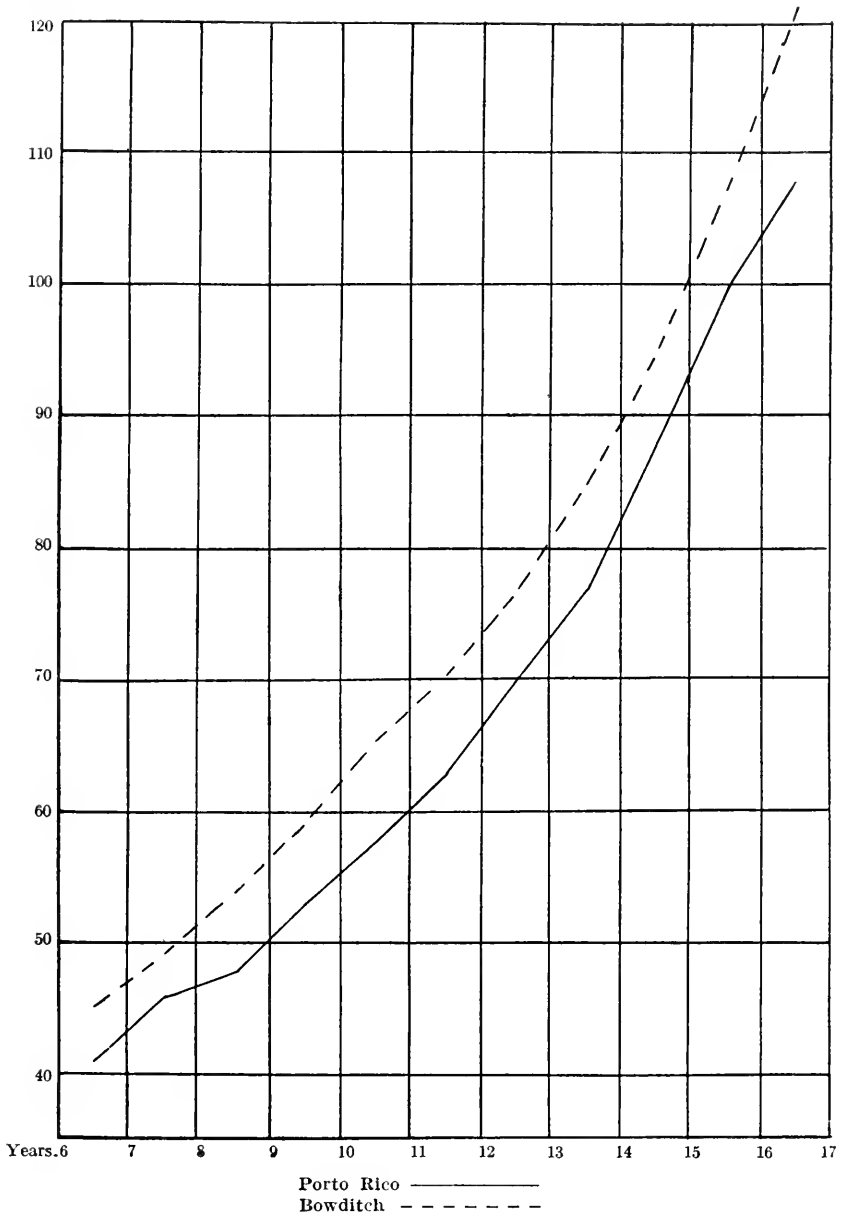


CHART IV.—Average weights of Porto Rican girls 6 to 16 years of age, as compared with Bowditch's figures.

Pounds.

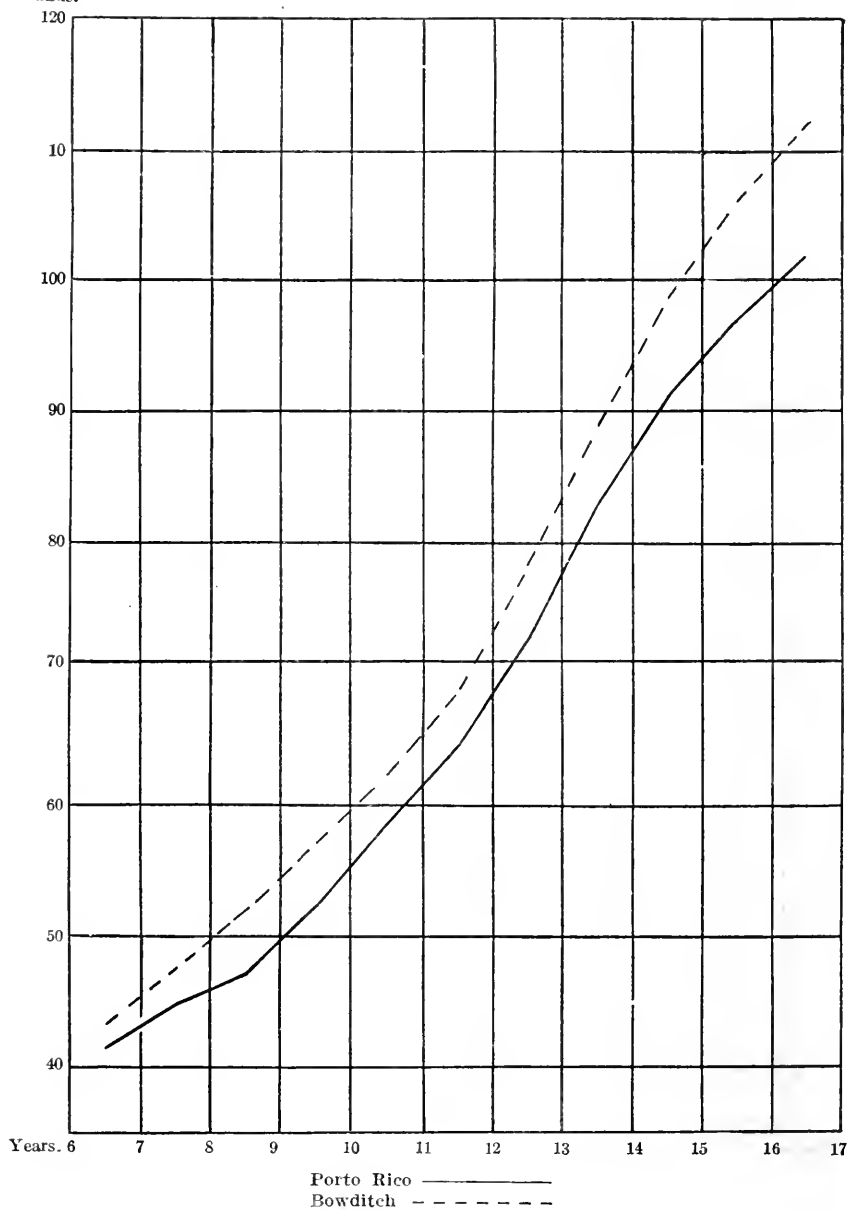


CHART V.—Average heights of Porto Rican boys 6 to 16 years of age, as compared with Bowditch's figures.

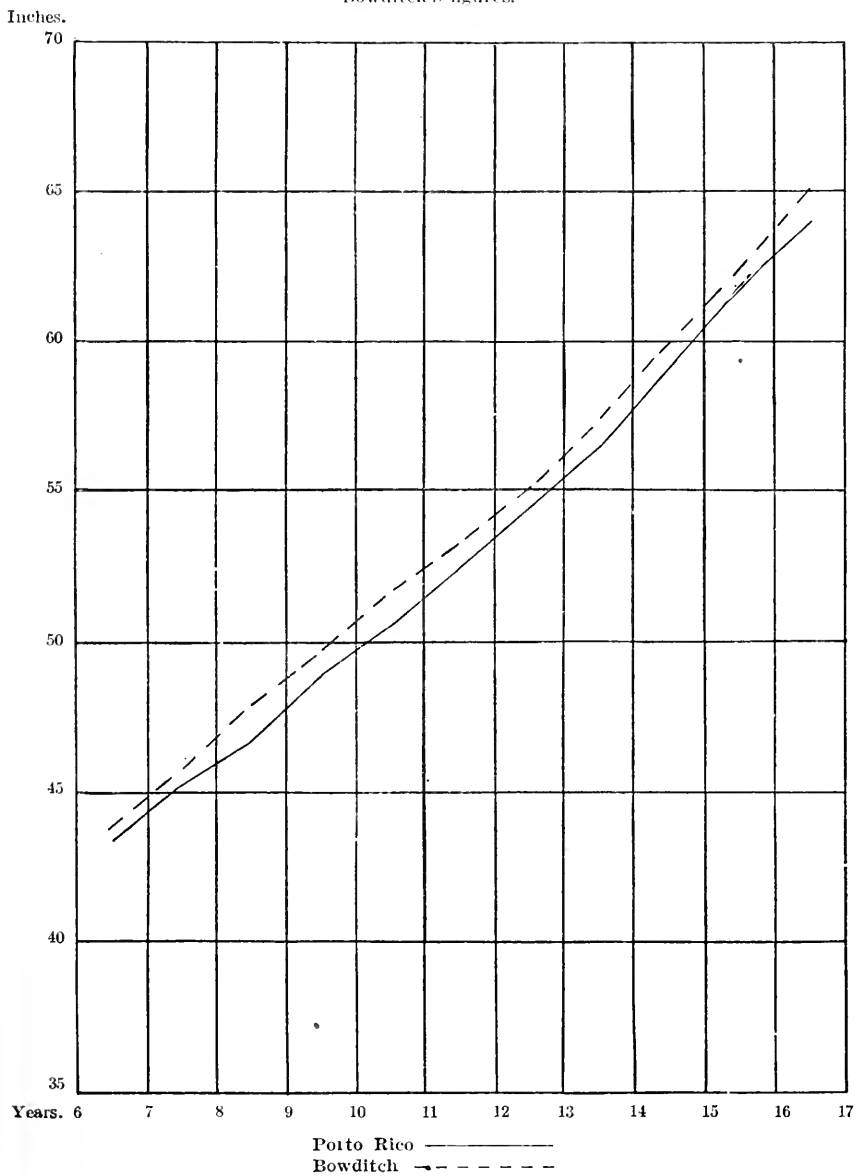


CHART VI.—Average heights of Porto Rican girls 6 to 16 years of age, as compared with Bowditch's figures.

