VOLUME XXII NUMBER EIGHT

THE NATIONAL GEOGRAPHIC MAGAZINE

AUGUST, 1911

+

CONTENTS

PUBLISHED BY THE
NATIONAL GEOGRAPHIC SOCIETY
HUBBARD MEMORIAL HALL
WASHINGTON, D.C.

$2.50 A YEAR 25 CTS A COPY

NATIONAL GEOGRAPHIC SOCIETY

HUBBARD MEMORIAL HALL

SIXTEENTH AND M STREETS, WASHINGTON, D. C.

To carry out the purpose for which it was founded twenty-two years ago, namely, "the increase and diffusion of geographic knowledge," the National Geographic Society publishes this Magazine. All receipts from the publication are invested in the Magazine itself or expended directly to promote geographic knowledge and the study of geography. Articles or photographs from members of the Society, or other friends, are desired. Contributions should be accompanied by an addressed return envelope and postage, and be addressed:

GILBERT H. GROSVENOR, EDITOR

Entered at the Post-Office at Washington, D. C., as Second-Class Mail Matter

Trust Fund Investments

The prompt payment beyond question of interest and principal at maturity must be the paramount consideration when investing Trust Funds.

And yet in most cases there is special need of securing the highest possible return on money invested.

Seasoned bonds, conforming to the requirements of the Trust, are preferred by most Trustees.

We have made a careful study of this subject and offer to Trustees a specialized service which has developed for us a large business with this class of investors.

It is our practice at all times to carry a representative line of bonds legal in the various states, as well as higher yield, but safe, bonds suitable for funds not under restriction.

Write for price-list A. N.-60 and pamphlet "Laws Governing Savings Bank Investments in Bonds"

N. W. Halsey & Co.

BANKERS

NEW YORK
49 Wall St.

PHILADELPHIA
1421 Chestnut St.

CHICAGO
125 W. Monroe St.

SAN FRANCISCO
424 California St.

Government, Municipal, Railroad and Public Utility Bonds bought, sold, and appraised

The Right Cheques for Americans Abroad

Americans traveling in every country of the globe have their financial dealings made easy and pleasant by using "A. B. A." Cheques, which are *good everywhere* and are *self-identifying*. They are issued in $10, $20, $50 and $100 denominations, with fixed equivalents in the moneys of the principal nations.

Use them to pay hotel bills, buy tickets, make purchases, e c.

Write to Bankers Trust Company, 7 Wall Street, New York, for information as to where the cheques may be obtained in your vicinity, and interesting booklet "*The Cheque that Identifies*"

BUY THEM FROM YOUR OWN BANKER
OR IF HE CANNOT SUPPLY THEM APPLY TO
BANKERS TRUST COMPANY, NEW YORK CITY.

KNAUTH, NACHOD, AND KÜHNE

Bankers

15 William St., New York
LEIPZIG, GERMANY

Members of New York Stock Exchange

INVESTMENT SECURITIES

Drafts on All Parts of the World

Letters of Credit and Travelers' Checks Available Everywhere

¶ Obtainable either direct from us or through Banks and Bankers throughout the United States and Canada. Pamphlet, "*Funds for Travelers*" sent upon application.

Jeffery's High-Powered Rifle

FOR several years the leading sportsmen of America have conceded to this company the distinction of introducing the most advanced ideas in new equipment to meet their needs in the field and in camp.

Keeping pace with a policy that has won this distinction, we have for some time past been closely observing the performances of a high-powered rifle made by W. J. Jeffery & Co., Ltd., of London. The big game hunters of Europe took a great deal of interest in this rifle, and after proving its qualities in the India and African fields declared it to be the finest and most perfect high-powered bolt-action gun yet made.

Our own investigations had led us to the same conclusion, and we promptly secured the American and Mexican rights to its sale.

Jeffery makes several rifles in different models—the .333 being the one best suited to our general American conditions. This rifle, with a weight of about 8½ lbs. and using the new cordite and axite powders, with a 250 grain bullet, obtains a velocity of 2,600 feet, with a striking force well over 4,000 pounds. This truly remarkable performance, and the fact that the length and sharp point of bullet permits the velocity to be maintained at long ranges, makes this .333 rifle superior to anything we have ever known in America for the open country and plains. The trajectory, figured by Jeffery, is taken by shooting from the shoulder, using one sight only, and up to 300 yards shows absolutely no drop.

We also carry in stock the .256 Jeffery's, the .400 Jeffery's, and the .404 Jeffery's.

The first importation of these rifles has just arrived, and we shall take great pleasure in showing them to those desiring a high-grade rifle. A special Jeffery's catalog will be mailed upon request.

It is due to the A. & F. Co. policy of up-to-date-edness that we daily receive orders for special articles and complete outfits from all parts of the world. Sportsmen everywhere know that they can find in our stock, as in no other place, a specialized variety, a uniform high quality, and a fair pricing of all goods. Our "Money Back" policy is a guarantee put upon everything we sell.

The camper—the canoeist—the hunter of large or small game, and the fisherman all need the A. & F. Co. catalog—nothing like it can be bought—it will give you better ideas of how to go and what to take—just a postal request will bring it free by return mail.

ABERCROMBIE & FITCH CO.

57 Reade Street **New York City**

EZRA H. FITCH, President

Blunt Sharp

Soft Point .333 Actual Size

Address A. & F. Co., 57 Reade St., N. Y. C. Please send Jeffery's Rifle catalog to

"Mention the Geographic—It identifies you."

Globe-Wernicke Elastic Bookcases
add
Protection to Convenience

The **Globe-Wernicke** "elastic" bookcases are not only selected for their appearance and convenience, but also because of the protection afforded.

Valuable books especially should be stored in **Globe-Wernicke** dust-proof and non-collapsible units, because, in catastrophe such as fire, they can be quickly and easily removed *with the contents* intact; where, as it is ofttimes impossible to protect books from fire and water on shelves or built-in bookcases.

Globe-Wernicke units are made in many different styles and finishes to harmonize with appropriate interiors for *home*, *club* and *public* libraries.

Catalogue illustrated in colors, also copy of "The World's Best Books," as compiled by such eminent authorities as Hamilton W. Mabie, John Ruskin, Canon Farrar, Dr. Eliot, Sir John Lubbock, mailed on request.

Carried in stock by nearly 1,500 agents, but where not represented, we ship on approval, freight paid.

The Globe-Wernicke Co., Cincinnati, U. S. A.

NEW YORK, 380-382 Broadway
BOSTON, 91-93 Federal Street

CHICAGO, 224-228 Wabash Avenue
WASHINGTON, 1220 F St., N. W.

Investing Your First $1,000

There is no doubt about it that the average person should be especially careful in the selection of his or her first investment. In the first place, it is important to get the right kind of a start; in the second place, the knowledge derived from the practical experience should be extremely helpful in the selection of future investments.

If you are considering the investment of your first $1,000, it is more than likely you are confronted with the problem of how best to go about it; how to do the wise and conservative thing.

It is perfectly natural that these questions should be uppermost in your mind. In fact, as saving and investing are practically one and the same thing, the incentive that led you to practise thrift and economy in the accumulation of your $1,000 is now doubtless influencing you to so invest the money as to obtain a satisfactory rate of income backed up by good security.

There is, however, another factor in investment that warrants consideration, and that is marketability; in other words, the readiness with which an investment may be converted into cash. While individual investors holding a good proportion of readily marketable investments are often justified in placing some of the money in sound investments having practically no established market, it is not ordinarily deemed prudent to fail to take into account the question of marketability when making one's first investment. So that it would seem to be wise for you to invest your first $1,000 in an investment combining:-

1. Safety as to principal.
2. Satisfactory rate of income.
3. Reasonably broad market.

We shall be glad to suggest to you investment bonds which, in our judgment, combine all of these features and yield a return of approximately **5 per cent.** And in this connection keep in mind the fact that bonds represent simply a mortgage divided into several parts, the question of their marketability being measured by the esteem in which they may be held by the investing public.

Write for our Bond Circular No. 437,

"Investment Securities."

Spencer Trask & Co.

Investment Bankers

Albany, N. Y., State and James Streets
Boston, Mass., 50 Congress Street
Chicago, Ill., 72 West Adams Street

43 Exchange Place, New York
Members New York Stock Exchange

VOL. XXII, NO. 8 WASHINGTON AUGUST, 1911

THE NATIONAL GEOGRAPHIC MAGAZINE

NOTES ON THE SEA DYAKS OF BORNEO*

BY EDWIN H. GOMES

THE Bornean jungles are immense tracts of country covered by gigantic trees, in the midst of which are mountains clothed in ever-green foliage, their barren cliffs buried beneath a network of creepers and ferns. The striking features are the size of the enormous forest trees and the closeness of their growth, rather than their loveliness or brilliancy of color. In the tropical forests few bright-colored flowers relieve the monotony of dark green leaves and dark brown trunks and branches of trees. The prevailing hue of tropical plants is a somber green. The greater and lesser trees are often loaded with trailers and ferns, among which huge masses of the elkhorn fern are often conspicuous.

But there is little color to relieve the monotony of all these somber hues. Here and there may be seen some creeper with red berries, and many bright-colored orchids hang high overhead. But it is impossible for the observer to gain a favorable position for beholding the richest blooms, which often climb far above him, turning their faces towards the sunlight above the roof of foliage.

These regions are still inhabited by half-clad men and women, living quaint lives in their strange houses, observing weird ceremonies, and cherishing strange superstitions and curious customs, delighting in games and feasts, and repeating ancient legends of their gods and heroes. But in a few years all these things will be forgotten; for in Borneo, as elsewhere, civilization is coming—coming quickly—and all the distinctive Dyak customs will soon be things of the past. Already the Dyak is mixing with other races in the towns, and is changing his picturesque dress for Western costume. He is fast forgetting his old practices and his old modes of thought.

The tropical forests of Sarawak were much the same years ago as they are today. But the life of the Dyak is already greatly changed and his lot improved by the introduction of just rule, law and order, and respect for human life. For a moment let us go back to the past and try to picture the life of the Sea Dyak as it was some 60 years ago.

In those days there was constant warfare between the different tribes, and the Dyaks lived together in large numbers in their long houses, which had stockades around them, so that they had some defense against any sudden attack. Very often the young braves would make an expedition against some neighboring tribe, simply because they wanted to

* Abstracted from Mr. Gomes' exceedingly entertaining narrative, "Seventeen Years Among the Sea Dyaks of Borneo," published by J. B. Lippincott Co.

A DYAK GIRL DRESSED IN ALL HER FINERY TO ATTEND A FEAST

She has in her hair a comb decorated with silver filigree work. Round her neck is a necklace of beads. The rings round her body are made of hoops of cane, round which little brass rings are arranged close together, so that none of the cane is visible. These hoops are worn next to the body, above the waist and over the petticoat below. The silver coins fastened to this brass corset, and worn as belts around it, are the silver coins of the country. The petticoat is a broad strip of cloth, sewn together at the ends and having an opening at the top and bottom. It is fastened at the waist with a piece of string. From "Seventeen Years Among the Sea Dyaks of Borneo," by Edwin H. Gomes. J. B. Lippincott Co.

A DYAK WOMAN IN EVERY-DAY COSTUME

She is wearing a necklace of small silver current coins, fastened together with silver links. The bangles are hollow and of silver or brass, made separately, but worn several together on each wrist. The two favorite colors for petticoats are blue and red. The red petticoat, as in the picture, has often a design in white worked or woven into it. From "Seventeen Years Among the Sea Dyaks of Borneo," by Edwin H. Gomes. J. B. Lippincott Co.

A DYAK BRIDE

She wears a silver filigree comb in her hair and a necklace of brass or silver buttons. Round her body is the brass corset worn by the women, and three belts of silver coins. She has bangles on her wrists and earrings in her ears. Her jacket is slung over her right shoulder. From "Seventeen Years Among the Sea Dyaks of Borneo," by Edwin H. Gomes. J. B. Lippincott Co.

SCRAPING PALM LEAVES FOR FIBER

With this the women tie up the threads they weave, so that when they are dipped in any particular dye the parts which are tied may not be affected by the dye. It is by this means that the different patterns in Dyak cloth are obtained. From "Seventeen Years Among the Sea Dyaks of Borneo," by Edwin H. Gomes. J. B. Lippincott Co.

bring home, each man of them, the ghastly trophy of a human head, and thus gain favor in the eyes of the Dyak girls. In these expeditions many were killed and many taken captive, to be the slaves of the conquerors.

Many of the Sea Dyaks joined the Malays in their piratical attacks upon trading boats. It was the practice of the Malay pirates and their Dyak allies to wreck and destroy every vessel that came near their shores, to murder most of the crew who offered any resistance, and to make slaves of the rest. The Malay fleet consisted of a large number of long war-boats, or *prahus*, each about 90 or more feet long, and carrying a brass gun in the bows, the pirates being armed with swords and spears and muskets. Each boat was paddled by from 60 to 80 men. These terrible craft skulked about in the sheltered coves waiting for their prey, and attacked merchant vessels making the passage between China and Singapore. These piratical raids were often made with the secret sanction of the native rulers, who obtained a share of the spoil as the price of their connivance.

The Dyaks gladly joined the Malays in these expeditions, not only for the sake of obtaining booty, but because they could thus indulge in their favorite pursuit, and gain glory for themselves by bringing home human heads to decorate their houses with. The Dyak *bangkongs* were long boats capable of holding as many as 80 men. They often had a flat roof, from which the warriors fought, while their comrades paddled below.

Both the piracy and the terrible custom of head-hunting were put down by Sir James Brooke. The romantic story of how he came to be the first Rajah of Sarawak may here be briefly recalled.

James Brooke was born on April 29, 1803. His father was a member of the civil service of the East India Company, and spent a great many years in India. Following in his father's footsteps, he entered the company's service, and was sent out to India in 1825. Not long after his arrival he was put in command of a regiment of soldiers and ordered to Burmah, where he took part in the Burmese War; and, being dangerously wounded in an engagement, was compelled to return home on furlough. For over four years his health prevented him from rejoining his regiment, and when at last he started, the voyage out was so protracted, through a shipwreck and other misfortunes, that his furlough had expired before he was able to reach his destination. His appointment consequently lapsed, and he quitted the service in 1830.

In that same year he made a voyage to China, and was struck by the natural beauty and fertility of the islands of the Indian Archipelago and horrified with the savagery of the tribes inhabiting them, who were continually at war with one another and engaged in a monstrous system of piracy. He conceived the grand idea of rescuing them from barbarism, and of extirpating piracy in the Eastern Archipelago.

On the death of his father he inherited the sum of £30,000, and found himself in a position to carry out his schemes. He bought and equipped a yacht, the *Royalist*, and for three years he cruised about, chiefly in the Mediterranean, training his crew of 20 men for the arduous work that lay before them.

On October 27, 1838, he sailed from the Thames on his great adventure; traveled slowly on the long journey round the Cape of Good Hope, and arrived in Singapore in 1839. Here he met a shipwrecked crew, who had lately come from Borneo. They said they had been kindly treated by Muda Hassim, a native rajah in Borneo, and they asked Mr. James Brooke to take presents and letters of thanks to him, if he should be going thither in his yacht.

Mr. Brooke had not decided which of the many islands of the Eastern Archipelago he would visit, and he was as ready to go to Borneo as to any other. So, setting sail, he made his way up the Sarawak River, and anchored off Kuching on August 15, 1839. The country was nominally under the rule of the Sultan of Brunei, but his uncle, Rajah Muda Hassim, was then the greatest

power in the island. As he was favorable to English strangers, Mr. Brooke paid him the customary homage, and was favorably received and given full license to visit the Dyaks of Lundu.

The Rajah was at this time engaged in war with several fierce Dyak tribes in the province of Sarawak, who had revolted against the Sultan; but his efforts to quell this rebellion were ineffectual. The absolute worthlessness of the native troops under his command, and his own weakness of character, induced him to cling to Mr. Brooke, in whom he recognized a born leader of men, and he appealed for his help in putting down the insurgents and implored him not to leave him a prey to his enemies. The Rajah even offered to transfer the government of the province to Brooke if he would remain and take command. This offer he felt bound at the time to decline, but it led to his obtaining a position of authority at Sarawak useful for the purposes of trade.

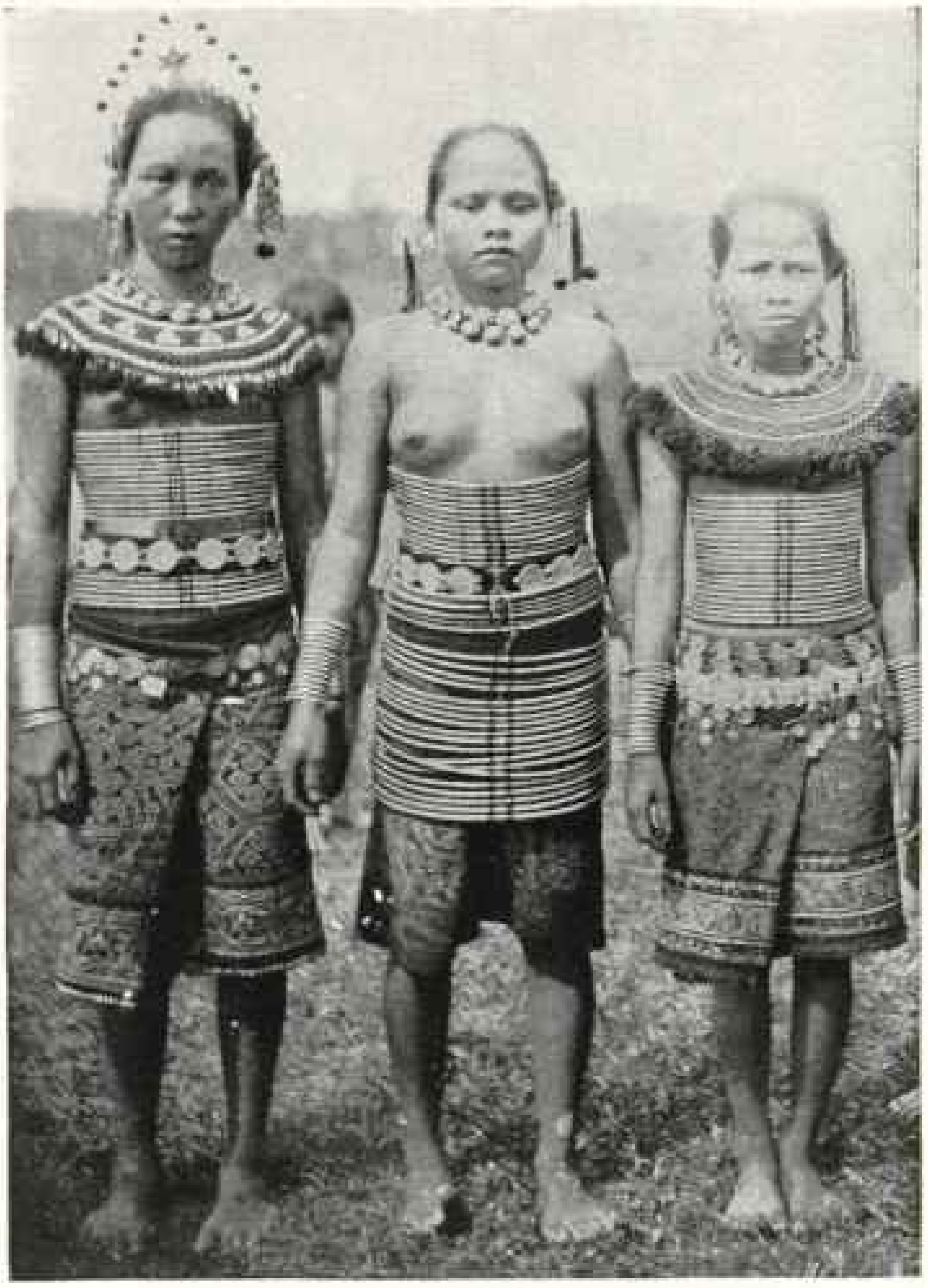
With James Brooke's help the rebellion, which the Malay forces were too feeble to subdue, was effectually stayed. The insurgents were defeated in a battle in which Brooke, with the crew of his yacht and some Malay followers, took part. For his services on this occasion Muda Hassim conferred on him the title of Rajah of Sarawak, and this was the first step towards that larger sovereignty which he afterwards acquired. Some time elapsed, however, before the Sultan of Brunei could be induced to confirm the title. Mr. Brooke at once took vigorous action, making many reforms and introducing a system of administration far superior to any that the native authorities had ever dreamed of, and in September, 1841, the government of Sarawak and its dependencies was formally made over to him. In the following year the Sultan of Brunei confirmed what Rajah Muda Hassim had done, on the condition that the religion of the Mohammedans of the country should be respected.

And now Rajah Brooke found himself in a position of authority which enabled him to bring all his administrative powers into operation. He saw clearly that the development of commerce would be the most effective means of civilizing the natives, and to make this possible it was necessary to suppress the hideous piracy, which was not only a curse to the savage tribes, appealing as it did to their worst instincts, but a standing danger to both European and native traders in those seas.

In the suppression of piracy James Brooke found a vigorous ally in Captain (afterwards Admiral) Keppel, who, in command of H. M. S. *Dido*, was summoned from the China station in 1843 for this service. Various expeditions were organized and sent out against the marauders, the story of which has been told by himself. The pirates were attacked in their strongholds by Captain Keppel and other commanders of British ships. They fought desperately and the slaughter was immense. The pirate crews found the entrances to the rivers blocked up by English gunboats and their retreat cut off. These strenuous measures soon cleared the seas.

The practice of head-hunting was also dealt with by Sir James Brooke. He declared it to be a crime punishable with death, and by his vigorous treatment of head-hunting parties he gave the death-blow to this horrible national custom.

After his strenuous life in Sarawak, Sir James Brooke had a great desire to visit England. Besides other reasons, the wish to see his relatives and friends, he felt he could effect more for the inhabitants of Borneo by a personal interview with government ministers in England than by correspondence. He left Sarawak, and reached England early in October, 1847. There honors awaited him. He was presented with the freedom of the city of London; Oxford University conferred upon him the degree of LL. D.; he was graciously received at Windsor by the Queen and the Prince Consort. The British government recognized the work he had done, and appointed him Governor of Labuan and commissioner and consul general in Bor-



THREE DYAK BELLES DRESSED IN THEIR FINERY

The girls on the right and left wear collars worked with beads and colored threads. They are all wearing ear pendants and belts made of silver coins. From "Seventeen Years Among the Sea Dyaks of Borneo," by Edwin H. Gomes. J. B. Lippincott Co.

A DYAK GIRL.

Seated on a mat and folding up a petticoat before putting it away. The girls are very careful of their clothing, and are often very vain, but when they are married they frequently become very untidy. A woman's wardrobe is not extensive. It consists of two petticoats and one jacket, as a general rule. From "Seventeen Years Among the Sea Dyaks of Borneo," by Edwin H. Gomes. J. B. Lippincott Co.

A DYAK GIRL.

Round her body is the brass corset the women wear, and she has a necklace made of large buttons of brass or silver. From "Seventeen Years Among the Sea Dyaks of Borneo," by Edwin H. Gomes. J. B. Lippincott Co.

neo, and made him a K. C. B. The warrant of investiture was issued by Her Majesty on May 22, 1848.

The extirpation of piracy was the first step towards introducing into the country the blessings of a settled government, with all its civilizing influences. But he was not satisfied with this, and soon began to take measures for the establishment of a Christian mission in Sarawak. When Sir James Brooke visited England in 1847, he appealed to the Church, and especially to the two universities, to come to his aid.

Neither of the two great missionary societies was able at the time to undertake this new enterprise through lack of funds, and a new organization, the "Borneo Church Mission," was founded, which labored in the island for a few years. Then, in 1854, the Society for the Propagation of the Gospel in Foreign Parts was able to take up the work, and has ever since been responsible for it. The original organization had, however, done well in the choice of the missionaries it sent out, the first of whom was the Rev. F. T. McDougall, who was consecrated Bishop of Labuan and Sarawak in 1855.

My father, the Rev. W. H. Gomes, B. D., worked under Bishop McDougall as a missionary among the Dyaks of Lundu from 1852 to 1867, and I myself have worked, under Bishop Hose, as a missionary in Sarawak, for 17 years, and have thus gained an intimate knowledge of the people and of their lives, now so rapidly changing under western influence.

Sir James Brooke was a man of the highest personal character. That a young English officer, with a fortune of his own, should have been willing to devote his whole life to improving the condition of the Dyaks was a grand thing. That he should have been able, by perfectly legitimate means, to do this in the teeth of much official and other opposition; that he should have been able to put down piracy and head-hunting, with their unspeakable accompaniments of misery and cruelty, and to do it all with the hearty good-will of the people under his rule—this was indeed an achievement which might have seemed hardly possible.

The present Rajah of Sarawak, Sir Charles Brooke, is a nephew of the first Rajah. He joined his uncle in 1852, when he held the rank of lieutenant in the British navy. For ten years he played an important part in the arduous work of punishing rebels and establishing a sound government. In 1857, when the Chinese insurrection broke out, it was his action that led to the punishment of the insurgents and the restoration of peace. In 1863, on the retirement of the first Rajah, he assumed control of the country, and five years later, on the death of his predecessor, he became Rajah of Sarawak. Ever since he became the responsible ruler of the country Sarawak has advanced steadily and made great moral and material progress. To the general public the first Rajah will always appear the romantic, heroic figure; but, while yielding full measure of praise and admiration to the work of a great man, those who know the country will, I think, agree with me that the heavier burden of working steadily and unwearingly, when the romance of novelty had worn off, has been borne by his successor. With talents not less than those of his illustrious uncle, he has carried out, in the face of disappointments and the most serious obstacles, a policy of regeneration for which the striking exploits of Sir James Brooke merely paved the way.

There are occasional outbreaks among the Dyaks of the interior, and head-hunting still survives where natives think there is a chance of escaping detection and consequent punishment. But, happily, these are getting more and more rare and do not affect the prosperity or trade of the country.

The natives of Sarawak owe much to the Brookes. The work, nobly begun by Sir James Brooke, has been ably carried on by the present Rajah. To use his

own words: "He as founder, and myself as builder, of the State have been one in our policy throughout, from the beginning up to the present time; and now shortly I have to hand it to my son, and I hope that his policy may not be far removed from that of his predecessors."

PECULIAR FASHIONS

The Dyak is of rather greater stature than that of the Malay, though he is considerably shorter than the average European. The men are well proportioned, but slightly built. Their form suggests activity, speed, and endurance rather than great strength, and these are the qualities most required by dwellers in the jungle. Their movements are easy and graceful and their carriage erect. The women are generally smaller than the men. They have neat figures, and are bright, cheerful, and good-looking in their youth, but they age very soon.

The women wear their hair long and tied in a knot at the back of the head. Some of the women have beautiful raven black hair of great length. Wavy or curly hair is seldom seen.

The teeth are often blackened, as black teeth are considered a sign of beauty. The blackening is done by taking a piece of old cocoanut shell or of certain woods and holding it over a hot fire until a black resinous juice exudes. This juice is collected, and while still warm the teeth are coated with it. The front teeth are also frequently filed to a point, and this gives their face a curious doglike appearance. Sometimes the teeth are filed concavely in front, or else the front teeth are filed down till almost level with the gums. Another curious way of treating the front teeth is to drill a hole in the middle of each tooth and fix in it a brass stud. I was once present when this operation was in progress. The man lay down with a piece of soft wood between his teeth, and the "dentist" bored a hole in one of his front teeth. The agony the patient endured must have been very great, judging by the look on his face and his occasional bodily contortions. The next thing was to insert the end of a pointed brass wire, which was then filed off, leaving a short piece in the tooth; a small hammer was used to fix this in tightly, and, lastly, a little more filing was done to smooth the surface of the brass stud. I am told the process is so painful that it is not often a man can bear to have more than one or two teeth operated on at a time.

The Dyaks do not like beards, and much prefer a smooth face. In the whole course of my Dyak experience I have only met with one bearded man. The universal absence of hair upon the face, on the chest, and under the arm-pits might lead one to suppose that it was a natural deficiency. But this is not the case at all, as old men and chronic invalids, who by reason of age or infirmity have ceased to care about their personal appearance, have often chins covered with a bristly growth. The absence of hair on the face and elsewhere is due to systematic depilation. The looking-glass and tweezers are often seen in the hands of the young men, and they devote every spare moment to the plucking out of stray hairs. *Kapu*, or quicklime, which is one of the constituents of betel-nut mixture chewed by the Dyaks, is often rubbed into the skin to destroy the vitality of the hair follicles.

Among some tribes it is the fashion for both men and women to shave the eyebrows and pull out the eyelashes, and this gives their faces a staring, vacant expression. I have often tried to convince them of the foolishness of trying to improve upon nature in this way, and pointed out that both eyebrows and eyelashes are a protection to the eyes from dust and glare. But my remarks have made little impression on them. Among the Dyaks, as elsewhere, fashions die hard.

The Sea Dyak language is practically a dialect of Malay, which is spoken more or less over all Polynesia. It is not nearly so copious as other Malayan languages, but the Dyaks do not scruple to

DYAK CHILDREN

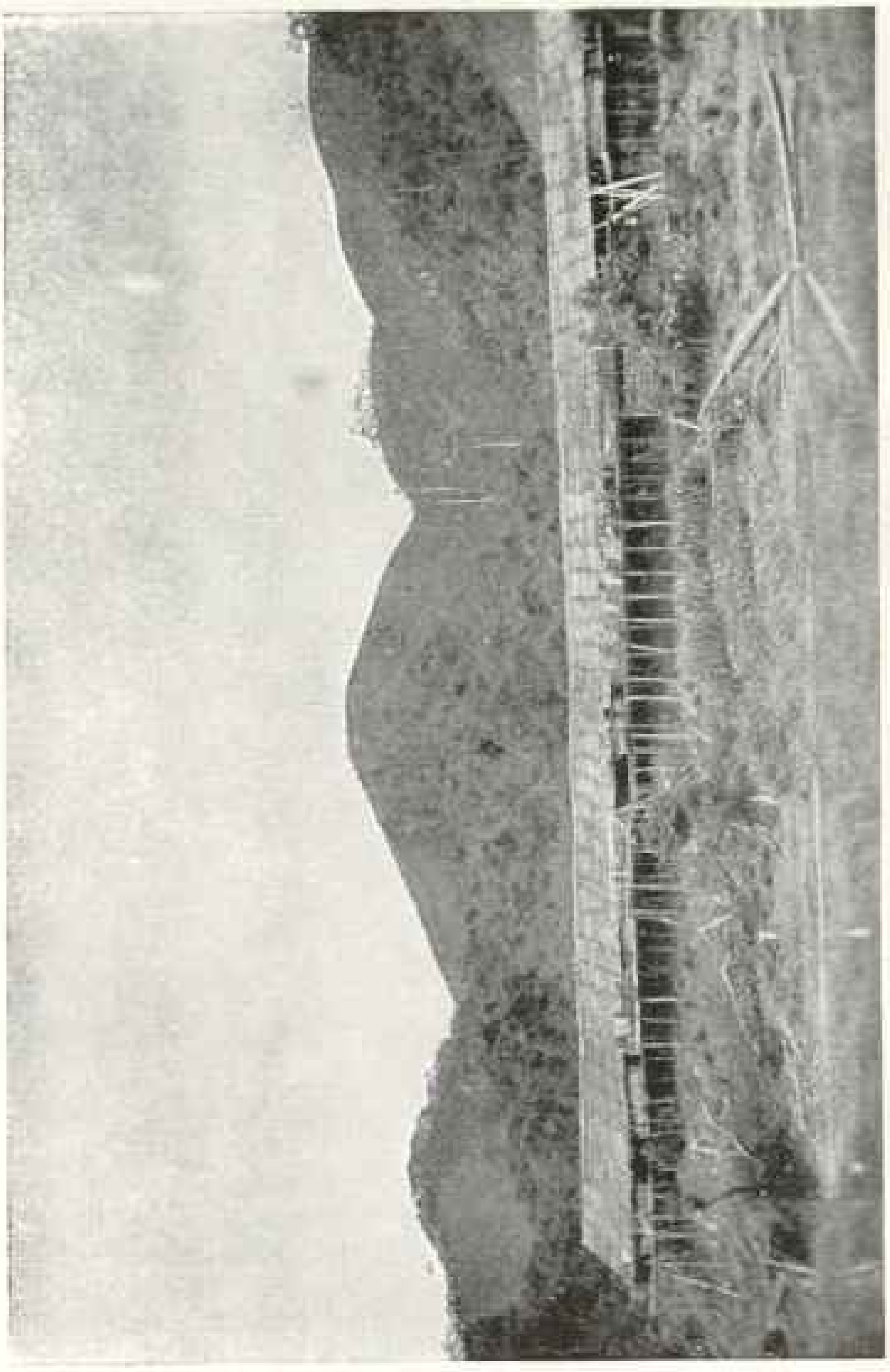
The figure on the right is a boy, the other five are girls. The children are fond of games, and are generally expert swimmers, but they have to make themselves useful, and help their parents very early in life. Dyak parents are very kind to their children, who, as a rule, return the affection and do as they are told from a desire to please them. From "Seventeen Years Among the Sea Dyaks of Borneo," by Edwin H. Gomes. J. B. Lippincott Co.

use Malay words in their conversation when necessary. The Dyak language is particulary weak in expressing abstract ideas. What the mind cannot grasp the tongue is not likely to express. I believe there is only one word—*rindu*—to express all the different varieties of love. On the other hand, the language is rich in words expressing the common actions of daily life. There are many words to express the different ways of carrying anything; one word for carrying in the hand, another for carrying on the back, and another for carrying on the shoulder.