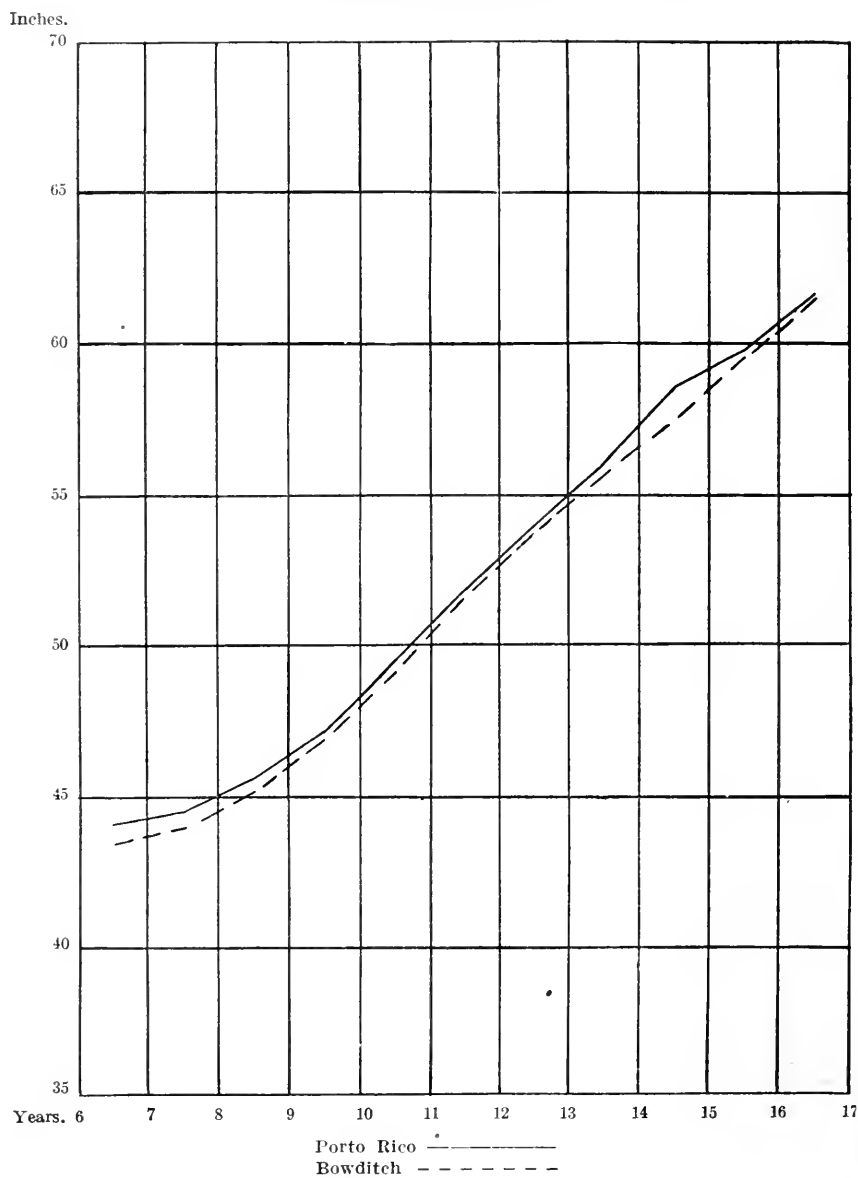


TABLE II.—Average differences between heights and weights of boys and girls in different communities and the average heights and weights of all boys and girls of the same ages who were weighed and measured.

District.	Boys.				Girls.			
	Excess or deficiency in average.							
	Height for age.		Weight for age.		Height for age.		Weight for age.	
	Number of cases.	Average excess or deficiency (inches).	Number of cases.	Average excess or deficiency (pounds).	Number of cases.	Average excess or deficiency (inches).	Number of cases.	Average excess or deficiency (pounds).
Bayamon and Catano	1,169	-.43	1,169	-1.11	1,143	-.43	1,141	-.49
Comerio	266	+.55	266	+.98	271	+.64	271	+2.09
Quebradillas	309	-.39	309	-.70	229	-.76	229	-1.43
San Juan	841	-.62	829	+.62	596	-.81	591	-.34
Ponce	1,287	+.78	1,288	+.57	1,313	+.73	1,313	+.40

Table III gives the average weight for height of the total group examined:

TABLE III.—Average weight for height of all boys and girls 6 to 17 years of age who were weighed and measured.

Height (inches).	Boys.		Girls.		Height (inches).	Boys.		Girls.	
	Number.	Average weight (pounds).	Number.	Average weight (pounds).		Number.	Average weight (pounds).	Number.	Average weight (pounds).
35	1	41.0			55	203	70.8	157	72.4
36	3	40.0			56	214	74.9	204	78.5
38	1	45.0			57	165	78.2	237	82.2
39	2	40.0			58	162	84.5	224	86.3
40	6	42.5	4	42.3	59	139	86.2	224	89.1
41	8	43.3	14	42.8	60	133	90.2	228	93.2
42	30	42.0	18	39.2	61	114	95.9	187	98.4
43	41	42.0	47	40.4	62	100	101.6	127	99.9
44	73	43.4	81	42.8	63	131	105.2	107	105.8
45	89	45.1	108	44.3	64	90	107.0	51	108.6
46	113	46.9	140	46.1	65	90	112.8	22	106.5
47	157	49.4	143	48.2	66	64	115.8	15	105.5
48	206	51.5	158	50.2	67	28	116.4	10	110.5
49	261	54.2	151	53.1	68	23	121.3	1	85.0
50	219	56.3	150	55.8	69	8	130.1	3	103.3
51	250	59.6	176	58.7	71	3	120.3	1	98.0
52	248	62.3	169	62.3	72	2	142.5		
53	232	64.9	174	64.3	74			1	99.0
54	213	68.4	164	69.3	76	1	125.0		

PHYSICAL EXAMINATION IN THE SCHOOLS.

Physical examination of school children was started in the city of San Juan by the municipal commissioner of education, who realized the serious handicap of poor physical condition in preparing the children for life. Three physicians were employed to make these examinations, and school nurses were appointed to assist and to follow up the children who needed attention. No attempt was made

to administer treatment. The parents were notified of the report of the physician and their attention was called to defects which could be remedied. In many cases in which the parents could not afford to pay for treatment services were given gratis by the physicians of the city.

The primary object of these examinations was to discover existing conditions so that, upon this basis of knowledge, an adequate policy might be formulated. The need for dental attention was immediately shown, and three dental clinics were established with the assistance of the Junior Red Cross. The general condition of the school children is indicated by the following figures for the 7,681 children examined in 1921-22:

	Number of children.
Treatment needed.....	6,599
Defects of respiratory system.....	5,394
Defects of teeth.....	4,770
Defects of skin and scalp.....	2,695
Defects of vision.....	1,214
Defects of digestive system.....	165
Defects of heart.....	61
Defects of hearing.....	60
No defects.....	1,082

The findings of these examinations have resulted in a greatly enlarged program of school medical and dental service. An eye, ear, nose, and throat specialist has been added to the staff, the dental clinics have been increased, and the volunteer treatment of poor children has been systematized and extended.

Similar physical examination of school children was extended during Children's Year to Bayamon, Quebradillas, Ponce, Utuado, Aguadilla, and Comerio, but the findings have not yet been tabulated.

TRAVELING SCHOOL PHYSICIANS.

During Children's Year the Junior Red Cross made the experiment of sending two traveling physicians, each with an assistant, through rural districts to make physical examination of the school children and to prescribe treatment in isolated sections which had no physicians.

The experiment was continued through the school year. At the end of that time the plan was changed, and one physician continued on a more detailed program. The chief difficulty lay in the extent and seriousness of these problems. It was hoped that the physicians could give the teachers instruction covering the basic points of practical hygiene, which the teachers in turn could pass along to the children; that they could prescribe for children needing medical assistance; and that they could complete their task by a return visit. The

experience of the physicians showed great prevalence of such diseases as hookworm and malnutrition, which require far-reaching education of the parents as well as of the teachers and children in sanitation and hygiene. The physicians could prescribe for minor ailments, but to touch basic conditions was impossible under the plan of work adopted. To give instructions in practical hygiene which the teachers could transmit effectively to their pupils involved more time than had been expected. To prescribe for children without knowing their home conditions and without follow-up work was found to be of little avail. To remain in a community long enough to make a satisfactory demonstration called for different equipment and plan from those adopted.

Much valuable information was secured by this experiment. Its chief value, however, lay in showing the educational authorities the handicapped physical condition of a large proportion of the children living in isolated districts and the need of formulating some plan for raising the general standard of health. The percentage of retardation and failure to be promoted³ in the schools is high, and this is undoubtedly due in large measure to the poor health of the children. Whether, with the same appropriations, the educational authorities could not actually achieve greater results in academic work by spending a portion of their revenues on direct health work is a question to be considered seriously. The present waste of having one-third of the pupils repeating their work is too great to be overlooked, and the general community benefits of a stronger race of children are incalculable.

INFANTS' AND MOTHERS' CLINICS.

When the Children's Year activities were being planned the American Red Cross agreed to send to Porto Rico a supervising nurse, who would develop mothers' and children's conferences, visiting nursing, and public-health work. The first baby clinic was opened in May, 1921, in Puerta de Tierra, the poorest section of San Juan. The work was developed in close cooperation with the municipal authorities. The clinics were opened in the building of the municipal pharmacy, but later larger quarters were needed and secured. At first the municipal physicians made the examinations both of mothers (prenatal) and of infants. Subsequently a woman physician made the examinations in the mothers' clinics, as this was found to be more in accordance with the Porto Rican point of view.

In the general survey of conditions are discussed the high rate of infant mortality and the limitations in the facilities for the training of

³ In 1920, 33 per cent of the pupils in rural schools were not promoted. Report of the Governor, 1920, p. 441.

nurses. With the obstacle of language, it is necessary in Porto Rico to employ Spanish-speaking nurses wherever nurses must deal directly with the poorer people. The first task of the supervising nurse was to train assistants in the essentials of public-health nursing, and to teach them how best to meet the general handicap of dire poverty and ignorance. For emergency illness beds could usually be obtained at some hospital, but for the general situation of poverty, unemployment, and bad housing no organized relief was available. The Red Cross gave aid as far as possible, but its resources were totally inadequate to meet the needs of the situation.

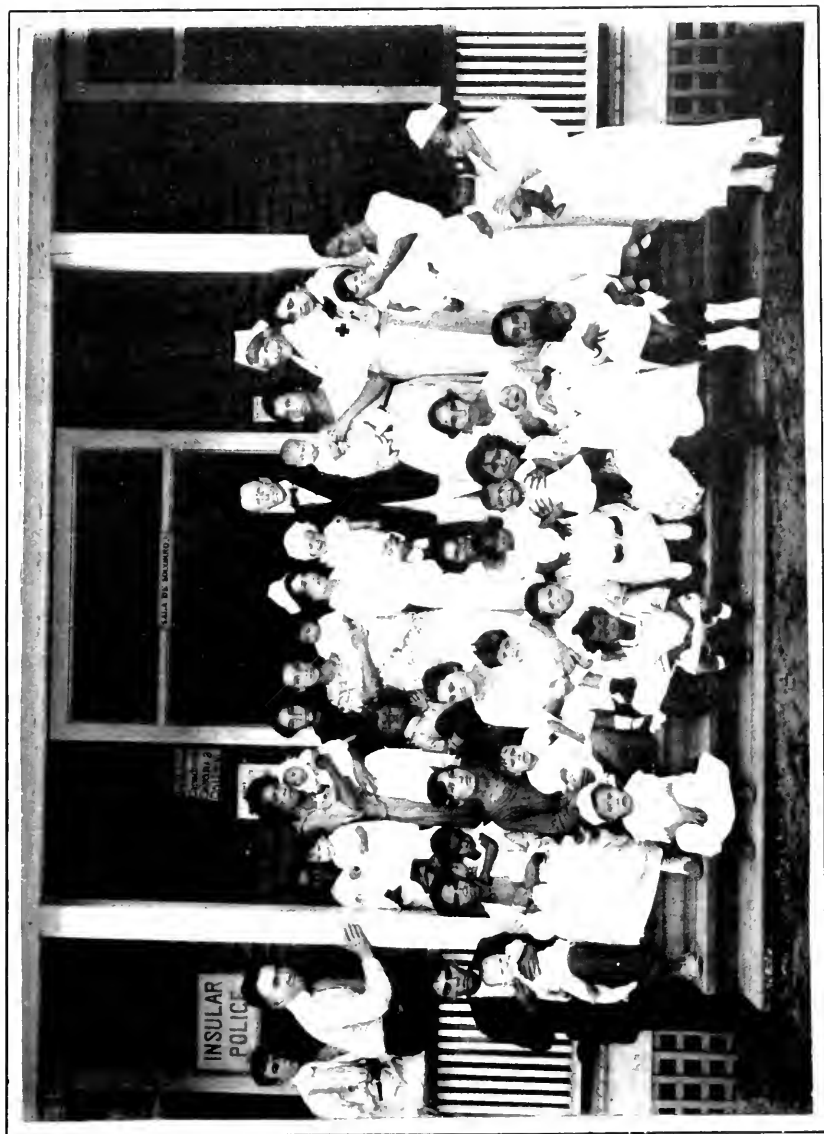
From the day the conferences were opened the mothers came and brought their babies. The Porto Ricans are most appreciative of anything done for their children, and no grants of milk or other inducements were needed to secure regular attendance at these conferences.