THEIR LONG COMMUNAL HOUSES

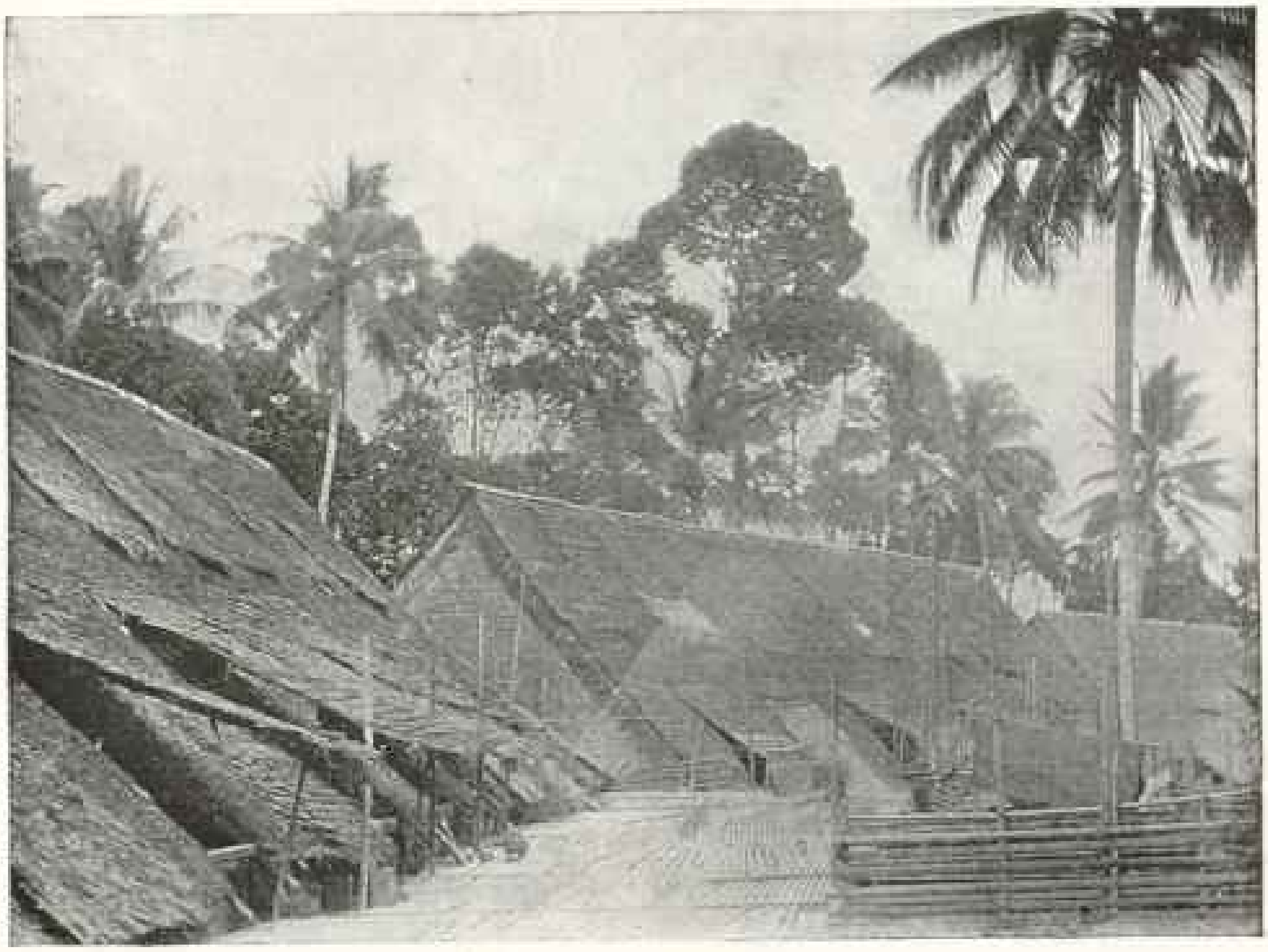
Among the Dyaks a whole village, consisting of some twenty or thirty families, or even more, live together under one roof. This village house is built on piles made of hard wood, which raise the floor from six to twelve feet above the ground. The ascent is made by a notched trunk or log, which serves as a ladder; one is fixed at each end of the house. The length of this house varies according to the number of families inhabiting it; but as the rooms occupied by the different families are built on the same plan and by a combination of labor, the whole presents a uniform and regular appearance.

The roof and outside walls are thatched with the leaves of the *nipa* palm, which are first made into *attap*. These are made by doubling the leaves



A LONG DYAK VILLAGE HOUSE

When a house is very long, as in this case, in addition to the ladders at each end, there are often extra ladders in the middle of the house. One of these ladders is seen on the right of the picture. The logs of wood on the ground are for walling upon. From "Seventeen Years Among the Sea Dyaks of Borneo," by Edwin H. Gomes. J. B. Lippincott Co.



DYAK HOUSES

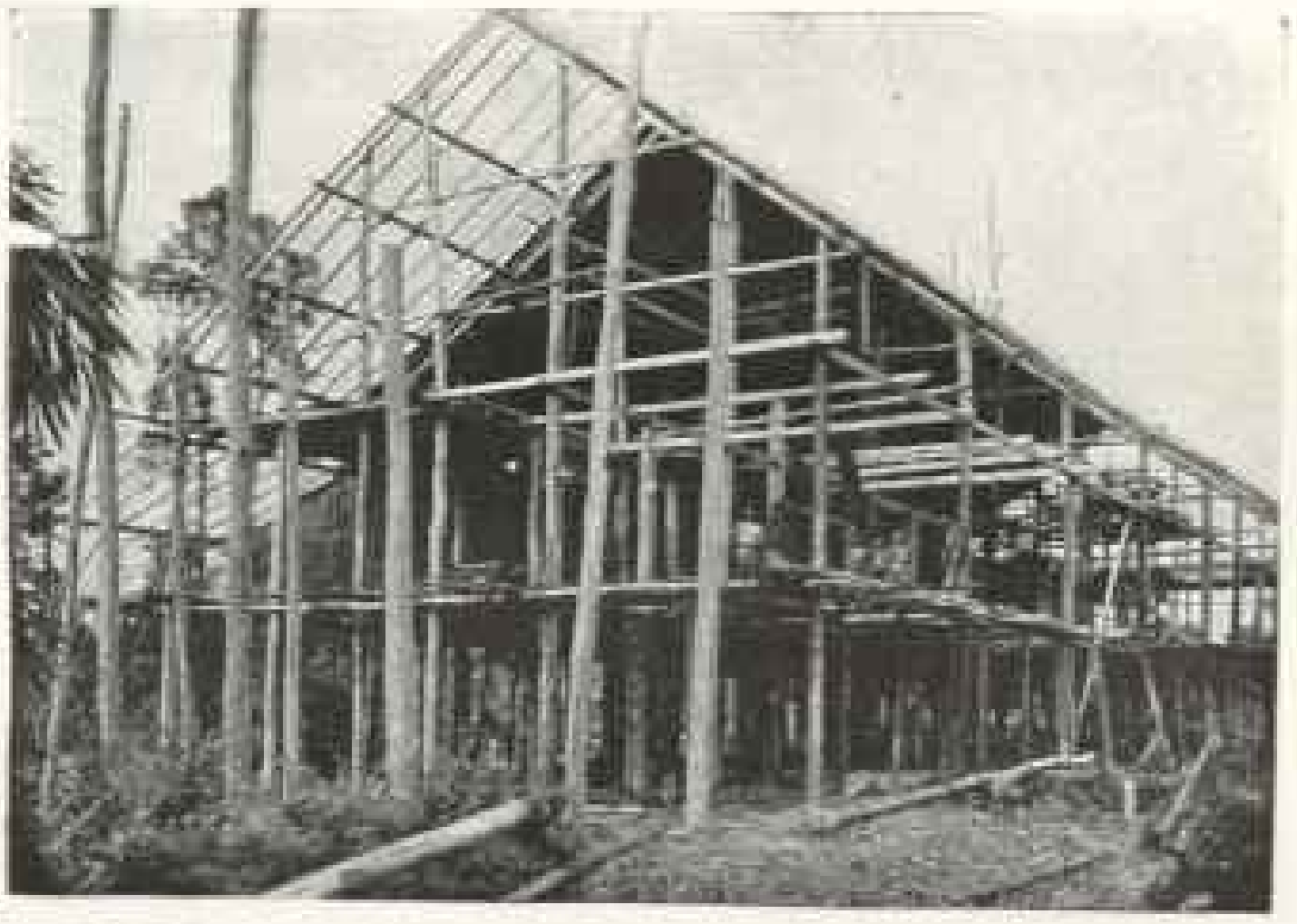
Showing the outside open platform, where paddy, etc., is put out to dry. Where the eaves are very low, parts of it are often raised to admit more light into the house. The palm trees in the picture are cocoanut palms. From "Seventeen Years Among the Sea Dyaks of Borneo," by Edwin H. Gomes. J. B. Lippincott Co.

over a stick about six feet long, each leaf overlapping the other, and sewn down with split cane or reeds. These *attap* are arranged in rows, each *attap* overlapping the one beneath it, and thus forming a roof which keeps off the rain and sun and lasts for three or four years.

The long Dyak village house is built in a straight line, and consists of a long uncovered veranda. The paddy is put on the veranda to be dried by the sun before it is pounded to get rid of its husk and convert it into rice. Here also the clothes and a variety of other things are hung out to dry. The family whetstone and dye vat are kept under the eaves of the roof, and the men sharpen their tools and the women do their dyeing on the veranda. The flooring of this part of the house is generally made of iron-wood, so as to stand exposure to the weather.

Next to the uncovered veranda comes the covered veranda, or *ruai*. This also stretches the whole length of the house, and the floor is made of bamboo, split into laths and tied down with rattan or cane.

This *ruai*, or public hall, is generally about twenty feet wide, and as it stretches the whole length of the house without any partition, it is a cool and pleasant place, and is much frequented by men and women for conversation and indoor pursuits. Here the women often do their work—the weaving of cloth or the plaiting of mats. Here, too, the men chop up the firewood, or even make boats, if not of too great a size. This



DYAK VILLAGE HOUSE IN COURSE OF CONSTRUCTION

This picture shows the arrangement of pillars and rafters of a Dyak house. The floor nearest the earth is divided into the long, open veranda and the rooms in which the different families live. Above this is the loft, where the paddy is stored away. Part of the roof in the picture has been covered with palm-leaf thatch.

DRYING PADDY

Before it is possible to rid the paddy of its husk and convert it into rice, it has to be dried in the sun. Here a woman is seen spreading out the paddy on a mat with her hands. She is on the outside veranda of the Dyak house (*tanju*). The long pole over her head is used by her to drive away the fowls and birds who may come to eat the paddy put out to dry. Photos from "Seventeen Years Among the Sea Dyaks of Borneo," by Edwin H. Gomes. J. B. Lippincott Co.

A HUSKING MILL (KISAR)

After the paddy is dried and before it is pounded, it is generally passed through a husking mill made in two parts—the lower half having a stem in the middle which fits into the upper part, which is hollow. The paddy is put into a cavity in the upper half, and a man or woman seizes the handles and works the upper half to the right and left alternately. The paddy drips through on to the mat on which this husking mill is placed.

THE TYPICAL RICE-HULLER OF BORNEO

It is made of extremely hard wood. The part with the handle fits down over the other piece. It is grooved on the inside, and the two pieces fit in together making an excellent huller. Photo from E. F. West.

long *ruai* is a public place open to all comers and used as a road by travelers, who climb up the ladder at one end, walk through the whole length of the house, and go down the ladder at the other end. The floor is carpeted with thick and heavy mats, made of cane interlaced with narrow strips of beaten bark. Over these are spread other mats of finer texture for visitors to sit upon.

The length of this covered veranda depends upon the number of families living in the house, and these range from three or four to forty or fifty.

Each family has its own portion of this *ruai*, and in each there is a small fireplace, which consists of a slab of stone, at which the men warm themselves when they get up, as they usually do, in the chill of the early morning before the sun has risen.

Over this fireplace hangs the most valuable ornament in the eyes of the Dyak, the bunch of human heads. These are the heads obtained when on the war-path by various members of the family—dead and living—and are handed down from father to son as the most precious heirlooms—more precious, indeed, than the ancient jars which the Dyaks prize so highly.

The posts in this public covered ve-

DYAK GIRLS POUNDING RICE

After the paddy has been passed through the husking mill it is pounded out in wooden mortars. Here are two girls at work. Each has her right foot in the upper part of the mortar to kick back any grains of paddy that may be likely to fall out. From "Seventeen Years Among the Sea Dyaks of Borneo," by Edwin H. Gomes. J. B. Lippincott Co.

randa are often adorned with the horns of deer and the tusks of wild boars—trophies of the chase. The empty sheaths of swords are suspended on these horns or from wooden hooks, while the naked blades are placed in racks overhead.

On one side of this long public hall is a row of doors. Each of these leads into a separate room, or *bilik*, which is occupied by a family. The doors open outwards, and each is closed by means of a heavy weight secured to a thong fastened to the inside. If the room be unusually large, it may have two doors for the sake of convenience.

This room serves several purposes. It serves as a kitchen, and in one corner there is a fireplace where the food is cooked. This fireplace is set against the wall of the veranda and resembles an open cupboard. The lowest shelf rests on the floor, and is boarded all round and filled with clay. This forms the fireplace, and is furnished with a few stones upon which the pots are set for cooking. The shelf immediately above the fireplace is set apart for smoking fish. The shelves above are filled with firewood, which is thoroughly dried by the smoke and ready for use. As the smoke from the wood fire is not conducted through the roof by any kind of chimney, it spreads itself through the loft and blackens the beams and rafters of the roof.

This room also serves as a dining-room. When the food is cooked, mats are spread here, and the inmates squat on the floor to eat their meal. There is no furniture, the floor serving the double purpose of table and chairs.

This *bilik* also serves as a bedroom. At night the mats for sleeping on are spread out here and the mosquito curtains hung up.

There is no window to let in the air and light, but a portion of the roof is so constructed that it can be raised a foot or two and kept open by means of a stick.

Round the three sides of this room are ranged the treasured valuables of the Dyaks—old jars, some of which are of great value, and brass gongs, and guns. Their cups and plates are hung up in rows flat against the walls. The flooring

DYAK GIRL SPINNING

She is seated on a mat, in a characteristic attitude, and is making yarn out of the cotton, using a primitive spinning-wheel. The corset must be very uncomfortable, as the wearer can hardly bend the body. From "Seventeen Years Among the Sea Dyaks of Borneo," by Edwin H. Gomes. J. B. Lippincott Co.

is the same as that of the veranda, and is made of split palm or bamboo tied down with cane. The floor is swept after a fashion, the refuse falling through the flooring to the ground underneath. But the room is stuffy and not such a pleasant place as the open veranda. The pigs and poultry occupy the waste space under the house.

From the *bilik* there is a ladder which leads to an upper room, or loft (*sadau*), where they keep their tools and store their paddy. If the family be a large one, the young unmarried girls sleep in this loft, the boys and young men sleeping outside in the veranda.

CATCHING FISH WITH POISON

The Dyaks have many varieties of fish traps, which they set in the streams and rivers. Most of these are made of split bamboo.

They also have nets of various kinds; the most popular is the *jala*, or circular casting-net, loaded with leaden or iron weights in the circumference, and with a spread sometimes of 20 feet. Great skill is shown by the Dyak in throwing this net over a shoal of fish which he has sighted. He casts the net in such a manner that all the outer edge touches the water almost simultaneously. The weights cause it to sink and close together, encompassing the fish, and the net is drawn up by a rope attached to its center, the other end of which is tied to the fisherman's left wrist. The thrower of this net often stands on the bow of a small canoe, and shows great skill in balancing himself. The *jala* is used both

DYAKS MAKING A DAM FOR TUBA-FISHING

The poison from the *tuba* root is put in the water some distance up river, and the Dyaks follow it as it drifts, and spear and net the poisoned fish. The *tuba* does not seem to affect the flesh of the fish, which can be cooked and eaten. Many fish swim down river to escape the poison. These come to this dam, in which there is an opening leading to an enclosure; in this the fish congregate and are afterwards captured. From "Seventeen Years Among the Sea Dyaks of Borneo," by Edwin H. Gomes. J. B. Lippincott Co.

in fresh and salt water, and can be thrown either from the bank of a river or by a man wading into the sea.

But the most favorite mode of fishing among the Dyaks is with the *tuba* root (*Cocculus indicus*). Sometimes this is done on a small scale in some little stream. Sometimes, however, the people of several Dyak houses arrange to have a *tuba*-fishing. The men, women, and children of these houses, accompanied by their friends, go to some river which has been previously decided upon. A fence made by planting stakes closely together is erected from bank to bank. In the middle of this there is an opening leading into a square enclosure made in the same fashion, into which the fish enter when trying to escape from the *tuba* into fresh water. The canoes then proceed several hours' journey up the river, until they get to some place decided on beforehand. Here they stop for the night in small booths erected on the banks of the river. The small boats are cleared of everything in them, so as to be ready for use the next day.

All the people bring with them fishing-spears and hand-nets. The spears are of various kinds; some have only one barbed point, while others have two or three. The shaft of the spear is made of a straight piece of bamboo about six feet long. The spear is so made that when a fish is speared the head of the weapon comes out of the socket in the

bamboo; but as it is tied on to the shaft, it is impossible for the fish to escape. Even when the fisherman throws his spear at the fish, there is little chance of the fish escaping, because the bamboo bears it to the surface, and it is easy for the men to pick up the bamboo shaft and thus secure the fish.

Most of the people bring with them some *tuba* root, made up into small, close bundles the thickness of a man's wrist and about six inches long. Early the next morning some of the canoes are filled with water, and the root is beaten and dipped into it. For an hour or so 50 or more clubs beat a lively tattoo on the root bundles as they are held to the sides of the boats. The *tuba* is dipped into the water in the boat and wrung out from time to time. This gives the water a white, frothy appearance like soapsuds. The Dyaks, armed with fish-spears and hand-nets, wait in readiness in their canoes.

At a given signal the poisoned liquid is baled out into the stream, and the canoes, after a short pause, begin to drift slowly down the current. The fish are stupefied by the *tuba*, and, as they rise struggling to the surface, are speared by the Dyaks. The large fish are thus secured amid much excitement, several canoes sometimes making for the same spot where a large fish is seen. The women and children join in the sport, and scoop up the smaller fish with hand-nets. The *tuba* does not affect the flesh of the fish, which can be cooked and eaten.

This form of fishing, when carried out on a large scale, is always a great event among the Dyaks, because besides the large amount of fish secured on these occasions there is always a great deal of fun and excitement, and it is looked upon as a pleasant sort of picnic.

HUNTING CROCODILES

For superstitious reasons the Dyaks do not interfere with the crocodile until he has shown some sign of his man-eating propensity. If the crocodile will live at peace with him, the Dyak has no

A DYAK IN WAR DRESS

Holding up his shield in readiness to receive the attack of the enemy. He is holding his sword in his right hand. The shield is decorated with human hair. From "Seventeen Years Among the Sea Dyaks of Borneo," by Edwin H. Gomes. J. B. Lippincott Co.

wish to start a quarrel. If, however, the crocodile breaks the truce and kills some one, then the Dyaks set to work to find the culprit, and keep on catching and killing crocodiles until they find him. The Dyaks generally wear brass ornaments, and by cutting open a dead crocodile they can easily find out if he is the creature they wish to punish. Sometimes as many as 10 crocodiles are killed before they manage to destroy the animal they want.

There are some men whose business it is to catch crocodiles, and who earn their living by that means; and whenever a human being has fallen a victim to one of these brutes, a professional crocodile catcher is asked to help to destroy the murderer. The majority of natives will not interfere with the reptiles or take any part in their capture, probably fearing that if they did anything of the kind they themselves may some time or other suffer for it by being attacked by a crocodile.

FIVE DYAKS IN WAR DRESS WITH SPEARS AND SHIELDS

The spears are made of steel and have shafts of hard, heavy wood. The shields are each cut out of one piece of wood, and are often colored with some fantastic design. Sometimes, as in the case of the man's shield on the left, cross-pieces of cane or wood are fixed in the shield to prevent it splitting. The second man on the left is wearing a large sleeveless jacket, or collar, of skin to protect his shoulders from wounds. From "Seventeen Years Among the Sea Dyaks of Borneo," by Edwin H. Gomes. J. B. Lippincott Co.

A SEA DYAK WITH SHIELD

He is dressed in the usual waist-cloth the Dyaks wear. On his head is a headkerchief decorated with a fringe. He wears a necklace of large silver buttons. On his arms are sea-shell bracelets and on his calves a large number of palm fiber rings. His right hand is holding the handle of his sword, the sheath of which is fastened to his belt, and his left hand is on his shield. The shield is made out of one piece of wood and colored with a fanciful design. It is decorated with human hair from the heads of dead enemies. From "Seventeen Years Among the Sea Dyaks of Borneo," by Edwin H. Gomes. J. B. Lippincott Co.

A DYAK USING A WOODEN BLOW-PIPE

He is seated on the ground with his blow-pipe held in position to his mouth. He is just in the act of blowing out one of his poisoned darts, some of which are lying on the ground in front of him. To his waist is fastened the bamboo receptacle in which the darts are kept. From "Seventeen Years Among the Sea Dyaks of Borneo," by Edwin H. Gomes. J. B. Lippincott Co.

HUMAN HEADS

The heads of slain enemies are smoked and preserved and looked upon as valuable possessions. The above is a bunch of old heads as they appear hanging from the rafters of a Dyak house. From "Seventeen Years Among the Sea Dyaks of Borneo," by Edwin H. Gomes. J. B. Lippincott Co.

DYAK MAKING A BLOW-PIPE

He is seen here shaping the outside of the blow-pipe. The hole is bored while the wood is about six inches in diameter, and it is then pared down to about two inches. From "Seventeen Years Among the Sea Dyaks of Borneo," by Edwin H. Gomes. J. B. Lippincott Co.

Photo from R. F. West

DR. R. F. WEST AND SIX DYAKS IN BORNEO

The ordinary way of catching a crocodile is as follows: A piece of hard wood about an inch in diameter and about 10 inches long is sharpened to a point at each end. A length of plaited bark of the *bara* tree about 8 feet long is tied to a shallow notch in the middle of this piece of wood, and a single cane or rattan 40 or 50 feet long is tied to the end of the bark rope and forms a long line.

The most irresistible bait is the carcass of a monkey, though often the body of a dog or a snake is used. The more overpowering the stench the greater is the probability of its being taken, as the crocodile will only swallow putrefying flesh. When a crocodile has fresh meat, he carries it away and hides it in some safe place until it decomposes. This bait is securely lashed to the wooden bar, and one of the pointed ends is tied back with a few turns of cotton to the bark rope, bringing the bar and rope into the same straight line.

The next thing is to suspend the bait from the bough of a tree overhanging the part of the river known to be the haunt of the animals. The bait is hung a few feet above the high-water level, and the rattan line is left lying on the ground, and the end of the rattan is planted in the soil.

Several similar lines are set in different parts of the river, and there left for days, until one of the baits is taken by a crocodile. Attracted either by the smell or sight of the bait, some animal raises itself from the water and snaps at the hanging bundle, the slack line offering no resistance until the bait has been swallowed and the brute begins to make off. Then the planted end of the line holds sufficiently to snap the slight thread binding the pointed stick to the bark rope. The stick thus returns to its original position, at right angles to the line, and becomes jammed across the crocodile's stomach, the two sharpened points fixing themselves into the flesh.

Photo from B. F. West

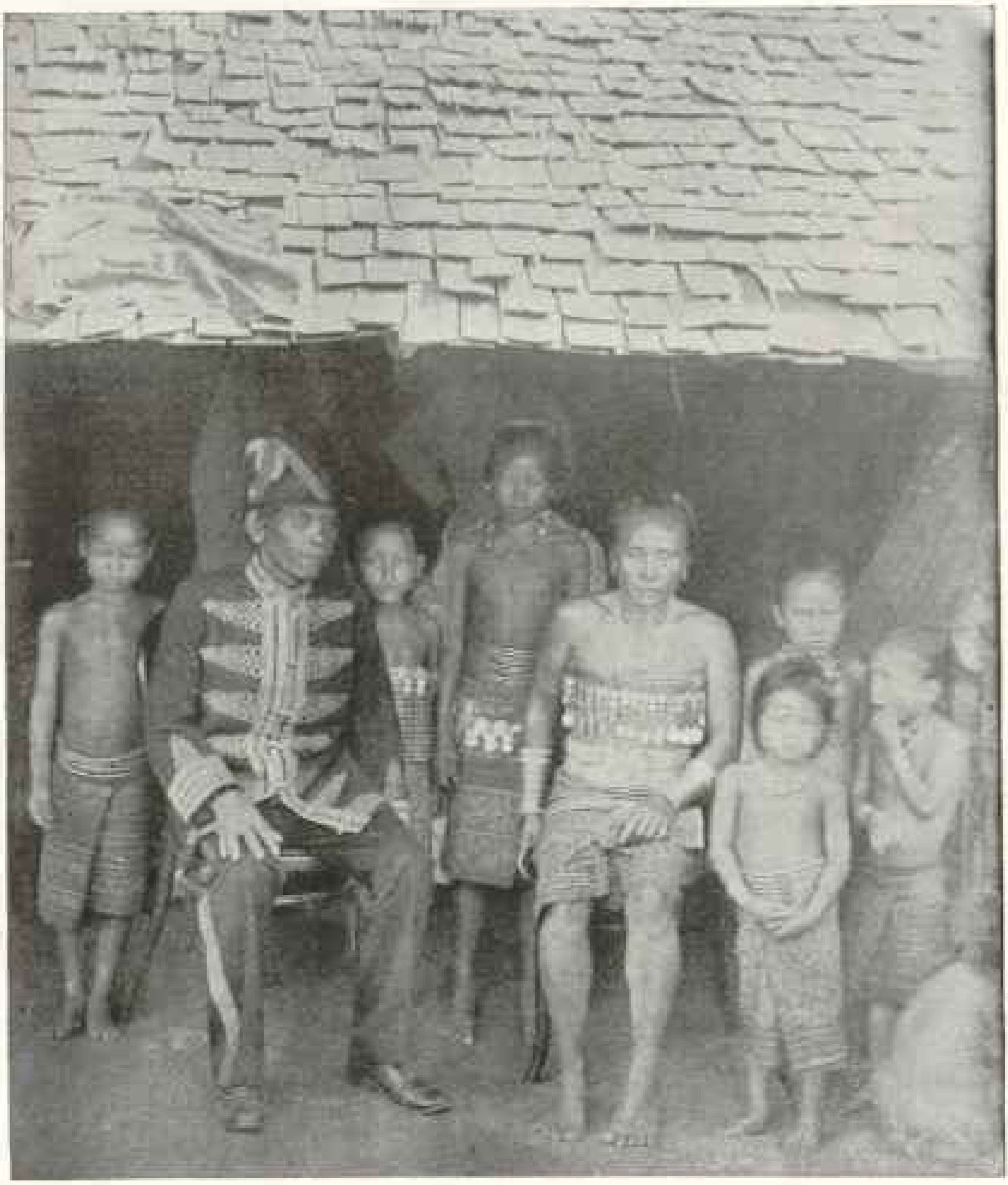
DYAK CHIEF MONANG, OF THE REJANG RIVER, BORNEO, WITH HIS WIFE AND HIS FOLLOWERS

Next morning the trappers search for the missing traps, and seldom fail to find the coils of floating *rotan*, or cane, on the surface of some deep pool at no great distance from the place where they were set. A firm but gentle pull soon brings the crocodile to the surface, and if he be a big one he is brought ashore, though smaller specimens are put directly into the boat and made fast there.

Sometimes the cotton holding the bar to the line fails to snap. In that case the crocodile, becoming suspicious of the long line attached to what he has swallowed, manages to disgorge the bait and unopened hook in the jungle, where it is sometimes found. But should the cotton snap and the bar fix itself in the animal's inside nothing can save the brute.

The formidable teeth of the crocodile are not able to bite through the rope attached to the bait, because the *barn* fibers of which the rope is made get between his pointed teeth, and this bark rope holds, no matter how much the fibers get separated.

Professional crocodile catchers are supposed to possess some wonderful



A BORNEO DYAK CHIEF, HIS WIFE, AND SEVERAL SLAVE GIRLS, THE CHILDREN OF MEN WHOM HE HAS SLAIN

The chief wears a cast-off military suit given him by the Rajah. Photo from B. F. West

power over the animals, which enables them to land them and handle them without trouble. I have seen a man land a large crocodile on the bank by simply pulling gently at the line. But this is not surprising, as from the crocodile's point of view there is nothing else to do but follow, when every pull, however gentle, causes considerable pain.

The rest of the proceeding is more remarkable. The animal is addressed in eulogistic language and beguiled, so the natives say, into offering no resistance. He is called a "rajah amongst animals," and he is told that he has come on a friendly visit, and must behave accordingly. First the trapper ties up its jaws—not a very difficult thing to do. The next thing he does appears to me not very safe. Still speaking as before, in high-flown language, he tells the crocodile that he has brought rings for his

fingers, and he binds the hind legs fast behind the beast's back, so taking away from him his grip on the ground, and consequently his ability to use his tail. When one remembers what a sudden swing of the muscular tail means, one cannot help admiring the man who coolly approaches a large crocodile for the purpose of tying his hind legs. Finally the fore legs are tied in the same way over the animal's back. A stout pole is passed under the bound legs and the animal is carried away. He is taken to the nearest government station, the reward is claimed, and he is afterwards cut open and the contents of his stomach examined.

Though the animal is spoken to in such flattering terms before he is secured, the moment his arms and legs are bound across his back and he is powerless for evil, they howl at him and deride him for his stupidity.

The professional crocodile catchers are generally Malays, who are sent for whenever their services are required. But there are Dyaks who have given up their old superstitious dread of the animal and are expert crocodile catchers.

EDIBLE BIRDS' NESTS

Sometimes the Dyaks join others in the collection of edible birds' nests for the Chinese market. This is a great industry in those parts of Borneo where there are large limestone caves in which these nests are found. The caves are farmed out by government, and whatever is obtained over the amount paid to government is the profit of the workers. In Upper Sarawak certain tribes possess caves in which edible birds' nests are found, and they divide the nests with the government.

Sometimes Dyaks who wish to earn a little extra money go and help these tribes in collecting birds' nests and get a share of the profits, or more often they go to small caves which belong to no one in particular and collect birds' nests for themselves, and then give a share of what they find to the government.

Some of the caves in which edible birds' nests are found are very large. At the entrance the visitor is met by thousands of bats and swallows. The latter resemble the common swallow in appearance, but are only half as large. These small swallows make the edible nests. Inside, the cave is often like an immense amphitheater roofed like a dome, the middle of which is over a thousand feet high. Thousands of nests are seen clinging to the pillar-like rocky sides and roof. The most flimsy-looking stages of bamboos tied together with cane are the simple means employed by the natives to collect the nests from the seemingly most inaccessible positions.

Though there are rifts in the sides through which come rays of light, still in parts the cave is so dark that lamps and torches have to be used.

The Dyaks climb up the bamboo scaffolding, carrying with them long cane ladders. These are fixed against the sides. Two men work on each ladder, which often hangs high up in the air. One carries a light four-pronged spear about fifteen feet long, and near the prongs a lighted candle is fixed. Holding on to the ladder with one hand, he manages the spear with the other, and transfixes the nest. A slight push detaches it from the rock, and the spear is then held within reach of a second man, who detaches the nest and puts it into a basket tied to his waist.

The natives say that there are two species of swallows that inhabit these caves. Those that take up their abode near the entrance of the cave build nests which are of no value. These birds often attack the other and smaller species which make the edible nests. The natives often destroy the nests of the larger swallows, so as to lessen their number.

The best quality nests are very translucent, and of a pale yellow color, and mixed with very few feathers. These are nests that have been freshly made. If the nests are not removed, the birds make use of them again, so that by age

and accession of dirt they become quite useless. The old nests are of no value, and the natives destroy them, so that the birds may build new ones in their place.