The nurses made regular follow-up visits and taught the mothers how to prepare food for their babies, and other elements of child care. The difficulties of the situation are hard to visualize. Many of the families have only one room, not over 10 feet square, in which the family of at least six persons dwells, often with one or more lodgers. The mother cooks on a charcoal fire on the ground. She owns, perhaps, one iron pot, and uses tin cans to help out. The baby, frequently, has not more than one dress and has no diapers. Their cleanliness under the circumstances is little short of marvelous.

The Porto Rican mothers frequently find breast feeding impossible. Pure milk is expensive and difficult to obtain and pasteurization is little understood. The poorer families commonly feed babies on family food at an early age. This is so generally true that in cases of infants only a few months old brought for treatment the best hospitals have found it advisable to accustom the babies to family diet before returning them to their homes. The prenatal clinic laid special emphasis on building up the mother's strength so that she could nurse her baby adequately, and the results obtained were most encouraging.

The Children's Bureau translated into Spanish its dodgers on the care of the mother and baby, simplifying them and adapting them with the assistance of island physicians to the special needs of Porto Rico. These were supplied to the mothers to emphasize the oral instructions given at the conferences. In addition, a leaflet was prepared by the chief of the veterinary bureau on the care of the milk goat to encourage the poor people to increase the production of milk by proper care of goats.

The results obtained in Puerta de Tierra, in spite of all the difficulties, led to the establishment of a baby clinic in Bayamon in October. This was organized in one of the schools, and the expenses



BABY CLINIC CONDUCTED IN SCHOOLHOUSE.



were paid largely by the Junior Red Cross. A nurse for follow-up work was trained in the Puerta de Tierra clinic, and the Red Cross supervising nurse continued to assist and guide. Several physicians volunteered their services in the clinic and much assistance was given by the women of the community.

In December a baby clinic was opened by the Red Cross in Barranquitas as an experiment in trying to educate mothers in an isolated district. This district was found to present peculiar difficulties—the people were extremely poor, many of the roads in the mountains were impassable during rains (and rains were unusually heavy at that period), and virtually no medical assistance could be obtained to supplement the nurse's efforts. With no means of relieving the general need of food and in view of all the difficulties it was considered advisable to discontinue this rural visiting nursing. The experiment indicated, however, that in such districts a better approach to public-health work could undoubtedly be made by beginning with conferences and classes for the better-educated mothers and extending the service as rapidly as it created its place in the community.

In December, also, a babies' conference was opened at Ponce, toward which the insular department of health and the municipality assisted the Red Cross by providing a nurse and medical assistance. The conference in Ponce was established in a better section of the city than was the one in San Juan, and received the understanding and hearty support of the community from the start.

In February a babies' conference was opened at the plant of the Central Aguirre, the second largest sugar refinery on the island, where the International Health Board is making its tests in malaria control. The company provided amply for the needs of the clinic, which was the best equipped on the island. The physician in charge had worked with the employees for years, and being thoroughly conversant with their needs was able to make more rapid progress than was made in the other clinics. The "central" had imported a large herd of thoroughbred Guernsey cows and was selling milk to the employees at a very low price, a factor of great assistance to the work of the clinic. It also raised a large variety of vegetables, primarily for the Americans in its employ but also influencing the diet habits of the Porto Ricans.

In April two additional baby conferences were opened in San Juan, in the Barrio Obrero, the workingmen's suburb, and La Perla, a poor section outside the city walls.

Conferences were later established in Mayaguez and Comerio. The expenses for all of these clinics have so far been met by cooperative arrangements between the American Red Cross, the Junior Red

Cross, the Porto Rico Department of Health, and the local authorities. All the conferences remain under the direction of the supervising Red Cross nurse.

Standard records have been kept in all the clinics, but no tabulations have as yet been made of the data.

DIVISION OF CHILD HYGIENE.

In February, 1922, the Porto Rico Department of Health created a division of child hygiene and began a special study of the condition of children in the poorer sections of San Juan. The investigation was based upon a realization of the underlying social and economic conditions affecting the child. A census was made of all the dwellings in the district. A family folder was filled out containing detailed information as to each house and its inhabitants, the material of the structure, condition, painting, cleanliness, water supply, garbage disposal, proximity of domestic animals, stagnant water, and sanitary facilities. Within this folder were placed individual cards showing the findings of careful physical examinations of all children under 5 years of age and all pregnant women. To the findings of the physical examinations were added information as to the economic status of the family, the employment of the mother, and the marital status of the parents. In the case of infants artificially fed information was recorded as to the methods of the preparation of food, the utensils used, and the care and cleanliness of bottles and nipples.

The census and housing inspection were made by a sanitary inspector. The mothers and children were directed to the doctor's temporary headquarters in the district for physical examination, and follow-up visits to the homes were subsequently made by a nurse to insure compliance with suggested changes. In this respect the investigation was broadened to partake more of the nature of regular child health center work. The insular department of health had at the time of the study detailed eight nurses to stations established under the supervision of the Red Cross, in various sections of the island. It was not possible for the department to concentrate its nurses in San Juan to provide continuing service centers for all children and mothers covered in the investigation, but it endeavored to render enough service in the course of its investigation to demonstrate to the local authorities and citizens the advantages of maintaining the work.

The findings of this investigation when completed will provide unique and invaluable data on the conditions affecting child welfare in a tropical city. Among the conditions shown by the findings of one section were incomplete birth registration and a widespread

neglect of vaccination. Before the American occupation smallpox was a periodical scourge. The results obtained by the complete vaccination of the population have been so successful that vaccination has recently been neglected. A large number of the children had glandular affections possibly indicating pretuberculosis, and many were receiving nourishment inadequate to their needs, either in quantity or in quality. The need of dental attention was general.

The investigation produced immediate improvement in sanitary conditions. Garbage was disposed of more promptly, standing water—breeding spots for mosquitoes—was drained, and the people were given many object lessons in more hygienic living.

PREVENTION OF BLINDNESS CAMPAIGN.

It is estimated that there are in Porto Rico about 2,000 blind persons—proportionately twice as many as among the population of the United States.⁴ Blindness resulting from smallpox, a disease common prior to the American occupation, was stopped with the virtual eradication of smallpox, but the other causes of blindness have been given little attention.

The discovery of cases of trachoma among children in various places in Porto Rico resulted in 1914 in an examination of over 4,000 school children under the direction of Dr. W. W. King, surgeon of the United States Public Health Service and member of the Institute of Tropical Medicine and Hygiene of Porto Rico. These examinations were made in 13 different localities, presumably offering a typical picture of conditions on the island. The proportion of cases varied widely in the different schools, but no locality was found to be free from the disease. Of all the children examined 9.5 per cent were reported as having positive cases. The disease was not confined to the poor nor to any special ages. Negroes apparently enjoyed a partial racial immunity, which, however, was lost by mixture with other blood. The origin of trachoma in the island is not clear; it was evidently introduced during the Spanish régime—probably by immigration from Spain and Syria, in both of which countries it is prevalent. The report of this survey called for a constructive program of cure and prevention to be continued over a period of years, but no special funds were made available for this work and the matter was dropped.

To reduce ophthalmia neonatorum the commissioner of health secured in 1921 a small appropriation for packages of prophylactics to be used on the babies' eyes at birth. However, the department was

⁴ In taking the 1920 census enumeration of the blind was not made in Porto Rico. In the census of 1910 it was estimated that the ratio of the blind to the total population was 62.3 per 100,000 in the States and 143.4 per 100,000 in Porto Rico. The Blind in the United States, p. 20. U. S. Bureau of the Census, 1917.

given no funds for the necessary education of midwives and the general public. Besides these two attempts to reach the problem little had been done to educate the public to the possibility of preventing blindness.

At Ponce the Porto Rico Department of Health maintains the Asilo de Ciegos (asylum for the blind), an institution for the care of the indigent blind, to whose functions has been added the treatment of eye cases referred by public authorities. The asylum has a capacity of about 100. For the blind children in the asylum the department of education in 1919 established a small school, under the direction of a well-trained teacher of the blind. The attendance at the school has averaged between 20 and 30, a number limited by the capacity of the school and of the children's living quarters in the asylum. The school is meagerly equipped and badly overcrowded, but its work has been important as a demonstration of the possibility of educating the blind, a subject which has received little attention in Latin America. Its work has been given publicity and assistance by the Porto Rico Association for the Blind, an organization with a small but strong membership among health and education officials and individuals interested in the problem.

In 1921 the legislature appropriated \$60,000 for a school for blind children, but complications have prevented the immediate erection of this much-needed school. The Junior Red Cross donated \$15,000 for a cottage to be erected as soon as the matter of a site was settled.

As a part of the Children's Year program, the Children's Bureau made it possible for the National Committee for the Prevention of Blindness to assist in an intensive campaign of education, which was made in close cooperation with the Porto Rico Association for the Blind and the insular departments of health and education. The committee's posters on babies' sore eyes were issued in Spanish, and selections from the committee's publications were translated and adapted to the special needs of Porto Rico. Stories to interest children in the care of the eyes were translated and published in the Porto Rico School Review, which goes to all teachers on the island, and republished in the newspapers. All this material was placed in the hands of every physician, health officer, pharmacist, and school supervisor in Porto Rico, and the posters were sent to every school.

To assist in the campaign the national committee sent its secretary and managing director and the New York State Commission for the Blind sent a special eye nurse. Meetings were held in Aguadilla, Arecibo, Bayamon, Caguas, Catano, Cayey, Gurabo, Humacao, Juncos, Lares, Manati, Mayaguez, Ponce, Rio Piedras, San Juan, Santurce, and Yauco. At these meetings motion-picture films on the care of the eyes, the prevention of blindness, and the education of the blind were shown, and short talks were given. In every town the

local officials and the local committees of the Porto Rico Association for the Blind participated. In Arecibo one session of the annual convention of teachers was given over to the subject of the prevention of blindness. In Rio Piedras a meeting was held especially for the normal-school students, emphasizing the work which they could organize in the rural districts. In San Juan a special meeting was held for girls in the upper grades.