The nests are collected four times a year. The natives say that the birds will lay four times a year if their nests are collected often, but if there are only two collections, then the birds only lay twice in the year. The best time for collecting nests is when the eggs are just laid. One would imagine that there would be a danger of over-collecting, and that the number of birds would diminish, but the natives say there is no danger of this, as the birds carry on their breeding in nooks and crannies inaccessible to the collectors.

THE ORDEAL BY DIVING

The practice of referring disputed questions to supernatural decision is not unknown to the Dyaks. They have the trial by ordeal, and believe that the gods are sure to help the innocent and punish the guilty. I have heard of several different methods, which are seldom resorted to nowadays. The only ordeal that I have frequently seen among the Dyaks is the ordeal by diving. When there is a dispute between two parties in which it is impossible to get any reliable evidence, or where one of the parties is not satisfied with the decision of the headman of the Dyak house, the diving ordeal is often resorted to.

Several preliminary meetings are held by the representatives of both parties to determine the time and place of the match. It is also decided what property each party should stake. This has to be paid by the loser to the victor. The various articles staked are brought out of the room and placed in the public hall of the house in which each litigant lives, and there they are covered up and secured.

The Dyaks look upon a diving ordeal as a sacred rite, and for several days and nights before the contest they gather their friends together, and make offerings and sing incantations to the spirits, and beg of them to vindicate the just and cause their representative to win. Each party chooses a champion. There are many professional divers who for a trifling sum are willing to undergo the painful contest.

On the evening of the day previous to that on which the diving match is to take place each champion is fed with seven compressed balls of cooked rice. Then each is made to lie down on a fine mat, and is covered with the best Dyak woven sheet they have; an incantation is made over him, and the spirit inhabitants of the waters are invoked to come to the aid of the man whose cause is just.

Early the next morning the champions are roused from their sleep and dressed each in a fine new waist-cloth. The articles staked are brought down from the houses and placed upon the bank. A large crown of men, women, and children join the procession of the two champions and their friends and supporters to the scene of the contest at the riverside. As soon as the place is reached, fires are lit and mats are spread for the divers to sit on and warm themselves. While they sit by their respective fires the necessary arrangements are made.

Each party provides a roughly-constructed wooden grating to be placed in the bed of the river for his champion to stand on in the water. These are placed within a few yards of each other, where the water is deep enough to reach the waist, and near each a pole is thrust firmly in the mud for the man to hold on to when he is diving.

The two men are led out into the river, and each stands on his own grating grasping his pole. At a given signal they plunge their heads simultaneously into the water. Immediately the spectators shout aloud at the top of their voices, over and over again, "*Lobon—lobon*," and continue doing so during the whole contest. What these mysterious words mean I have never been able to discover. When at length one of the champions shows signs of yielding, by

his movements in the water and the shaking of the pole he is holding to, the excitement becomes very great. "*Lo-bon—lobon,*" is shouted louder and more rapidly than before. The shouts become deafening. The struggles of the poor victim, who is fast becoming asphyxiated, are painful to witness. The champions are generally plucky, and seldom come out of the water of their own will. They stay under water until the loser drops senseless, and is dragged ashore apparently lifeless by his companions. The friends of his opponent, raising a loud shout of triumph, hurry to the bank and seize and carry off the stakes. The vanquished one, quite unconscious, is carried by his friends to the fire. In a few minutes he recovers, opens his eyes and gazes wildly around, and in a short time is able to walk slowly home. Next day he is probably in high fever from the effects of his dive. When both champions succumb at the same time, the one who first regains his senses is held to be the winner.

I have timed several diving contests, and where the divers are good they keep under water between three and four minutes.

Among some tribes of Dyaks the champion is paid his fee whether he wins or loses. They say it is not the fault of the diver, but because his side is in the wrong, that he is beaten. Among other tribes, however, no fee is given to the losing champion, so he comes off very poorly indeed.

There are certain cases where diving seems to be the only means of a satisfactory decision. Take the case of the ownership of a durian tree. The tree probably does not bear fruit till fifteen years after it has been planted. Up to that time no one pays any attention to it. When the tree begins to bear fruit, two or three lay claim to it. The man who originally planted it is probably dead, and no one knows for certain to whom the tree belongs. In a case like this no amount of discussion can lead to a satisfactory decision, whereas a diving contest settles the matter to the satisfaction of all parties.

The Dyaks have great faith in the diving ordeal, and believe that the gods will always maintain right by making the man who is in the wrong be the loser. In fact, if a Dyak refuses the challenge of a diving ordeal, it is equivalent to his admitting that he is in the wrong.

TUNIS OF TODAY

By Frank Edward Johnson

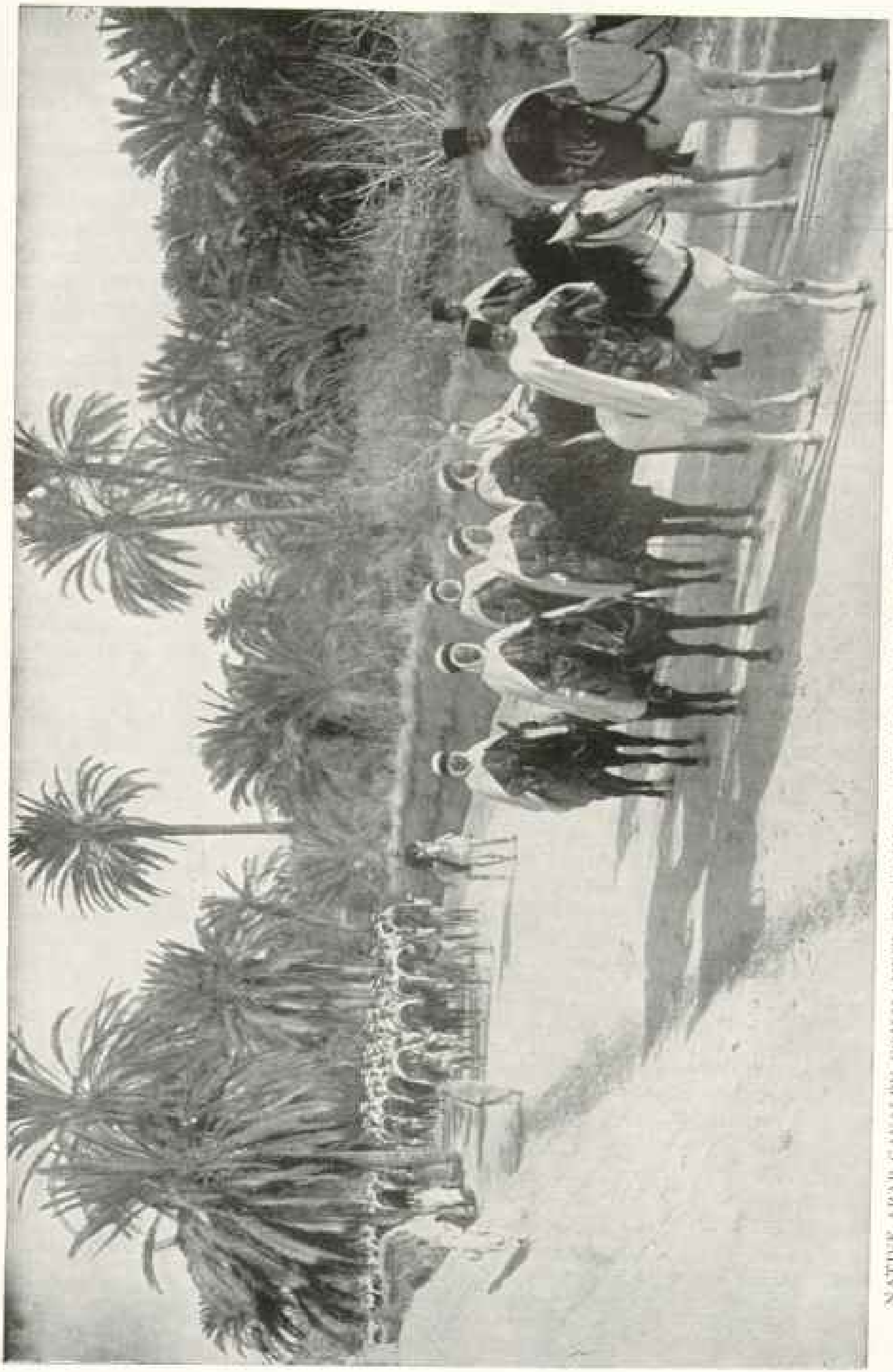
With Photographs by Messrs. Lehnert and Landrock, of Tunis

TUNIS, the capital of Tunisia, situated on the coast of northern Africa, is considered one of the most beautiful cities of the Orient. It has a mixed population of over 200,000: about 100,000 Arabs, 50,000 native Jews, 14,000 French, 50,000 Italians and Sicilians, and several thousand Greeks and Maltese.

Tunisia was an absolute monarchy until 1881, when, on May 18, the "Treaty of the Bardo" made it a French protectorate. It is governed by an Arab bey, who is advised by a resident general from France. The latter is in reality chief executive.

Tunisia is divided into 38 "caidships," or provinces, which are supervised by French officials with the title of "contrôleurs civils." The extreme south of Tunisia is under martial law.

Tunis is called by the Arabs "The White Burnous of the Prophet." Its houses are all flat-roofed and creamy



NATIVE ARAB CAVALRY COMMANDED BY FRENCH OFFICERS: THESE PARTICULAR MEN ARE NOW AT MOROCCO

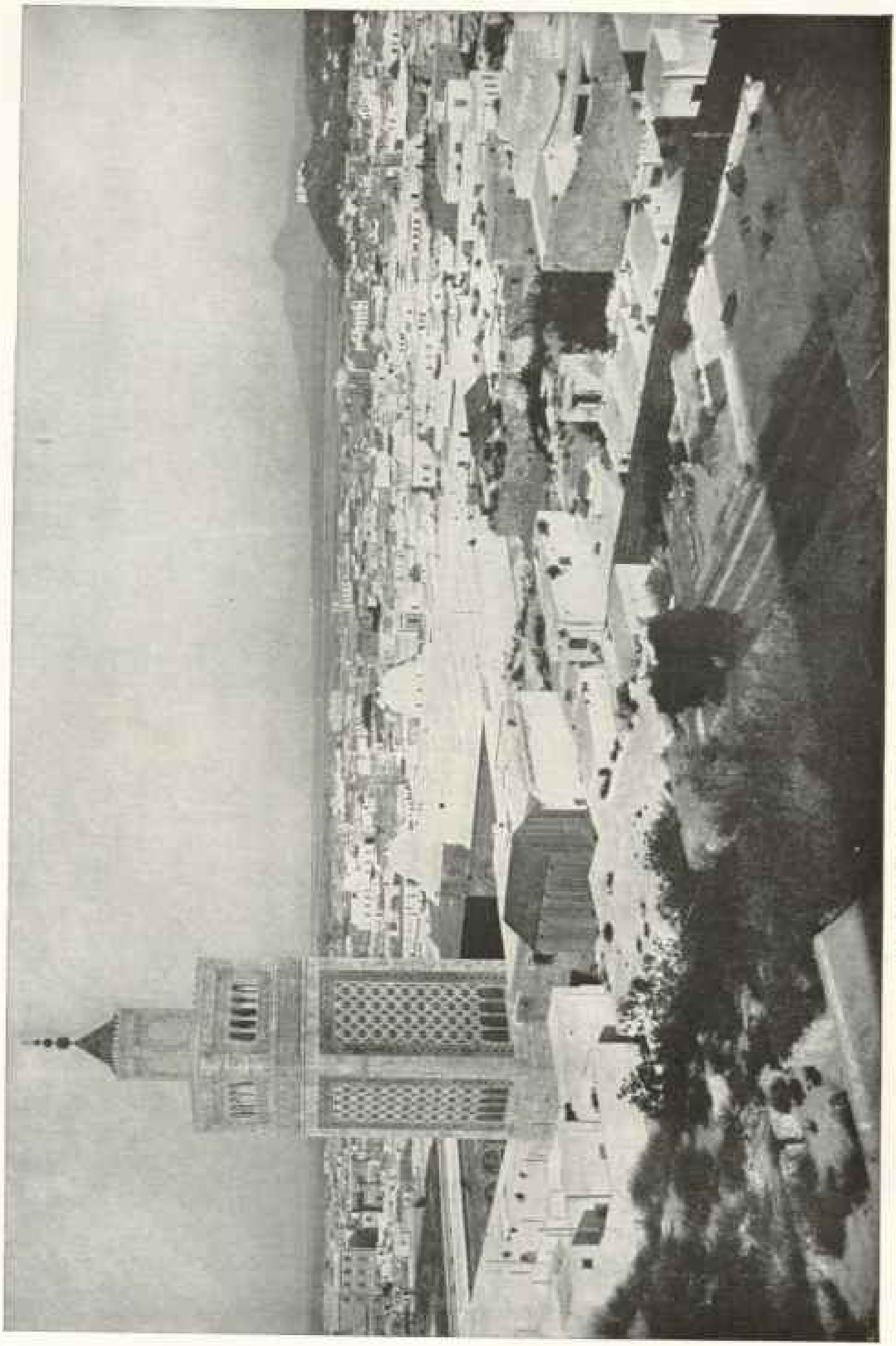
A "FANTASIA," WHERE HORSE AND RIDER COMPETE AGAINST EACH OTHER TO THE PLAYING OF A FIFE AND TOM-TOM

white in color. Minarets point heavenward from every square, and from their tops may be heard the "call to prayer of the faithful" five times a day: "Allah is Allah. There is no God but Allah; Mohammed is his prophet."

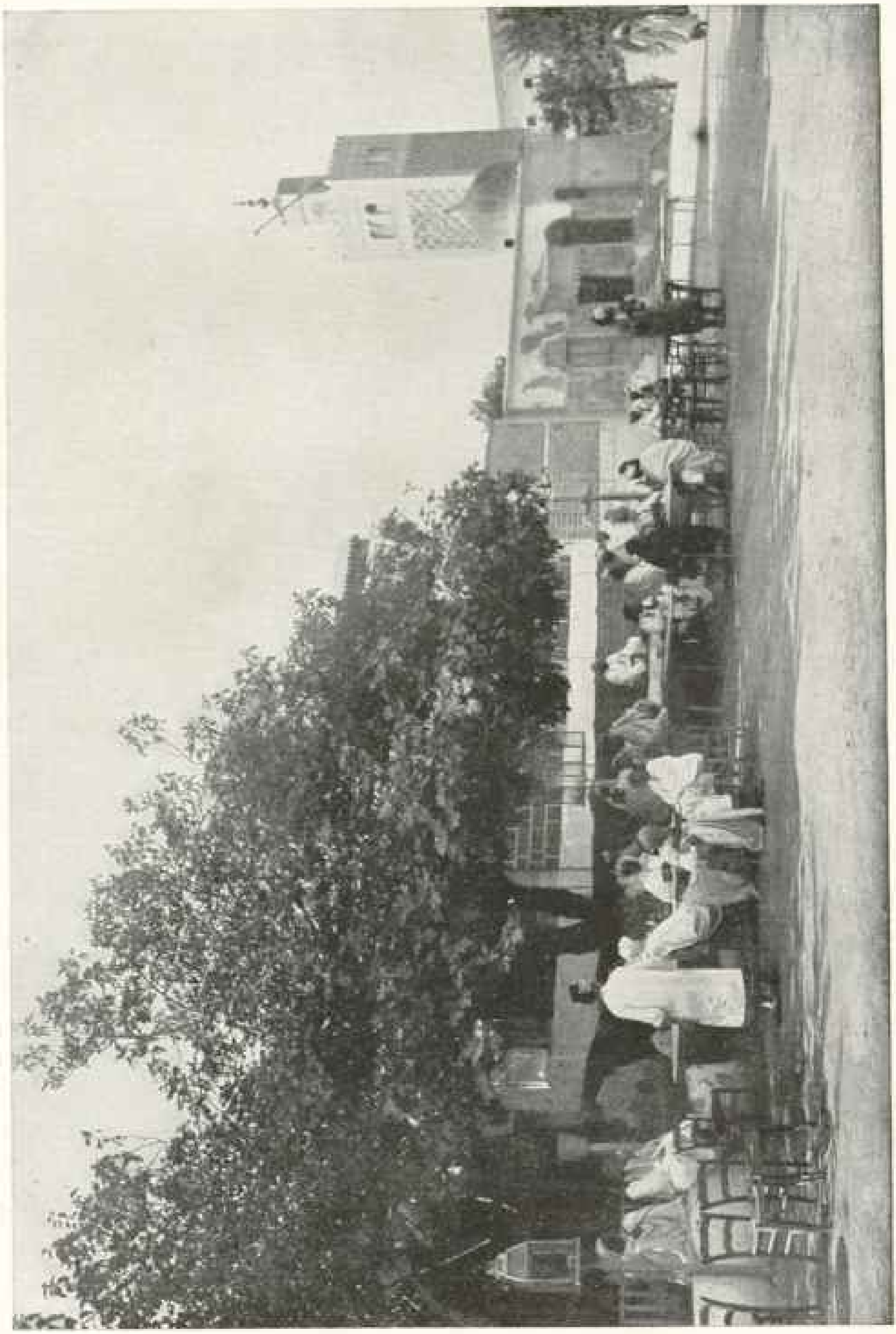
Tunis has changed greatly since 1881. A large and attractive French town has sprung up outside the walls of the native city. Broad boulevards, with rows of palms and various shade trees; large shops, with tempting displays; modern hotels, with every comfort and luxury; restaurants, cafés, and garages for the motors that come in greater numbers every season. Trolleys run in all directions, and Carthage can be reached in 25 minutes.