In the larger cities conferences were held with the local health officials and physicians. Group conferences were held with nurses of the various baby clinics, and home visits with these nurses were made by the eye nurse to instruct them in the care of the eyes of the newborn. A conference on eye conditions was held with the hospital nurses in San Juan, and the school nurses were assisted in classroom inspection and home visiting.

At the conclusion of the campaign the National Committee for the Prevention of Blindness reported to the Porto Rico Department of Health the results of its observations and offered suggestions for a program of work. From its observations and conferences with health officers and private physicians the committee concluded that a large proportion of the blindness on the island resulted from remediable causes. The shortage of physicians, the fact that very few physicians on the island have specialized in eye conditions, the very limited facilities for skilled refraction, and the general employment of ignorant midwives at childbirth are handicaps which must be overcome if blindness is to be prevented.

The committee urged the importance of a detailed investigation of the blind and the causes of blindness. As a remedial measure, and one which also would yield valuable data, the committee recommended a traveling eye clinic, with a staff of one oculist and two nurses, to visit all parts of the island. Follow-up work and return visits would be necessary, and to reach all sections of the island plans should be made to carry on the work for at least three years.

In reference to the education of the blind the committee advised the economy of establishing a single school for the entire island, for which purpose sufficient land should be set aside in the beginning to permit natural expansion, and the buildings should be planned with a view to later additions.

BABY WEEK.

The first "Baby Week" in Porto Rico was celebrated in San Juan January 1-7, 1922, under the general direction of the Woman's Civic Club, aided by the mayor and other municipal and insular officials, the United States Army post, and many other organizations.

Early in the week the Boy Scouts canvassed the city house by house to check up on birth registration. The general impression

had prevailed that birth registration in San Juan was virtually complete. The canvass, however, showed that about 10 per cent of the births were not registered.

The program for the week's celebration included "baby Sunday," "demonstration day," "fathers' day," "little mothers' day," "school day," "three kings' day," and "mothers' day."

In the Sunday services the churches gave appropriate messages. In the afternoon three special band concerts were held for children, the United States Army band, the municipal band, and the Boys' Charity School band playing music particularly interesting to children.

On demonstration day the municipal theater was decorated with posters concerning all phases of child welfare. This exhibit was open all day and during the following days. In the afternoon was given a program of motion pictures and talks.

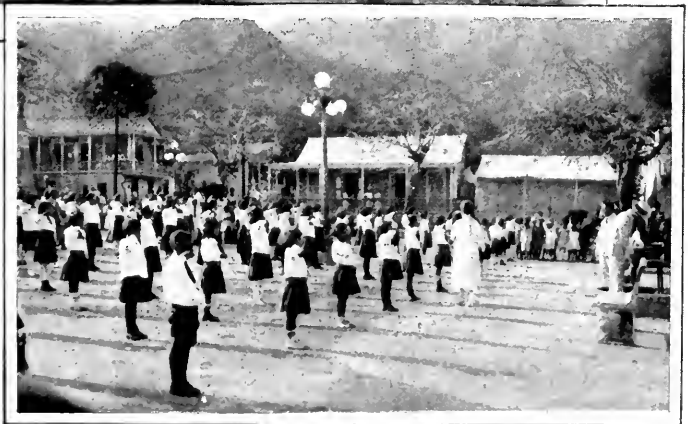
On fathers' day eight school auditoriums were used as forums for discussion of the duties and responsibilities of fathers for the care and education of their children. Thirty-four speakers made addresses and 14 poets read original poems on this theme, which were later published in the newspapers.

On the morning of little mothers' day the high-school girls were given a lecture—illustrated with motion pictures—on the care of children, with particular emphasis on the care of the eyes of the newborn and the prevention of blindness. In the afternoon demonstrations were given in the three high schools, by a physician and a nurse, of the proper manner of bathing and dressing a baby. Talks were given by the physician and the supervising Red Cross nurse on the essentials of child care.

School day was celebrated by a parade of 4,000 school children, in which the United States Army band and other bands assisted, and which was reviewed by the governor and other officials. The schools competed for prizes offered by the Junior Red Cross for the best exhibit. The children were dressed in great variety of effective costumes and carried banners with appropriate mottoes. After the parade addresses were given in the municipal theater.

Friday (January 6) was three kings' day, the Porto Rican Christmas. A committee of prominent women headed by the wife of the mayor took charge of this day. Regular Christmas celebrations were held in three districts, and candy and gifts were distributed to 3,500 children selected with the assistance of the teachers.

The final day of Baby Week was celebrated as mothers' day. Nine clinics for examining children were kept open that day to call the attention of the parents and the community to the state of health of the rising generation. For these temporary stations the United States Army post loaned tents.



CHILDREN'S PARADE, BABY WEEK, SAN JUAN. SCHOOL LUNCHES.
OPER-AIR TOOTHBRUSH DRILL.



Thirty-four physicians volunteered their services for these stations, the Red Cross and hospitals sent nurses to assist, and many women of the community helped with weighing and measuring the babies and filling out the records. It had been planned to compile and analyze all the records taken in the various stations. However, many of the physicians found it imperative to explain to the mothers in careful detail the needs of the children, and this required so much time that the records were not filled out as completely as necessary for careful analysis.

The following figures analyzed by the physician in charge deal with the facts as they were shown in the clinic at La Perla, a district of San Juan situated just outside the ancient city walls. This district has narrow streets and poor housing, but its health conditions are greatly improved by the strong sea breeze which blows continually. At this clinic 77 children were examined, of whom 33 were less than 1 year of age, 14 from 1 to 2 years, 25 from 2 to 5 years, and 5 over 5 years of age. Of the children less than 1 year of age 15 were classed as well and 18 as not well; 28 were of normal weight and 5 were under weight. Of the 18 who were classed as not well the following conditions were indicated:

Gastrointestinal disorders.....	5
Skin diseases.....	4
Glandular affections.....	3
Malnutrition.....	2
Nasal catarrh.....	2
Enlarged tonsils.....	1
Otorrhea.....	1
Pulmonary catarrh.....	1
Pulmonary tuberculosis.....	1
Whooping cough.....	1
Inflamed navel.....	1
Deformity of the chest.....	1

Of the second group, between 1 and 2 years of age, 13 were classed as not well and only 1 as well. Eight were of normal weight and 6 under weight. As will be noted, the number of those suffering from malnutrition was greater than in the first age group—the result of inadequate and improper feeding.

Among the 13 children classed as not well the following defects were found:

Skin diseases.....	6
Glandular affections.....	5
Gastrointestinal disorders.....	4
Defective tonsils.....	2
Nasal catarrh.....	2
Rickets.....	1

In the third group, between 2 and 5 years of age, 3 children were classed as well and 22 as not well. Twelve were of normal weight and 13 below weight. It will be noted that the percentage of those under weight increased as the age increased. The following defects were found:

Defective tonsils.....	8
Defective teeth.....	8
Gastrointestinal disorders.....	4
Defective eyes.....	4
Nasal catarrh.....	4
Glandular affections.....	3
Lung affections.....	3
Ear defects.....	3
Acute malnutrition.....	2
Adenoids.....	2
Skin diseases.....	2
Tuberculosis.....	1
Heart affections.....	1
Hernia.....	1

In the fourth group, between 5 and 7 years of age, 1 was well and 4 were not well. One was of normal weight and 4 were under weight. Among the 4 the following defects were found:

Defective teeth.....	1
Defective ears.....	1
Defective lungs.....	1
Hernia.....	1

Acute gastrointestinal affections were found more often among the younger children; what is an acute condition among the youngest children develops into a chronic and less noticeable condition as the child grows older.

At the time these examinations were made there was no epidemic and no special diseases were prevalent which might account for the generally poor condition of the children.

Later, after a regular health conference had been established in La Perla, the nurses who had worked in other sections of San Juan reported that that district had better health conditions than were found elsewhere.

HOMELESS CHILDREN.

Some time ago the chief of police of Porto Rico, on the basis of more than 10 years' observation, estimated that there were in the island at least 10,000 homeless children. No enumeration has been made of such children in Porto Rico, but after checking up on the numbers in selected districts the chief of police stated that the total number on the island was probably at least double his original estimate.

The great mass of homeless children work as servants in private families. Such servants are found in almost every household, and it is only by such work that many of these children escape starvation. The typical Porto Rican lady does not go marketing nor run her own errands. Whether a regular servant is hired or not there is always sure to be some child about to run errands. Largely because of the difficulty of keeping food in a warm climate the householder buys only enough food for the day or for one meal at a time, which necessitates a constant running of errands. The child servant also entertains and looks after the children of the family. Very seldom are these child servants given any education. When they grow up they are paid wages, or leave either to establish homes of their own or to obtain paid positions as servants.

This system is partly an outgrowth of the transition from slavery, which was abolished in Porto Rico by decree in 1873. This abolition of slavery was brought about at the request of Porto Ricans and was accomplished without the bitterness of any struggle. In a large number of cases the former slaves continued to live as previously and their children grew up loosely attached to the family of the former owner.

In Porto Rico there is a small class of highly educated persons of means, but the great majority of the population is very poor and uneducated.

Formerly marriage fees were very high and for the mass of the poor people legal marriage was impossible. In many cases these people established their little homes in exactly the same way as though legally married, but in other cases the lack of legal bonds has resulted in more indefinite and impermanent relationships. Fathers have not considered themselves responsible for the support of their children. As a rule the mothers make every effort to keep their children together, but frequently poverty makes this impossible. Family life has been vague and in many cases the children have been given away to anyone who could provide food and shelter. In other cases the children have wandered away of their own volition.

HOMELESS BOYS.

A study was undertaken of homeless boys encountered on the streets of the three largest cities of the island—San Juan, Ponce, and Mayaguez. A large number of these boys were interviewed and investigated. Most of them were found to have come to the city from the country districts. The majority had some form of home tie, but the records taken in the study include 161 boys who were without any protection from their families, although in only 51 cases were both of the parents known to be dead. Of these boys 87 were white and 74 were colored. Many of the boys were not certain

as to their exact age, but their ages computed as definitely as possible were as follows:

Total.....	161
17 years	26
16 years	30
15 years	21
14 years	20
13 years	15
12 years	31
11 years	3
10 years	9
9 years	1
8 years	5

Thirty of these boys knew absolutely nothing about their parents. They had been given away when very young and had only vague recollections of having come to the cities from the country districts. Eighty-five of the boys believed their mothers to be dead. Of the mothers who were still living 6 were washerwomen, 2 were seamstresses, and 2 were cooks. In various instances the mother was living with a man not the boy's father and the boy had left home largely for this reason.

The great majority of poor families in Porto Rico live in houses consisting of one or two small rooms, and in these crowded conditions a boy often prefers to leave his mother rather than live with an uncongenial stepfather. As a rule the man does not assume any responsibility for the children of previous relationships and the boy has to provide for himself. In many instances he also has to provide for younger brothers and sisters.

Of their fathers 30 of the boys had no knowledge, and 76 understood that their fathers were dead. Among the fathers who were known to be living were 3 farm laborers, 2 longshoremen, 2 carpenters, 1 cigarmaker, and 3 peddlers.