The native town is the great attraction, with its "souks," or bazars, and its streets of various guilds, where for an entire street only one trade is followed: The streets of the shoemakers, where hundreds of men and boys are busy making the yellow or red morocco leather slippers, or red-top boots for riding; the street of the gun-makers, where one can watch the long-barreled gun, beloved by the Arabs, being damascined with silver and sometimes gold; the street of the coppersmiths and numerous streets of weavers.

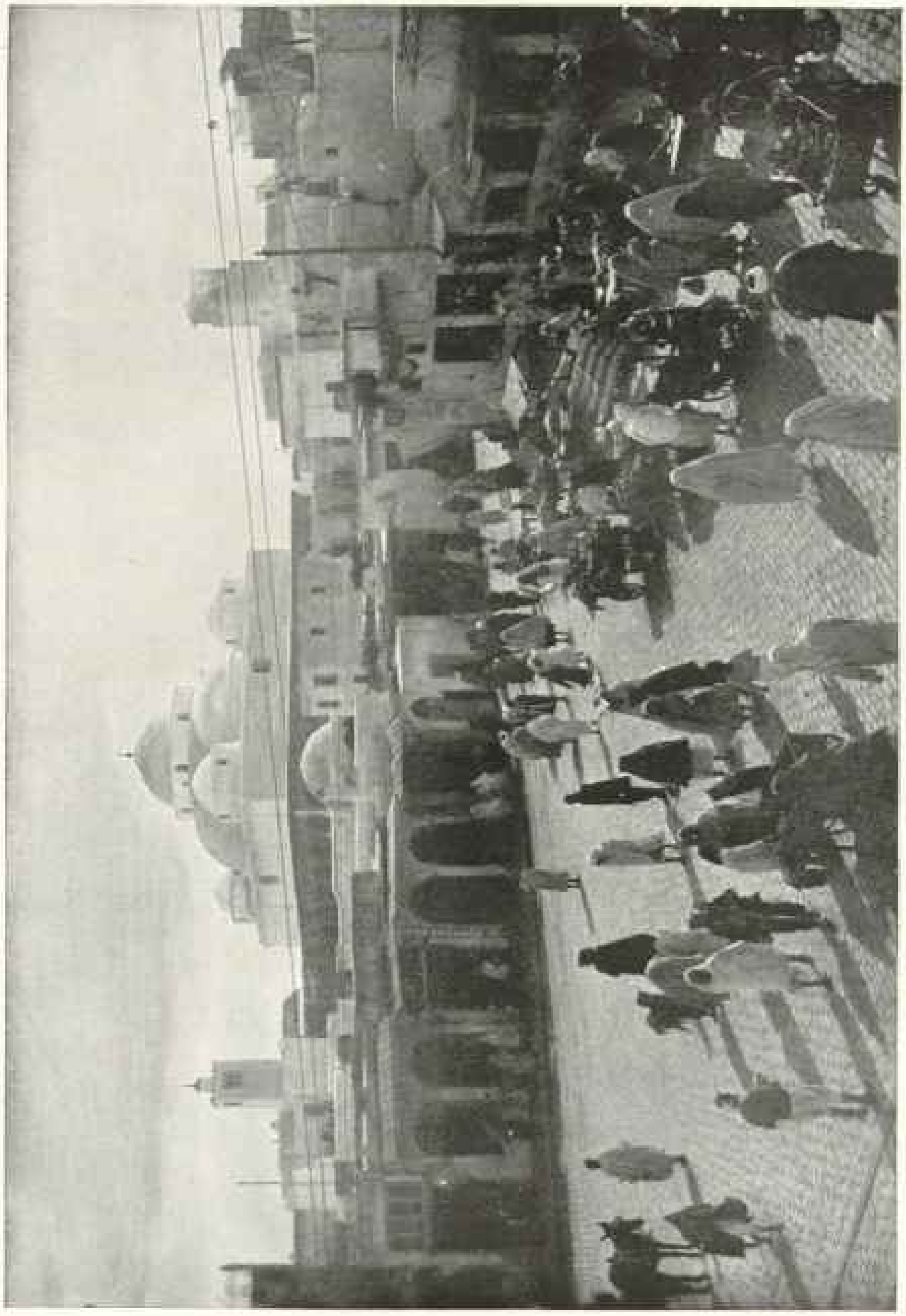
Friday is the Arab Sunday, when all the women go in the morning to the cemeteries to pray. One passes hundreds of them chatting together, dressed in their silvery white "haiks" and black face-veils. Many of the women of the wealthier families, instead of a face-veil, wear a broad scarf of heavy dark silk,



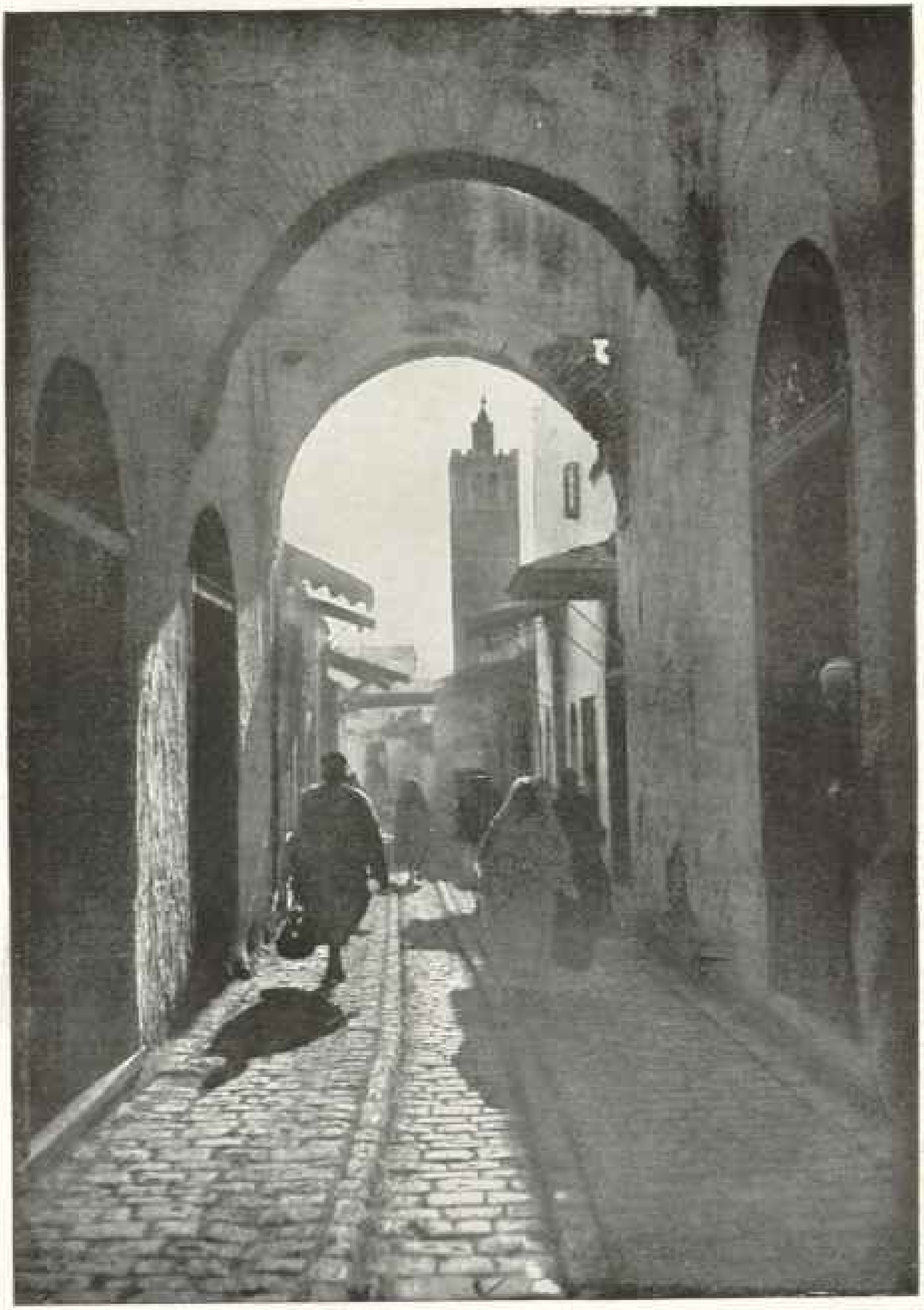
PANORAMA OF TUNIS FROM THE PALACE OF DAR-EL-BEY



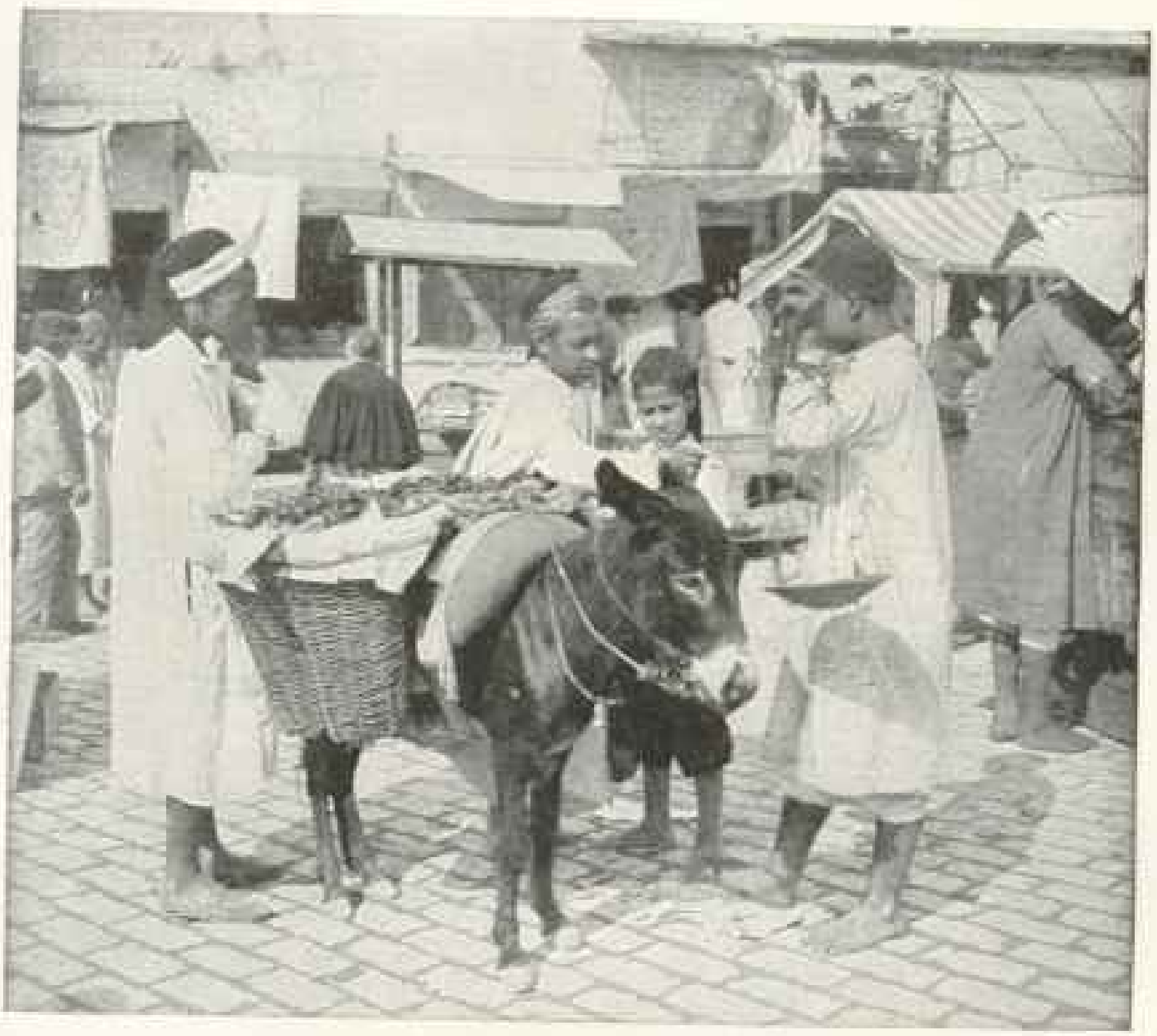
ARAB CAFÉ: TUNIS



THE PLACE HAB-SUKA: TUNIS. (SEE PAGE 730)



STREET SCENE: TUNIS



FRUIT VENDER: TUNIS

which covers their face and is held out in front by the arms of the wearer. All she can see is a few steps in front of her feet. These wealthy women are usually followed by several female attendants.

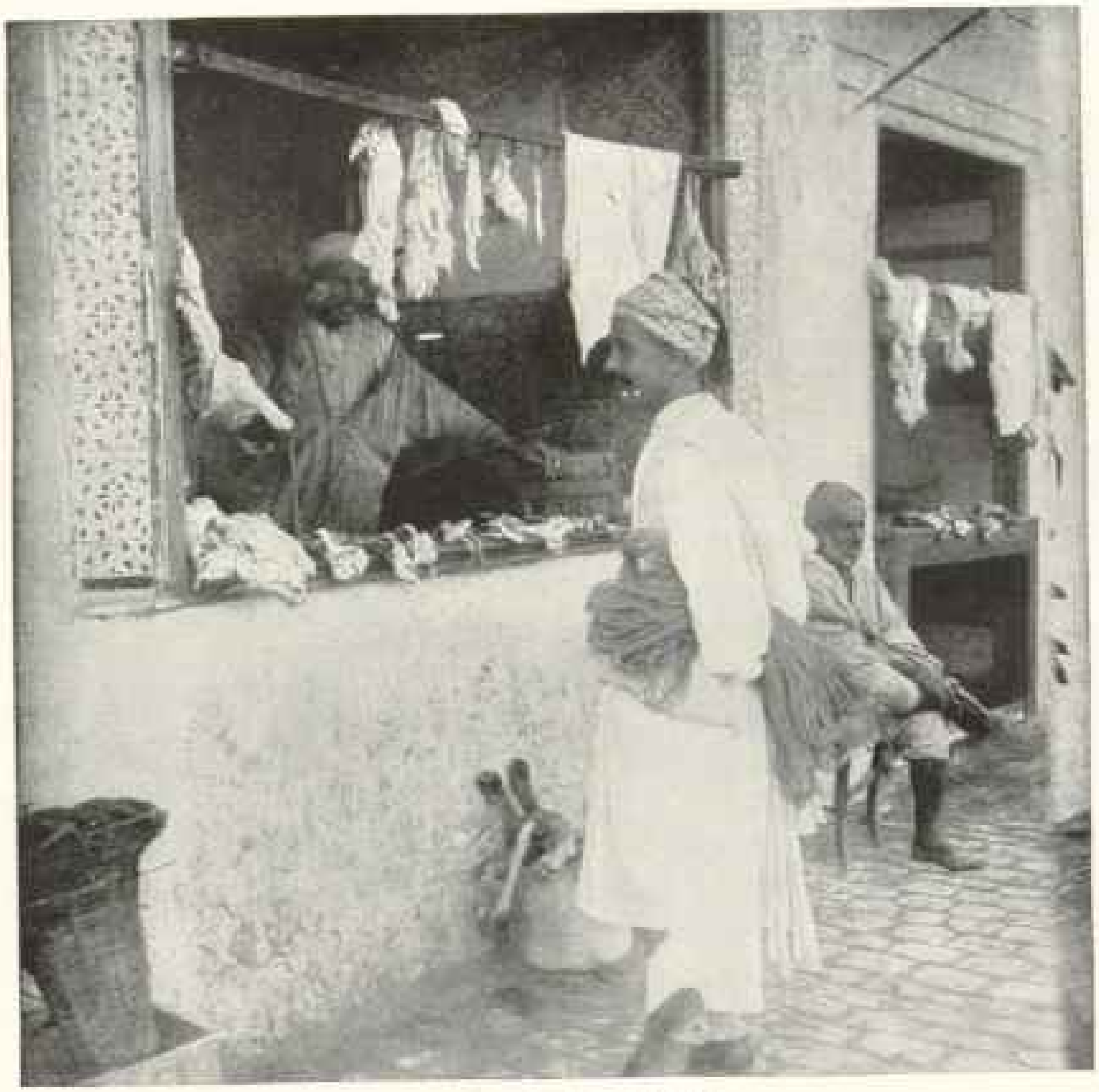
Place Bab-Suika is one of the most animated scenes in a town where every street teems with life. The great domes of the mosque form a picturesque background for a multi-colored throng of moving humanity, so dense that it is difficult to walk about.