Of the 161 boys in this study 38 were servants; 104 were engaged in street trades, of whom 24 were bootblacks, 18 newsboys, 7 street vendors, and 55 odd jobbers; 6 were farm workers; and 13 were engaged in miscellaneous work. The most lucrative trades in the streets are the selling of newspapers and bootblacking. Most of the regular bootblack salons employ only grown men. The younger boys have small portable outfits which they carry through the streets and into the office buildings, restaurants, and other places. Most of the newsboys were found in San Juan. In the other cities the newspapers were distributed chiefly to subscribers and very few were sold on the streets. In San Juan some of the newsboys were not in business for themselves but were paid a fixed amount by some news-stand proprietor. The street vendors who sell sweets, gum, and other small

articles usually are given a percentage on the sales made. In some cases they are employed directly at a fixed daily wage. The odd jobbers support themselves by running errands and carrying packages around town, the least profitable of the street trades.

Just how much the boys earn is difficult to state accurately, but according to computations the boys in the street trades averaged about 35 cents a day. Out of this small amount of money 33 of the boys, according to their reports, contributed to the support of other persons. Four of them were keeping younger brothers and sisters in school, although in none of these four cases had the boy himself ever attended school. Ten of the boys were attending school and earning enough to cover their expenses. In many cases the earnings of the boys were barely enough to meet their simplest needs and provide for an occasional motion-picture show. The majority of the boys attended the rear of a motion-picture theater where for 5 cents they could see the reverse side of the screen. Since in most cases they were unable to read, the fact that the legends were reversed was not a matter of consequence.

Of the 161 boys whose cases were investigated 102 had never attended school, 7 were attending night school, 2 were in regular day school, and 57 had previously attended day school. The numbers who had attained the different grades were as follows:

Total.....	57
First grade.....	3
Second grade.....	19
Third grade.....	17
Fourth grade.....	13
Fifth grade.....	4
Seventh grade.....	1

Five years is the legal age for admission to the public schools of Porto Rico. However, the school facilities are not adequate for all the children who wish to enter and the preference is given to older children. From this condition it results that in many cases the boys become used to the freedom from restraint which the street offers before they have a chance to be admitted to school, and later on it is difficult to get them to give up that freedom. The 7 boys who were attending night school were doing so as a result of the investigation. Among the boys investigated 106 expressed a desire to attend night school, but the crowded conditions made it impossible for more than 7 to be enrolled. The night schools of Porto Rico are organized primarily for the purpose of teaching adults the principles of reading, writing, and civics. The courses are not designed for children, and they do not offer much encouragement to boys who have learned the first principles of reading and writing. The schools of the island

have shown the greatest desire to cooperate so far as their limited funds will permit in meeting any need of the people, and adequate night schools for this class of boys will be established as rapidly as possible. Most of these street boys have come to realize the great advantage of learning English, and their eagerness for education is noteworthy. Only four expressed a positive dislike for school.

The general living conditions of these boys were haphazard. Thirty-nine of them were sleeping at the houses of their employers, 59 slept at the houses of friends, 3 rented rooms, 23 slept in cheap boarding houses when they had the money to pay for such accommodations, and 37 reported that they slept "anywhere." The boys who reported sleeping with friends—who were in most cases no better off than the boys themselves—received merely the privilege of sleeping in some corner of the house, which usually consisted of only one small room. Needless to say, there was no bed for the boy, who merely curled himself up in the corner and considered himself lucky to sleep indoors. Although the climate is very mild and there is no danger from snakes or animals, the Porto Rican is very reluctant to sleep out of doors, and the gratitude of the boys for permission to sleep on a bare wooden floor was pathetic. The family which shelters a boy at night has little if any control over him. Thirty-seven boys reported sleeping "anywhere," which means that if they earned sufficient money to pay for a bed or for space on the floor at some cheap rooming house they did so, otherwise they slept at the wharves, in doorways, on park benches, or in other public places. One boy had been sleeping for months at the railroad station in an empty car, but a new superintendent had refused to permit him to continue doing so, and the boy was at his wits' end to decide what to do. Another boy slept under the house of his sister, who was a prostitute, but he seemed very grateful for this amount of protection. Still another boy was sleeping in an automobile at a garage through the kindness of the night watchman. In outlying districts it is not at all uncommon for a boy to be hired to sleep in an automobile in the open, as garage facilities are extremely limited. The police are well acquainted with most of these homeless boys and exercise great leniency and kindness toward them. Only 6 of the 161 boys had "records." Most of the boys on the streets had developed a combative spirit and were considered troublesome and mischievous, but they had not shown vicious or destructive tendencies. One had served a term in the reform school for petty thefts.

The city of San Juan has a small refuge for homeless boys, which at the present time shelters 20 boys in space originally provided for 10. In Mayaguez the poorhouse extends its hospitality to all wandering children. At the time of the investigation 60 girls and 30 boys were receiving shelter in the institution and the director had ar-

ranged a classroom where some Catholic sisters were giving these children the rudiments of reading and writing.

In their haphazard form of existence the irregularity of the boys' meals is a matter of course. There are restaurants in the cities where a boy can obtain rice and beans for 10 cents, and those who are able to pay for such a meal once a day consider themselves fortunate. At other times they have to content themselves with very scanty rations, often consisting of no more than a piece of bread. The generosity of friends can always be counted upon; those who go to friends for food will always get something, although that something is not, in many instances, what the appetite and healthy growth of a boy demand.

Outlines of some interesting cases of homeless boys follow :

Luis.—White. He did not know his age, but looked about 12 years old; did not know where he was born. He knew his mother was somewhere in a certain inland town, but had not seen her since he was 2 months old. She had other children. His mother had given him to his aunt and uncle when he was 2 months old, and he had lived with them until two years before the investigation, when he came to San Juan to look for work.

For awhile he had been on a coasting vessel and helped the cook around the kitchen. But when the boat was about to go to Santo Domingo he had to leave it, because he did not know how to get a passport and nobody was interested in getting him one. He was fond of sea life and would have liked to go back to it.

Luis had never gone to school. He was very dirty, and at the time when he was interviewed was in the habit of sleeping in a motion-picture house.

Pepe.—Colored. He did not know his age, but looked about 10 years old; had no parents. He slept and ate with friends. He made his living by selling newspapers, earning from 50 to 60 cents a day. This youngster did not keep his savings in a stocking, as is the custom among the boys, but gave his money to a policeman, who kept it for him.

Pepe had never been to school. He was very dirty and was wearing clothes that must have been made for a boy two years his senior.

Mario.—Colored. Age, 14. His mother was dead and his father was living in another town with another woman. After his mother's death Mario had left home, and his sister had been placed out in a free foster home. He did odd jobs for a living, earning about 40 cents a day. He slept in an automobile which he was hired to look after, and ate at a restaurant. He was dirty and in rags.

Carmelo.—Colored. Age, 13. Both parents were living. The mother had three other children, all by different fathers. Carmelo's father was a carpenter and earned good wages, but he lived with another woman and had other children, and did not contribute to the boy's support. Carmelo had stayed in school up to the third grade, but had been expelled. He had been arrested several times for fighting. He earned about \$7 a week and gave much of it to his mother, though he maintained a separate and independent existence.

Ramon.—Colored. Age, 12. Both parents were living in another town. Seven brothers and sisters were at home with the parents. Ramon had attended

school up to the third grade and then come to the city to work. He was selling papers, for which he was paid \$8 per month and given board and room. Ramon's earnings went to his family, his mother buying the necessary clothes for him.

Angel.—White. Age, 8. Angel had come from the country with his mother and older brother after the death of his father. The mother had found work at a hotel, but the boys were not allowed to stay with her. Angel had gone from house to house asking to be allowed to work for his board and room. He was taken in by a family to run errands and entertain the children, but was found to be too naughty and was discharged. He started the rounds a second time to find himself another home and had succeeded for the time being.

Victorio.—White. Age, 10. His mother had committed suicide and his father had several other children, all by different women. Victorio was found leading a blind woman beggar, who paid him \$1 a month. He was talkative and gave a very picturesque description of his life, which he seemed to enjoy. He had never been to school and did not want to go.

Alfredo.—White. Age, 12. Alfredo was one of a large family of children. Both parents were living, but they had hookworm and were unable to work. Following the lead of his older brother he had come to the city to work as a servant. He stayed with an uncle for a little while and then found work with a family who agreed to pay him \$1.50 a month. Some disagreement followed at the end of the month and he had to appeal to the police to get his wages. He went back to his uncle and was taken ill. When he was able to be about his uncle told him he could not stay in the household because it was already too large. When the investigator found him he was aimlessly walking around the streets, sick, hungry, dirty, and discouraged to the point of not caring what might happen to him. The idea of going back to his parents did not appeal to him.

HOMELESS GIRLS.

Of the large number of homeless girls in Porto Rico almost all live as servants in families. In many cases they are treated very kindly, although it is seldom that these children are given any schooling. When a baby is born it is not unusual for the family to take a child of from 7 to 12 years of age who becomes the personal servant of the infant, and poor families in the hills are only too glad to find homes for their children where they can be certain the children will receive enough to eat and a place to sleep. Girls of 6 or 7 often show a matured sense of responsibility more pitiful than other more obvious evidence of the lack of happy carelessness in childhood. This seems all the more remarkable when the child is underdeveloped physically and appears even younger than she is.

Up to the present time there has been no social conscience against this practice. In many cases the child's services are not really needed and she is taken into the house more in charity than for any selfish motive. Often she is a relative of some other servant and comes because she has no other place to go. However, where servants are cheap and plentiful duties are multiplied to fill their time, and the household feels that it must have services which people in the States,

in similar conditions, would not expect. To have three or four servants is not unusual for a family of moderate means. The servants' duties are light. They often sleep in their own homes, and any occasion of family illness or other need is sufficient excuse for their non-appearance at work.

Among the Porto Ricans social relations are strongly personal, and many things are done by custom which are governed elsewhere by legal right. Kindness and consideration, as well as all the forms of courtesy, are the rule. However, any system under which the welfare of children is dependent upon the kindness of persons not legally responsible for them is liable to abuse. The problem of these thousands of children who are kept or passed along without any guaranty of protection is one that calls for much more consideration.

The race problem inevitably has had much to do with a careless attitude toward the education of these child servants, almost all of whom are of mixed blood. While Porto Rico was fortunately spared bitterness and civil war in the freeing of its slaves, a wide gulf has existed between the highly educated Porto Ricans of Spanish blood and continental culture and the simple, illiterate colored people. Toward those of mixed blood the islanders have been far more sympathetic than the people of the States have been. They have recognized individual merit and have accorded high honors to many colored persons, but they have considered it not unsuitable that the colored people should remain servants and therefore have thought it unnecessary for them to receive education.

As education spreads responsible Porto Ricans are coming to realize and to advocate the right of all children to the fundamentals of education. Compulsory education is doubtless the broadest approach toward a solution of the many problems involved in the situation; but at present education is a privilege, and not a right, in spite of a compulsory education law enacted by the legislature. Until sufficient funds are found to provide school facilities for all children the compulsory education law can not be enforced.

The general education of public opinion in regard to the homeless children is going on. The Woman's Civic Club of San Juan, the W. C. T. U., and other organizations are giving the matter careful consideration, and the large influence of former teachers among the membership keeps education constantly in mind as the method of solving the problem.

In addition to the general problem of these children, for whom no one is considered responsible, there is an acute problem of delinquent and neglected girls for whom no institutional care is provided.⁵

Subsequent to the investigation of homeless boys the chief of the insular police cooperated with the Children's Bureau in gathering

⁵ See p. 28.

data concerning girls in need of institutional or other care because of delinquency or neglect. Questionnaires were sent to all district chiefs of police asking them to list girls who had come under their observation as being in need of such care. Data were received concerning a very large number of girls in dire need. In most cases these girls were living with their families or relatives and their condition was one of extreme family poverty but did not otherwise call for change from existing living arrangements. The notations of the district police officials showed personal knowledge and concern and their eagerness to find some help for the children was touching. The original lists sent by the officials were turned over to the American Red Cross to see if aid might not be found in individual cases, and to be used to assist the attorney general's office in its appeal to the next legislature for funds for an institution for girls.

Of the larger number of forms filled out, 119 were taken as a basis of study, as indicating the need of removal from existing conditions. Of these girls 65 were classed as "homeless," "vagrants," or "delinquent," and 54 as "servants," but under conditions which called for immediate change. In gathering this information no attempt was made to draw any sharp lines between cases of neglect and delinquency. All the girls were under 16 years of age and all were living under conditions of extreme moral hazard. Of the servants several had notations such as "prostitutes" or "often found on the streets at very late hours." Some had appealed to the police for help because of intolerable moral conditions. One girl only 7 years old was living with three sisters, all prostitutes. One 13 years old was living in a recognized house of prostitution. One of 8 years and another of only 4 without parents or regular abode were classed by the police as "moral delinquents." Another girl of 13, who had first come to the attention of the police as a victim of rape, was now a prostitute. Various others were listed as being under observation for moral laxness. Twelve of the girls made begging a regular occupation, several of them because of the illness of a parent but under conditions which offered little hope for the future of the child.

Of the 119 children the parents of 70 were either dead or unknown. Eleven had both parents living and 38 had one parent, but many of the parents living were classed as beggars or ill, and were considered by the police a hindrance rather than a protection to the children.

Of these 119 girls 67 had never been in school, 20 had reached the first grade, 16 the second, 7 the third, 7 the fourth, and 2 the fifth. Two of the girls, 13 and 14 years old, were attending night school (first grade) at the time of the investigation. The parents of both were dead. One girl eked out a precarious existence sewing blouses and the other lived in a family as a servant. Both were trying

without help or guidance to lift themselves out of hopeless and illiterate poverty, with nearly every probability against their success. Four of the girls had police records for theft.

The ages of the girls were as follows:

Total	119
4 years	1
6 years	5
7 years	6
8 years	8
9 years	8
10 years	15
11 years	12
12 years	21
13 years	20
14 years	14
15 years	9

One of the girls was an Indian, 41 were colored, and 77 were white.

ABANDONED MOTHERS.

As a sidelight on the matter of homeless children, the W. C. T. U. undertook a study on a limited scale of mothers, married or unmarried, who had been abandoned by the fathers of their children.

As has been stated, among the educated classes marriage is as strictly observed in Porto Rico as in any other section of the United States, but among the poor and ignorant unlegalized relationships are common.⁶ In many cases these relationships are of a stable character, but in many others they are of short duration.

The "family" and the "home" do not exist among the poorer classes of Porto Ricans in the sense in which these terms are used ordinarily. The degree of poverty which prevents a family from having more than one small room, and that virtually without furniture—with perhaps a hammock or a poor bed for the man, no chairs and no other conveniences—makes of the "home" only a room where the family sleeps in a mass on the floor at night. Privacy does not exist. Life is lived on the street, and only a people of unusual kindness and clean instincts could make of the situation one in which sordidness was not the rule.

The lack of a feeling of responsibility for their children on the part of the fathers is in peculiar contrast to their invariable kindness and fondness for children. This is probably rooted in the combination of geographical and social conditions—the mild climate in which shelter is not necessary to existence and, until recently, nature

⁶ The United States census of 1920 lists 48,697 men and 52,593 women as living in consensual unions. The figures for 1910 are practically the same: Men, 50,113; women, 51,073.

supplied food without labor, circumstances relieving the parents of a responsibility taken for granted among northern races; and the former condition of slavery or dependence with its attendant irresponsibility for self-support and its tendencies towards irregular unions.

The mothers ordinarily take more than their share of the responsibility for the children, working in the tobacco factories, washing, sewing, cleaning, and doing other housework, when they can get work to do. They bear the brunt of providing for the children in the majority of cases, so that desertion by the father does not necessitate so sudden a readjustment in their lives as it would if the fathers were customarily the sole providers. When the mother is young and has some means of earning a living the shifting of relations may not cause physical hardships to the children, but it breaks up any remnant of the care and protection of children which is associated with any form of family life. If the mother is no longer young and attractive, or if her strength has failed, the situation often becomes pitiful. The kindness of neighbors is extraordinary, and they will literally share their last crust of bread, but often they have nothing to share. The children wander off or are given away without any assurance that they will have care or consideration.

Determination of the cause of desertion is often very difficult, particularly if the deserted wife is the only source of information. The prevailing opinion of the women who made this study was that the basic trouble was economic conditions—low wages, uncertainty of employment, and long periods of unavoidable idleness with its breaking up of regularity and good habits and its hardships under which many men desert their children rather than see them suffer.

Some typical cases which help to visualize the situation are here listed:

Concha, aged 25, married to a man 20 years older than herself, had 4 children—9½, 8, 6½, and 5 years of age. Her husband was a clerk, employed irregularly. He had deserted her a year before, after a long period of unemployment. She had no resources nor occupation; was living on the charity of neighbors, but this could not continue indefinitely.

Carmen, aged 22, not married, had four children—aged 6, 4, 3, and 1. Her man was a policeman, who left her to live with another woman. She worked in the tobacco factory when there was work.

Maria, aged 25, married 10 years before to a carpenter, had four children, of whom only one was living. Her husband had had many affairs. He had left her finally a year before the investigation. She supported herself by washing.

Dolores, aged 29, married to a man who worked in an office, had three children—7, 6, and 3 years of age. Her husband had deserted her two years before. She and her mother made blouses, and with difficulty supported the family. The Red Cross located the man in New York, and he sent a little help. He said he went north to get better opportunities, but had not earned enough to bring the family north.

Juana, aged 26, not married, had one child of 2 years, by a servant. He had left her a year before. An aunt supported her and the baby. The man was believed to have gone to New York.

Mercedes, aged 30, not married, had three children living—15, 12, and 9 years old—and had lost four others by death. Her man was a carpenter, who worked irregularly and gambled. At the time of the study he was living with another woman. He contributed a little money occasionally to Mercedes, and also to another woman besides the one with whom he was living. The oldest boy was in the reform school.

GAMES AND ATHLETICS.

Games and athletics, as they are known in the States, in Porto Rico date from the American occupation. Previous to that time sports meant horse racing, cockfighting, and other activities in which the gambling feature was prominent.

Baseball came in with the troops and has been as popular as it has been wherever else it has obtained a foothold. Track and field athletics were introduced by some of the first school-teachers from the north, and interest in them has grown steadily, although many boys of better-class families at first felt that it was out of place for them to take an actual physical part in strenuous contests.

A few years ago the Y. M. C. A. introduced basket ball, and this game was played in a few of the schools. During Children's Year it was adopted by many more schools and for the first time made real progress as an activity for girls. Under the direction of the insular supervisor of home economics the home economics clubs (numbering 68) all over the island have taken up basket ball. Hereafter as part of the course of study every girl taking home economics will make for herself an athletic costume, which will naturally encourage the girls to wider participation in games. Some of the schools have tennis courts, but this game is not practical, as few can play at a time and the equipment is expensive. Volley ball is played as a playground sport only, but appreciation of this game is growing, and it will eventually take its place as a competitive sport. Soccer football has been played to some extent, but not in the schools. It is doubtful if it will ever be popular, as it is too strenuous for the Tropics.

Physical training and playground work were introduced in 1908. For a time a special supervisor was employed, but the position was eliminated in 1914. At that time there was a general impression that a playground meant an open-air gymnasium; considerable money was spent on swings, giant strides, seesaws, and other apparatus, but nothing for supervision, with the result that most of the money was wasted. In the general curtailment of appropriations in 1915 the supervision of physical education was discontinued, but it was again instituted in 1921.

Prior to 1921 the possibilities of play and games without apparatus had not been developed on the island. Although a few supervisors and teachers had made beginnings along this line, their work had not reached beyond their own districts. Partly because of the tropical climate and partly because of inheritance and traditions different from those of northern races, the children of Porto Rico have played few games. They have largely missed the play which is taken for granted in the upbringing of the American child and which develops health, teamwork, and the spirit of fair play.

The specialist in recreation sent to Porto Rico by the Children's Bureau worked with the department of education in establishing a system of organized play in the schools. Demonstrations were given at teachers' institutes held in Guayama, Cabo Rojo, and Yauco, and instructions for playground and schoolroom games, adapted to the special needs of Porto Rico, were widely distributed. For several months classes to teach games to the teachers of San Juan were held weekly in the various schools. Schoolroom as well as playground games were taught and emphasis was laid on the selection of games as exercises in developing alertness, concentration, observation, and similar faculties. There are no schools in Porto Rico for backward or subnormal children. In several schools the teachers discovered in games a means of developing backward children. The play period has replaced an unprofitable recess time in certain districts, and in San Juan, Mayaguez, and Manati regular play periods have been included in the schedule. San Juan and Mayaguez have had special women teachers to supervise the work. Classes were started for normal students at the University of Porto Rico, and this work was later extended by the department of education into an intensive summer-school course in physical training, games, and athletics for rural teachers, principals, and physical-education instructors.

The Porto Rican teachers, already carrying a very heavy burden, were at first reluctant to add another duty to the day's work, but this attitude changed after a short trial demonstrated that the playing of games taught the children to see and hear and think more quickly and that they carried back to their studies a new alertness. To the pleasure of wholesome games was added the beginning of group spirit. Discipline and attendance improved and the children approached their work with new interest.

The educational system of Porto Rico has strained to overcome the neglect of past centuries, and academic work has necessarily absorbed every effort. But wherever games have been introduced the children, and the teachers and principals as well, have entered into the spirit and have played with an eagerness surprising and touching. The function of organized play in the schools in the transition from the old tradition of Spanish aristocracy to that of American

democracy—of universal participation and responsibility in community life—was immediately recognized by leading educators of Porto Rico.

Special interest was shown in the singing games and the simpler folk dances. The Porto Ricans are a dramatic people, and the "play acting" as well as the physical movement and the music makes a strong appeal to them. Fundamentally folk-song games are founded upon the life and spirit of a people, their customs, and their national activities. For generations Porto Rico has borrowed her customs, her mode of dress, her music and dance from Spain and has ignored her natural inheritance of traditions from the Indian. Since 1898 Porto Rico has looked to the States to satisfy a longing for national customs, and has too hastily discarded much that was well worth preserving. Teaching Porto Ricans the traditions of other countries was an opportunity of awakening a pride in their own. The teachers and the children caught the spirit of the simple Old World games. Very often a teacher or pupil would say, "We have something almost like that game." Whenever a Porto Rican version was found an effort was made to encourage its appreciation.