Here early in the morning are to be found great piles of freshly picked fruit and vegetables brought in from the surrounding country.

A tiny donkey with paniers filled with oranges shoves you up against the wall of the narrow street as he passes, and we wonder what the vender is crying. It sounds weird, but translated means only "Oranges—sweeter than honey."

Passing through the "Porte de France," one of the numerous gateways into Tunis, we walk up the crowded and narrow Rue de l'Eglise, where Arab, Jew, Greek, Italian, French, and tourist rub shoulder to shoulder. At the end of the street is the large "Mosque of the Olive Tree" (Djamma Zitouna). A sign in large letters warns one in French, English, German, and Italian: "Reserved for Moslem worship. Entrance forbidden." The glimpses one has of the interior make one long to enter.

Leaving the mosque, to our left we come to the Souk of the Perfumers. Here in small niches sit the venders, looking like five Buddas. Attar of rose, jasmine, amber, and rose geranium are the favorite scents. Should one be unfortunate enough to have a guide, instead of the oriental perfume a coal-tar product will be substituted, which comes



BUTCHER SHOP: TUNIS

direct from Germany. A large business is done in these German scents, so perfectly imitated that it takes a connoisseur to tell the difference. The guides are a band of robbers and demand 50 per cent or more commission on all purchases.

Entering one of the largest souks, steaming Turkish coffee is brought us in tiny cups, while oriental rugs, silks, jewels, and antique weapons are shown us.

The souks are picturesque and fascinating places, where time passes all too rapidly. A rug should be looked at in various lights; its color and texture discussed and its price debated, and many cups of coffee and quantities of cigarettes consumed before its eventual purchase. Not to accept a cup of coffee is almost an offense, and it is always offered. The merchants in the souks are keen tradesmen, and the prices vary according to the appearance of the purchaser. The original price is always greatly in excess of what is expected. One of the most picturesque souks is that of the saddle and harness makers. The tomb of a maribout (holy man) is in the center of the street, and on fête days there are beautiful old flags. The color effects are impossible to describe and most difficult to paint.

The Arab saddles and bridles have mountings of silver and panther and leopard skins. The leather is of red morocco, or a pale yellow, and harnesses,

STREET SCENE: TUNIS

saddle-bags, and purses are ornamented with silken embroidery and gold and silver threads.

Most of the souks are roofed over as a protection against the great heat, and small square holes are left for ventilation, so that the effects of sunlight sifting through are very curious and make photographing them almost impossible.

Maribouts are built in the most unexpected spots, and are often not actual tombs, but spots made holy by some maribout during his lifetime and built on after his death. A hermit, a saint, or a crazy man are always maribouts and very fanatic.

The little fruit-shops are most attractively arranged and very artistic in regard to color. The love of flowers and color seems inborn to all Arabs. Even the smallest café has great bunches of flowers, and the butcher standing in his tiny shop has a rosebud and golden marigolds stuck over his ear. The blue-green antique tiles around his shop are worthy of being shown in a museum.

Many of the Arab entrances and courtyards are built of materials taken from the Roman ruins. The old Moorish arches are exceedingly graceful in form and the despair of modern architecture to reproduce.

In the afternoon a large crowd is always to be found at the Place Sidi-Bayan watching the snake-charmer and his large hooded cobras and other snakes. Some of the snakes are wriggling on the ground, with a large stone on top of each of their tails so that they cannot get away. The snake-charmer's head resembles that of a male Medusa, as several snakes are twined about, while two huge cobras are coiled on the ground ready to strike as the snake-charmer approaches. They seem hypnotized, but they hate him and strike his face again

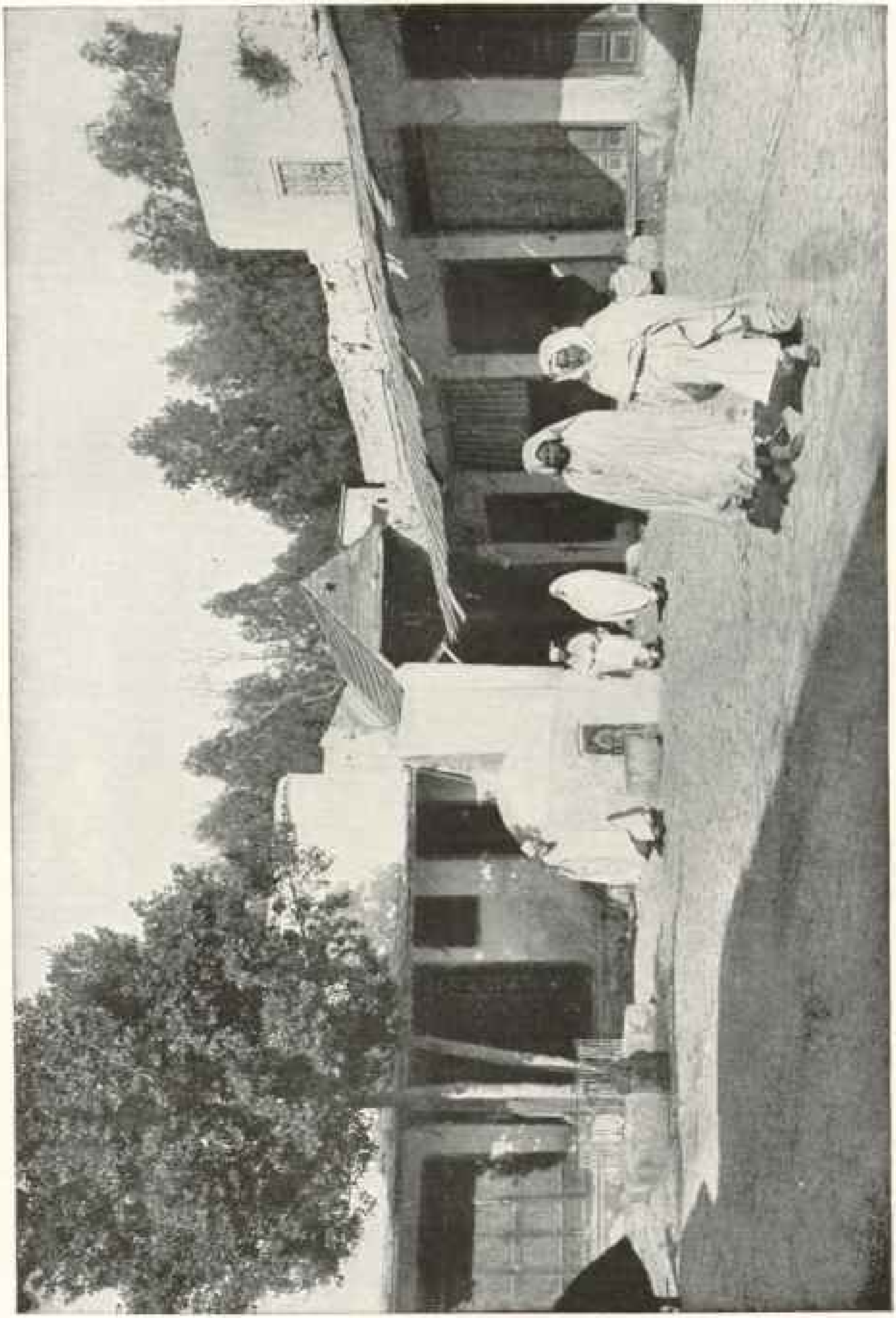
IRON-BARRED WINDOW OF DAR-EL-BEY, WHERE THE BEY THROWS COINS TO THE POOR BELOW

and again, until his nose and cheeks are dripping with blood. Each time they strike they puff out their broad hoods. The snakes are carried from place to place in long leather bags. The snake-charmers come from the south and are usually fine types, but resent being photographed, as do all Mohammedans, so that photography is wrought with difficulty.

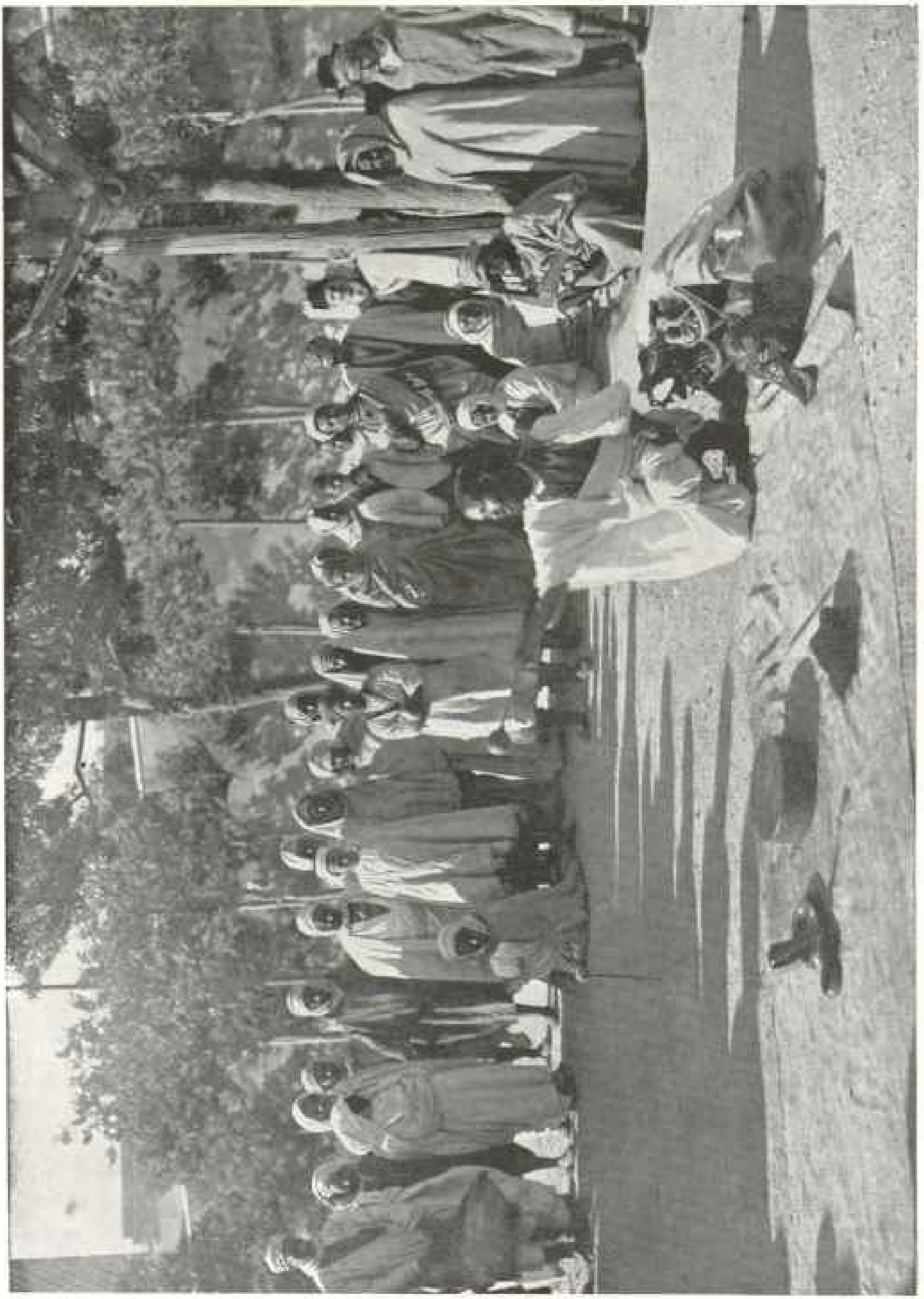
The large market, built since the French occupation, near the post-office, is worth an early morning visit, and gives one an idea of the products of the country.

The market-place occupies an entire block and has four entrances; a wide arcade runs around three sides, leaving a large open square in the center. Out here are the stalls for the sale of vegetables, fruit, and fish. For retail purchases it is better to buy in the arcade.

Squatted in the vaulted gateway is a row of Sudanese women as black as ebony, with their small cream cheeses and little pyramid-shaped cakes placed on large green leaves before them. They seem to do a thriving business, for as a rule about 10:30 o'clock all their wares have been sold. The crowd coming and going reminds one of the subway on a busy afternoon, save that it is an oriental lot of people in quaint and picturesque costumes. Passing through the entrance, one comes into a large hall. At the left is sold olive oil by the quart or barrel; to