In addition to the woman recreation director, the Children's Bureau sent a man to assist the Porto Rico Department of Education in raising the standards of school athletics, in promoting wider participation, and in making these activities assist in community progress.

The insular department of education was encouraged to replace the former complicated system of calisthenics in the schools with one much simpler and calling forth much more spontaneous activity. Calisthenic drills have proved interesting to the parents and the general public, and have stimulated the formation of athletic clubs and classes for older men quite apart from the school. At Mayaguez were held two field days, contests between different schools, in which the most keenly contested features were competitive calisthenic exhibitions participated in by all the children from each school. Similar exhibitions have been given in various towns, as, for example, at Comerio, where on "school day" or "children's week" an exhibition of the "daily dozen" to the music of the phonograph was given by 250 children in the historic plaza.

The Boy Scout movement is a possible source of great good if it can be properly launched and directed. Attempts have been made to organize scout work on the island, and at one time there existed an excellent organization centering in the Y. M. C. A. Ten or twelve troops of scouts were organized and the boys were enthusiastic. The Y. M. C. A., however, found itself unable to carry on the work in addition to its regular program, and as no other organization was found to take up the work the movement lapsed. Its influence, how-

ever, has persisted. At various times during the Children's Year activities former scouts offered their services. During Baby Week in San Juan they made a house-to-house canvass of the city and its suburbs, and collected a mass of material regarding birth registration that awakened a realization of the incompleteness of registration under the system in use. They kept order during the parade of the schools in which 4,000 children marched through the streets without a teacher in line. They acted as ushers at field meets and served as volunteer "police" on several occasions.

Practically nothing has been done to arouse interest in the Girl Scout movement, except by a small group at Mayaguez.

Baseball on the island has generally been played under adverse conditions. Before 1922 the department of education had never taken control of school games; consequently so-called school teams were made up largely of outsiders, and no one was responsible for their conduct. Town or club organizations played on a semiprofessional basis without any controlling body. This had resulted in many evils, such as stopping games in the middle to save gambling money, wholesale desertion of teams by players, throwing of games, and all sorts of trickery and unfair practice. The particularly bad feature of this had been that many of these teams were composed in part of schoolboys, who acquired an entirely wrong point of view on the whole question of athletics. A large proportion of the athletes in the schools were playing baseball for money, and too often the accepted standard of conduct was "anything to win." The department of education through the Porto Rico Interscholastic Athletic Association, which it controls, has made a stand against professionalism in track athletics, but has not accepted the playing of baseball for money as a cause for disqualification, on the ground that if this were made a reason for barring a player there would be no track athletics.

The general standard of athletic performance has been low, for the same reason that the athletic spirit has been of the wrong kind—that is, lack of competent instructors. By this is meant not only men able to teach the boys the form and technique of sports, but men who are themselves sportsmen, able and eager to instill into their pupils the amateur idea of playing a game for its own sake. The only men available have been the graduates of the system in vogue, who naturally carried it on. A few men from the States have tried to raise the standard, and their work is gradually having its effect. Better feeling is growing up, with games on a more wholesome basis and with a better class of boys taking part.

The fact that there was no background of sporting tradition, combined with the gambling atmosphere that surrounded all games, created conditions that paralleled very closely those of a few years

ago in some schools and colleges in the States, when star athletes from preparatory schools were offered substantial inducements to enter this or that college and a "crack" baseball or football player could always find a convenient "scholarship" somewhere. Although conditions in the States have improved greatly, there are still enough instances of this kind to make possible an understanding of the difficulties which the Porto Rico Department of Education has been obliged to overcome in building up the spirit which it has desired to establish on the island.

When the Children's Bureau began its campaign to increase interest in physical development through games and athletics the department of education appointed 12 special instructors, who were assigned to districts in various parts of the island. Through the intensive work of these instructors far wider participation was obtained during the year than was ever obtained before.

One of the greatest obstacles to the development of athletics in the island is the lack of grounds. Porto Rico is small, densely populated, and in some sections so hilly that it is practically impossible to obtain any level ground near schools. There is one excellent athletic field in the island, at Ponce, but that needs greatly enlarged seating capacity in order to accommodate the crowds that are anxious to attend the field days and festivals held there. San Juan has two tracts of land suitable for athletic fields, one belonging to the city and one to the schools, which will soon be made ready for use, and the San Juan budget for next year carries provisions for playgrounds in connection with six of the schools. Mayaguez, Caguas, Fajardo, Humacao, and Rio Grande have athletic fields ample for their needs, all but that of Mayaguez having been obtained during Children's Year. Yauco has obtained land, which will soon be put into condition. Plans are under way for establishing in Arecibo a field larger and better equipped than any other on the island, a gift from a prominent citizen to the children of the city. Manati has acquired a field. Isabela and Quebradillas at present have the use of vacant land, and may be able to continue on the same basis. An excellent field in Catano, between San Juan and Bayamon, used occasionally for professional sports, is to be given for the use of the schools. In addition, many smaller playgrounds have recently been acquired. The special attention which has been given by the department of education to the physical development of children has met with generous response on the part of public-spirited citizens, who have donated land or given the use of it to the schools, and have assisted in paying for necessary grading and the building of fences and grandstands. Many of the rural schools use the roads for playgrounds if there is little traffic, but the difficulty

of obtaining adequate space is very real and its solution will require much work and money and no little time.

As a means of promoting better understanding and of increasing interest local athletic associations were formed during Children's Year in 29 towns and districts. The exact form of organization varies according to local conditions, but the general rule of giving the pupils of the schools a certain amount of responsibility and initiative has been followed throughout. In some districts one association has been formed, in others a separate one in each school; in others a high-school association exists in addition to the general organization. In some towns, regular meetings of the high-school associations have been conducted in English, and the scope of activities has not been confined to athletics but has taken on a more general character, the athletic association serving as an additional opportunity of practicing English. A number of the associations have promoted entertainments to raise money for the purchase of equipment and for other needs, and have developed into more general community clubs.

During Children's Year hundreds of games of baseball and basketball were played by the school children. In the larger towns every school had its team, and in many of the schools each class, also, had its own team. This meant the participation of thousands of boys, instead of the very limited participation of previous years. Permission to play on teams was made dependent on satisfactory school work, and the teachers found this feature a decided help in the general conduct of their classes.

The annual interscholastic track and field meet for the championship of Porto Rico was held in Ponce at the end of March. Nearly 500 boys, from every district of the island, took part—an entry list double that of any previous field meet in Porto Rico. The contests consisted of the events customarily scheduled in interscholastic track meets in the States. Baseball, girls' basket-ball, and boys' basket-ball championships were played off at the same time. Considering the handicaps, the standard of performance was excellent. Porto Rico will undoubtedly make a place for itself in national competition in the very near future.

During the spring of 1922 the Y. M. C. A. conducted a series of basket-ball games to determine the championship of San Juan. The teams competing were composed largely of men from the States, Army men, and ex-college players, but the winning team, it is interesting to note, was made up entirely of Porto Ricans, and the San Juan High School team, the lightest and youngest of the teams, finished in third place. This series led to greatly increased interest in the game among the schoolboys, and it is certain that as a result there will be much more basket ball in the schools hereafter.

Some of the men on the island most interested in baseball are now trying to create a controlling body to take charge of professional baseball. This would result in keeping the schoolboys from mixing with the professionals. Also the Porto Rico Interscholastic Athletic Association under its new constitution will prohibit the boys from playing club baseball. However, unless rectified, the bad influence of the present professional system will continue. It will be hard to raise the standards of the boys' teams if they see all manner of unsportsmanlike practices followed by the outside clubs. Any responsible controlling body which will force the players to keep their engagements, and prevent throwing of games, mobbing of umpires, and disputes over gate receipts, will be a great help to the men who are trying to raise standards among the boys.

The Y. M. C. A. is planning to organize a body comparable to the Amateur Athletic Union, which will register all amateur athletes in the island and conduct track meets and other contests. In connection with this they will, if possible, organize an association of officials, to bring together all men who are capable of acting as baseball umpires, basket-ball referees, and track officials. In view of the need of good officials, this will be a great help to better sport. The plan is not only to make use of all present officials but to develop new men to take up the work.

What is needed in Porto Rico to bring games and athletics to their point of greatest service in the development of the people is more adequate control and direction by the department of education and better training of instructors. To meet both these needs the department has taken important steps.

Under the provisions of the constitution of the Porto Rico Interscholastic Athletic Association, as recently rewritten, all athletics are directly controlled by the department of education, which does away with the irregularities that have existed with respect to baseball. The rules regarding professionalism and scholarship requirements are made much more stringent and their enforcement is made easier. A new system of grouping the schools into classes will be used by which competition will be equalized and a much larger participation will be obtained.

The question of instructors is receiving serious attention. A course was given at the summer school of the University of Porto Rico for the benefit of men wishing to qualify as instructors of physical training. Not only students desirous of devoting themselves entirely to this work but all those in the summer school were admitted to this course, which thus reached a large number of the rural teachers. The rural schools have the greatest need of this work; whatever will bring physical training to rural children will reach a field hitherto untouched.

The department has funds to pay only 12 to 15 special teachers of physical education, but many municipalities are willing to pay part of a teacher's salary for this work. These special teachers have in many instances been mistakenly regarded as coaches paid to train track, baseball, or basket-ball teams, and some of them have done practically nothing else. This has been partly the fault of the instructors, who thought their work would be judged solely on the showing that the teams made in contests, and partly the fault of their supervisors, who encouraged them in this attitude. The course at the normal school was designed to make them realize that the pupils who really need their attention are not the athletes but the nonathletes, and that the main task of the instructor is to obtain universal participation in activities which will add to the health and education of all the children and promote community well-being.

The new constitution of the athletic association provides for competition among pupils in the lower grades and in the rural schools, who so far have been overlooked. During Children's Year a beginning was made toward conducting athletic games for the rural schools. In Isabela an interesting program of games was held at the time of the annual agricultural exhibit. Six rural schools sent track teams, and two others were represented by baseball teams. Another rural-school field meet was held in Ponce, in which 46 rural schools took part. Over 150 boys participated, and 15 different teams succeeded in scoring points. The interest in this track meet was remarkable; hundreds of people from the country filled the grandstand, and for the first time in their lives saw their boys running and jumping and playing games in competition. Some of these people, and some of the participants as well, had walked as far as 15 miles in order to be present, and had to walk home afterwards.

In the development of rural-school meets it will probably be best to modify the events, substituting informal and amusing "stunts" for certain contests, such as pole vaulting, which require a high degree of technical skill.

A rural baseball series was later held in the Ponce district in which 12 teams were entered, a notable showing considering the difficulties; not one of these schools had a baseball ground, and the boys practiced on the roads and in rough fields, with only the most primitive equipment.

This eager participation by the children of the rural schools in games and contests, and their willingness to make sacrifices in order to take part, refute the careless and sweeping statements sometimes made as to their indolence and lack of interest in wholesome recreation. They have been handicapped by the lack of facilities as well as by the long-time tradition against group activities, but with only slight encouragement they have made rapid strides toward overcoming these disadvantages.

DEVELOPMENTS SINCE 1922.

In the spring of 1923 the Children's Bureau made a brief follow-up study of conditions in Porto Rico, which showed that the child-welfare activities initiated during the previous year had gone forward in a most encouraging manner. Play and athletics had been given greater importance throughout the school system, and the training of teachers in play had established those activities upon a firm foundation. Classes in organized play were again given for the teachers of San Juan and Santurce. Their work with the children had been greatly strengthened, and the benefits of organized play periods had completely overcome the first difficulties of adding to a schedule of work already crowded. A Manual of Games prepared by the bureau for use in Porto Rico was distributed through the Porto Rico Department of Education to all the grade teachers on the island, giving instructions, programs of games, and suggestions which have made the work of the teachers more definite. The general increase in play activities throughout the island is indicated by the statement of the commissioner of education in his annual report for 1922, that within that year the number of urban school playgrounds increased from 50 to 179 and that of rural school playgrounds from 16 to 261, the number of municipalities having community playgrounds from 4 to 18, and the number of recreation and athletic associations from 15 to 39.

Participation in athletics has increased very much in the last year. The number of entries for the annual field meet, which in 1922 was double that of any preceding year, again doubled in 1923, necessitating the division of the meet into three sections. Participation in baseball and basket ball was increased fully as much.

The 1923 session of the legislature created a bureau of social welfare under the Porto Rico Department of Health, with an appropriation of \$60,000, and with provision for flexibility in developing this work. This bureau will have supervision of public health, infant hygiene, and charities, the last having been delegated to the health department by the organic act. Two years ago the supervision of municipal charities was brought under the Porto Rico Department of Health, but without adequate means for carrying out the work. With the means now provided, great progress should be made in the near future. During the last year the number of child-health centers established by the insular and municipal departments of health working in cooperation with the Red Cross has been increased, their

service has been strengthened, and public interest in their work has become widespread. The program of Baby Weeks has been continued, and an institute on infant welfare and other aspects of public health has been conducted most successfully.

The 1923 legislature also appropriated \$50,000 for a training school for nurses in connection with the Municipal Hospital of San Juan, under the insular department of health, and accepted the cooperation of the Red Cross in providing the supervising staff of the school. At the present time public-health work is held back by the lack of an adequate number of trained nurses, and this provision for increasing the number of nurses and raising the general standards of nursing is of basic importance to the development of all health work on the island.

The 1923 legislature also provided \$60,000 for the establishment of an insular puericultural and maternity institute for promoting the hygiene of maternity and infancy. The institute is to have consultation centers for expectant mothers and for children, besides hospital facilities for women during confinement.

During the last year the United States Public Health Service made a survey of tuberculosis in Porto Rico, working in connection with the insular department of health so that the most practical benefits might be achieved from its study. The findings of the survey have called further attention to the need of general education toward better standards of sanitation, diet, and housing. A health crusade has been started in the schools to emphasize these aspects of health conditions.

The summer courses at the University of Porto Rico in home hygiene and the care of the sick were continued, with special emphasis on infant and child care. These courses were given to the home-economics teachers of the island, and it is planned to have a supervising nurse go over the island during the next school year to strengthen the class work on these subjects.

During the regular term of the university an experimental course in social service was offered. Lectures were given by persons representing the various social activities so far developed, and supervised field work was planned. The first half of the course was required and the second was elective, but no falling off in attendance occurred after the required period was completed.

The dental clinics supported by the Junior Red Cross and the municipalities have been increased in number and have adopted standard forms and methods. Health teaching has been continued in the schools. The school for the blind has been moved to larger and better quarters pending the completion of a new building, and another assistant trained in the States has been added to the staff.

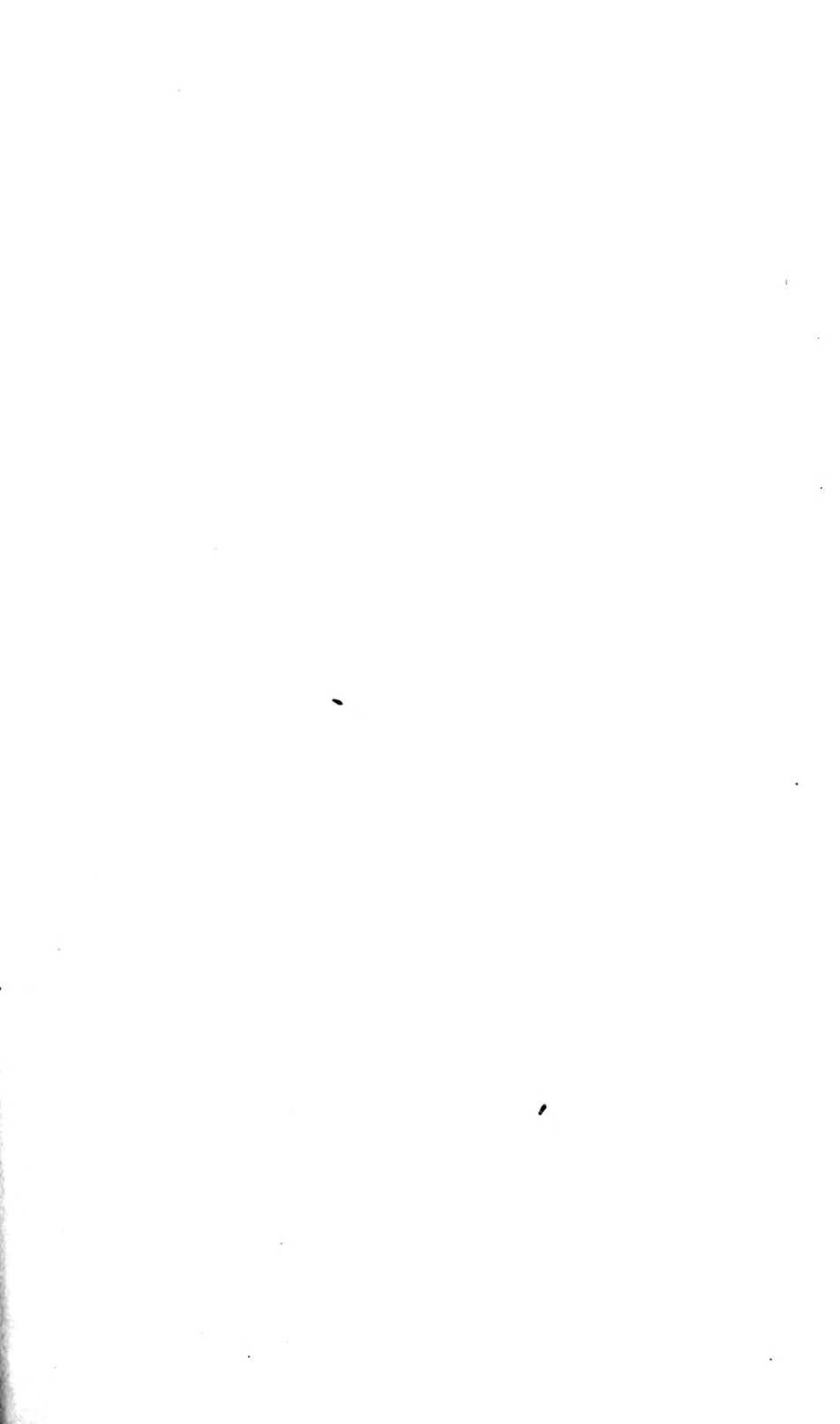
In the difficult period of transition, the fostering of wholesome recreation is most important. To further the program of health and social progress for girls, the department of education is cooperating with the Girl Scouts. The Girl Scouts are now giving special training to an organizer who will work through the school system in developing scout work for girls.

In the homeless boys of San Juan the business men's organizations have shown a continuing interest. They have raised several thousand dollars for constructive work for these handicapped children.

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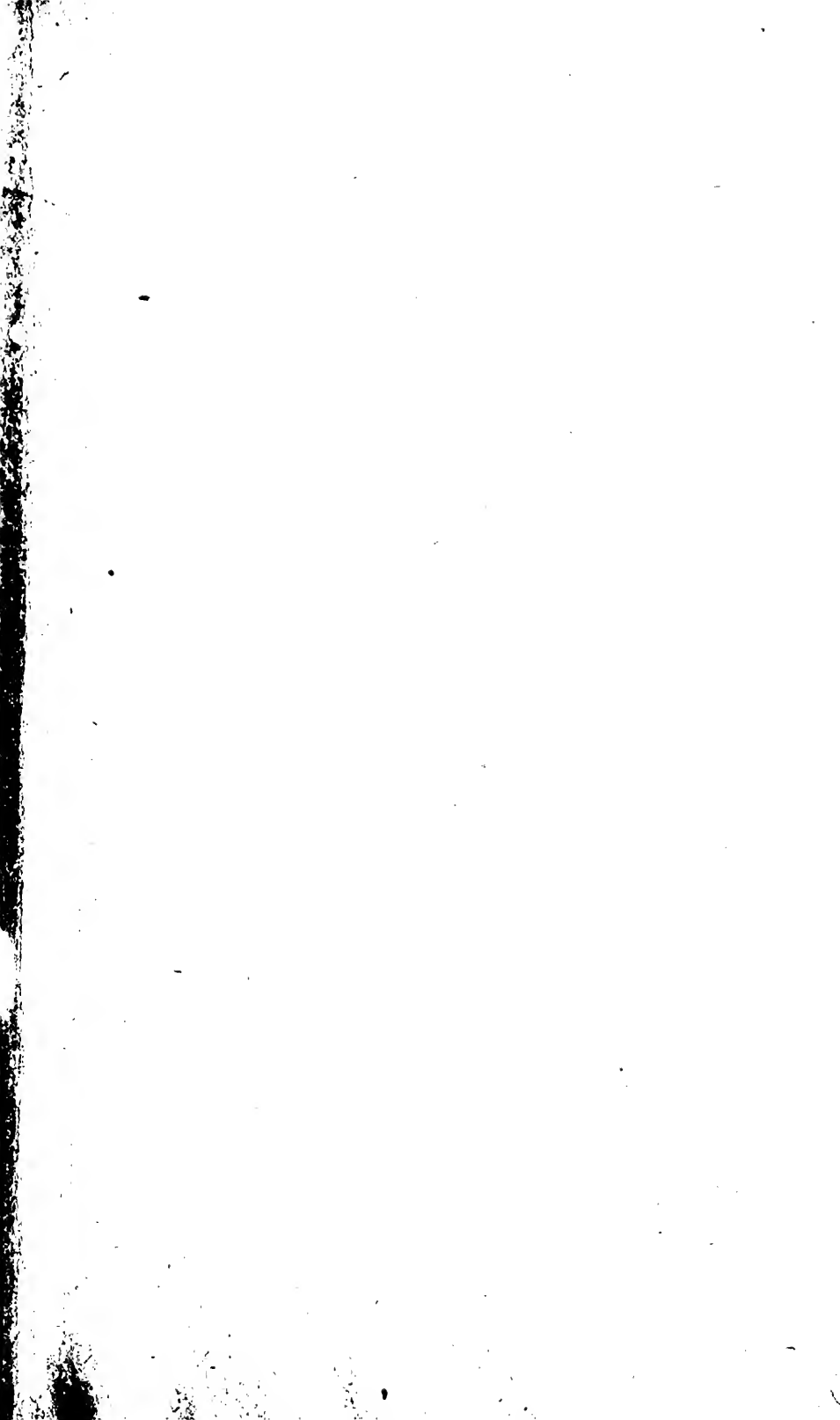
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