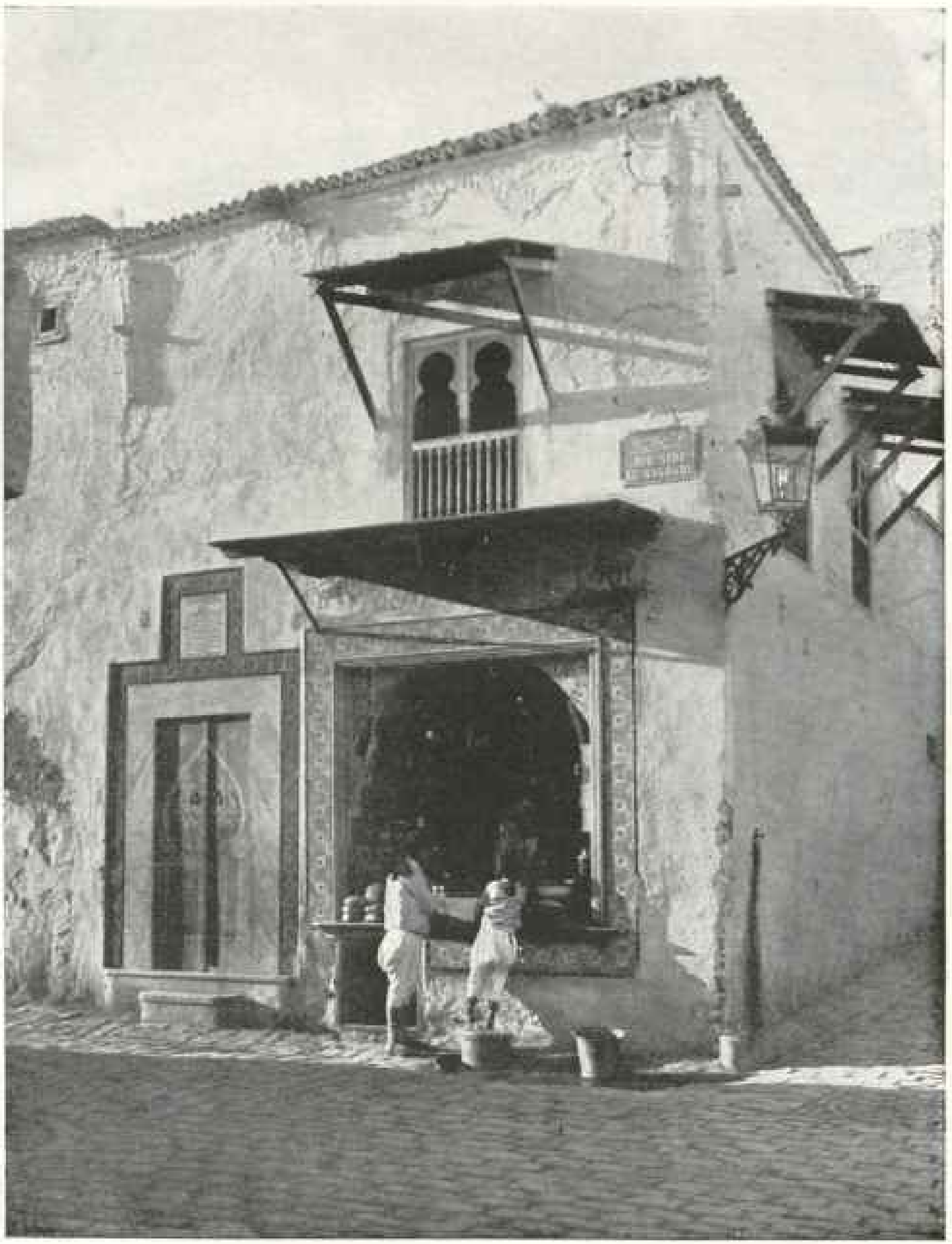


ENTRANCE TO SOUK OF SADDLE AND HARNESS MAKERS: TUNIS

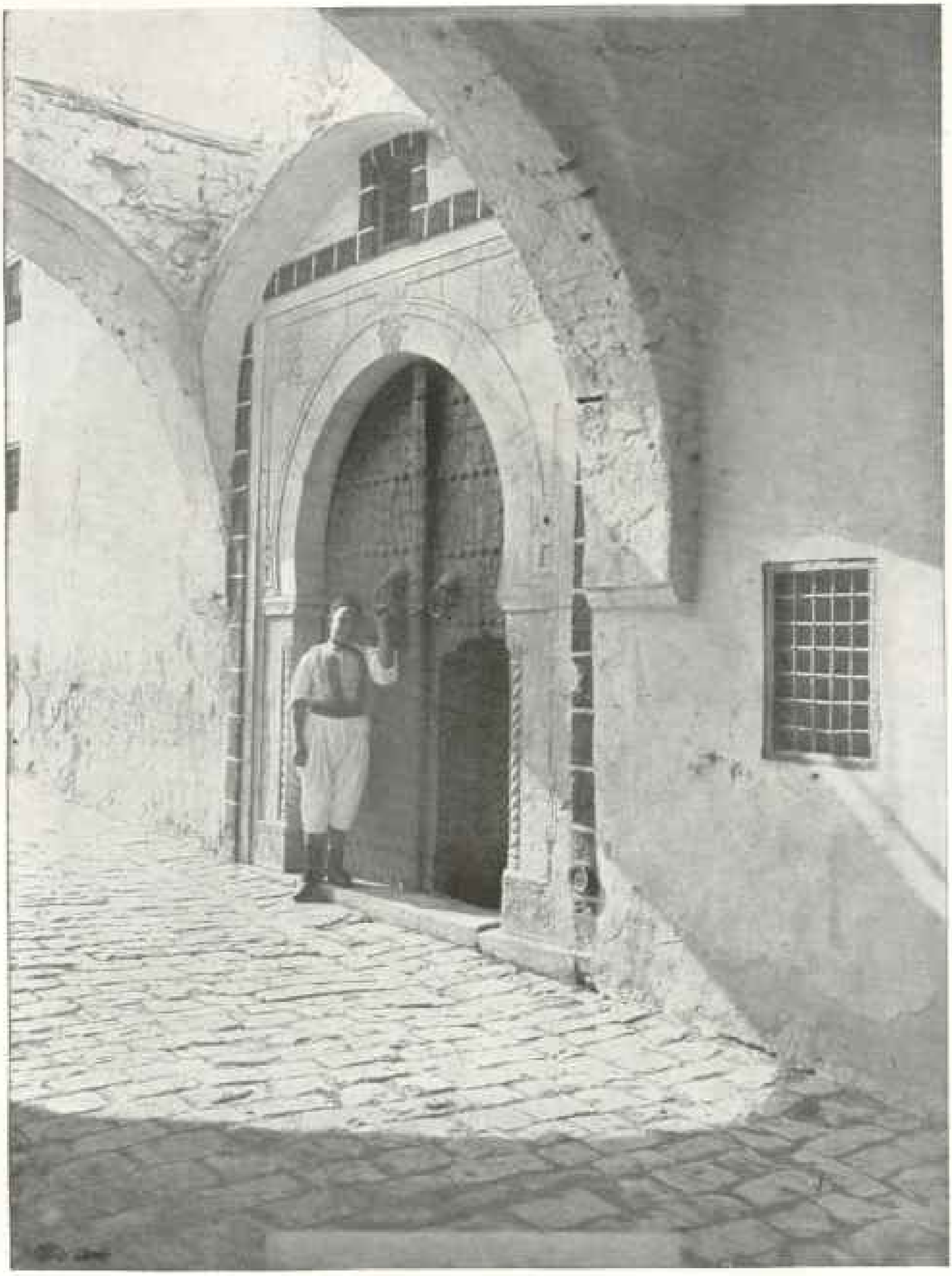


THE SNAKE-CHARMERS' FÊTE

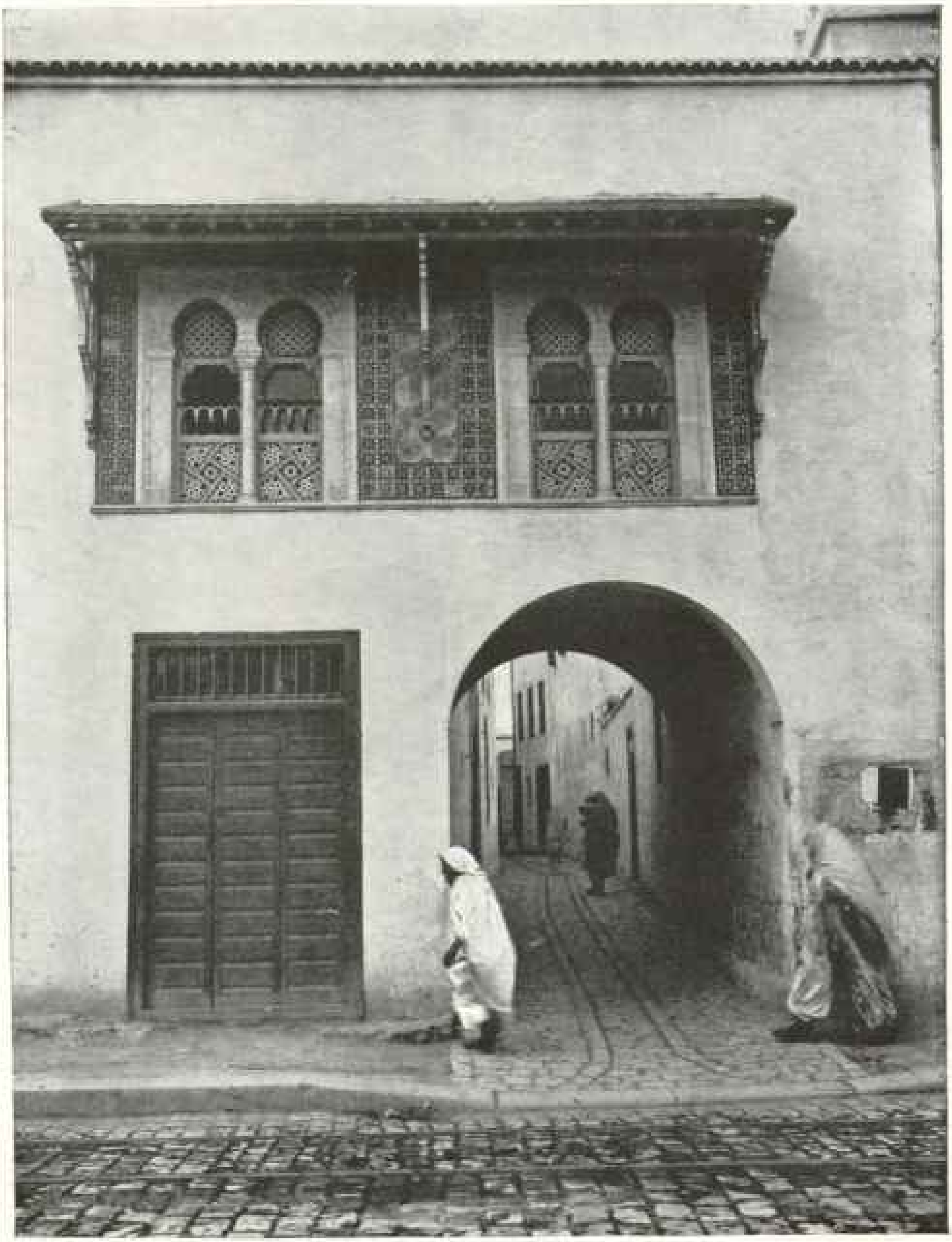
A SCENE TOO FREQUENTLY MET WITH IN NORTHERN AFRICA: BLINDNESS FROM NEGLECT WHEN AN INFANT



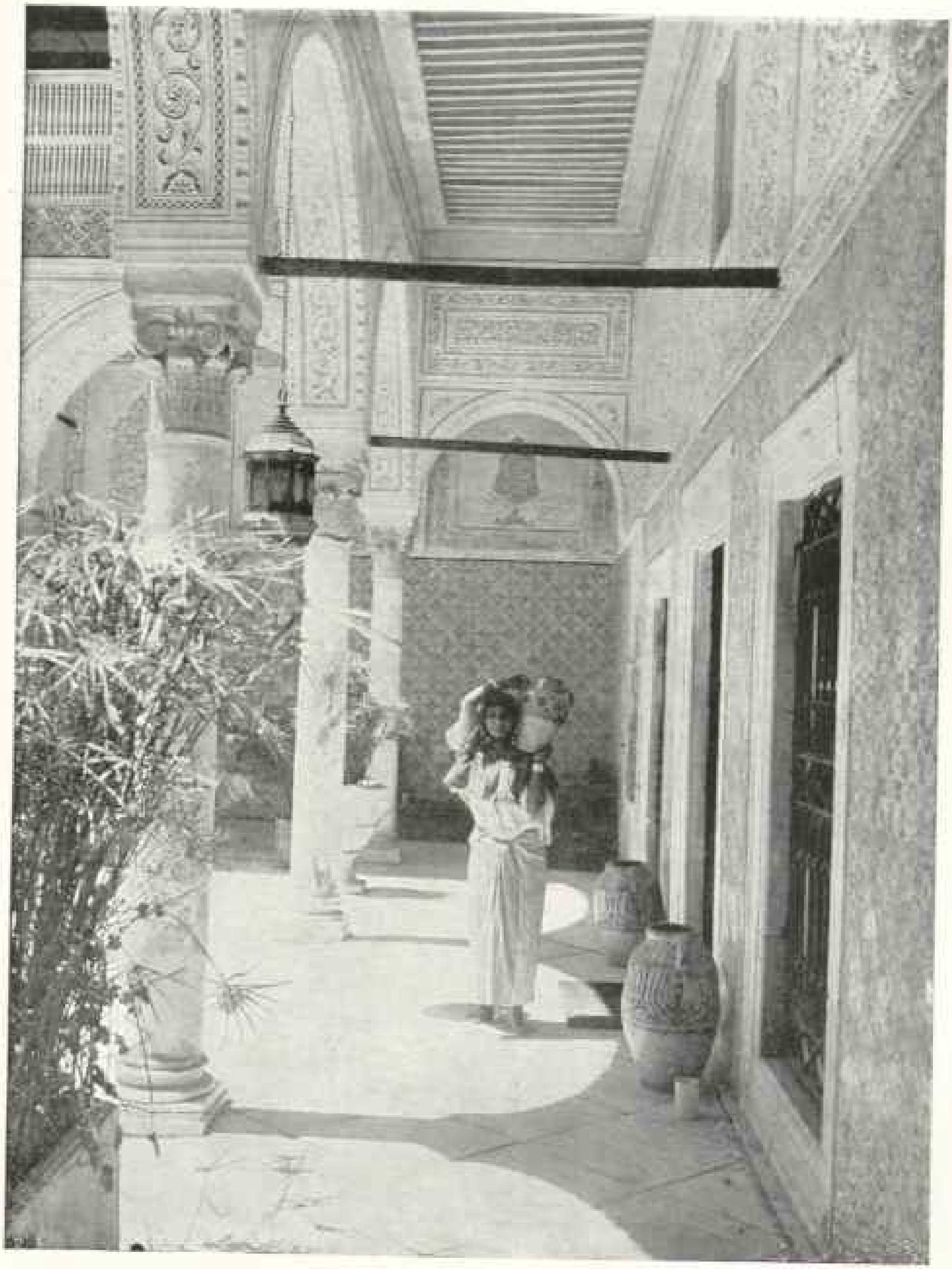
ARAB GROCERY STORE: TUNIS



ENTRANCE TO ARAB HOUSE; TUNIS



THE FACADE OF A MOORISH HOUSE



COURTYARD OF MOORISH HOUSE

the right is a fish market, where fish are auctioned off to the highest bidder, in lots of from one to seven pounds.

Keeping on through another vaulted gateway, some Arab women are selling snails and bunches of lettuce and asparagus and large and small turtles, which are supposed to bring good luck. The poultry venders have a place for themselves, where live chickens, ducks, and pigeons are to be bought, on one side of the arcade, and on the opposite side are the freshly plucked chickens, pigeons, and quantities of native quail, much smaller than ours in America. The vegetable booths have fresh beets, carrots, radishes, artichokes, cauliflowers, peas, onions, string beans, and other varieties of beans unknown in New England, new potatoes, and large squash cut into slices. The fruits for sale in April are dates, oranges of all varieties, mandarins, lemons, sweet lemons—a fruit greatly esteemed by the Arabs, very juicy, but insipid—and a curious pear-shaped blood orange, bananas of a small variety, but excellent in flavor. Nespolies of Japan are greatly liked and thrive in this soil. Later in the season come grapes, figs, melons, apricots, peaches, pears, and apples, pomegranates, and strawberries; also almonds and pistache, which is used in great quantities in making bon-bons by the natives. A date stuffed with freshly prepared pistache is delicious.

The natives eat the fruit of the prickly-pear cactus. Unfortunately, the new variety without thorns, lately developed by Mr. Burbank, has not been imported into Tunisia, and its cultivation might prove a failure, as the prickly-pear cacti are used almost entirely instead of fences. They only cost the labor, and once grown their sharp thorns, finer than a needle and irritating to the skin, keep out man and beast. The butcher-shops have beef, mutton, and pork, and there are two stalls at market where only horse-meat is sold.

At the slaughter-house there are three separate divisions—one for the Europeans, one for the Jews, and a third for the Mohammedans, where the animal to be killed has to face toward Mecca.

Arabs are extremely fond of fish, and the waters of the Mediterranean and the numerous salt lakes in Tunisia abound with many species unknown in Europe and America. Many fish thrown away or used as lobster bait on our Atlantic coast are considered excellent over here. For instance, none of us has ever thought of eating a "skate." How our Gloucester fishermen despise them! Yet many of us who have lived in France have eaten them without knowing, thinking it was turbot.

Tell an old Maine fisherman that you had eaten a dogfish and he would consider you almost as bad as a cannibal. Yet early this morning I saw hundreds of dogfish, small sharks, and very large skates being eagerly bought at the market. Among the fish that I had seen before were soles, mackerel, red mullet, tangfish weighing from 70 to 200 pounds, and merling, large and small, with their tails in their mouths. Why are fried merling always served that way in France? At an Arab fish-monger's in the hall in the market reserved especially for seafood, a large octopus was gracefully arranged, so that his body made a huge rosette; his tentacles formed long loops—a sort of gothic-arch effect; above were light and airy arches of a species of soft-shell crab, still alive. Dangling from the loops made by the octopus were two large silvery fish with iridescent colors, their tails bent up like the figure six, their mouths wide open, holding feathery bunches of flowers.

On the counter were quantities of squids and large shrimps, from three to four inches long, and langoustes (very like a lobster), and various kinds of fish, all arranged so that the colors harmonized; here and there a bunch of flowers to set off the color of the fish. Everything was spotlessly clean.

In the days of Rome northern Africa (Tunisia) was called the "granary of the world," for the Roman system of irrigation was marvelous and the soil

A BEDOUIN GIRL: CARTHAGE

WEALTHY ARAB WOMEN OF TUNIS

fertile wherever water was to be had, and it was to be found in abundance in the mountains. The aqueduct, built under Hadrian, about 136 A. D., supplied Carthage with 32 million liters of water a day (somewhat over eight million gallons).

The invasion of the Vandals, Arabs, Berbers, Spaniards, and Turks laid waste the fertile plains, filled up the wells, and destroyed the aqueducts, so that the French found deserts where the Romans left gardens. Their task of reconstruction has not been a light one, but the change wrought since 1881 is wonderful, and the cultivation of cereals is once more on the increase.

History tells how the "Province of Egypt" was taxed in grain, and how an annual tribute of 144 million bushels of grain were sent to Rome by the "Egyptian fleet."

In the golden days of proconsular Africa these figures were more than doubled, and the grain was paid for, not sent as a tribute. No wonder that mosaics and statues of Africa represent her allegorically as a young girl holding great ears of corn in her hands, or with her arms clasping horns of plenty, overflowing with cereals and fruit.

At Rome during the fourth century A. D. African olive oil was preferred above all others, and Cæsar taxed the community of "Little Leptis" three million pounds of oil per annum for the Roman baths.

Today Tunisia has over ten million

WEALTHY ARAB WOMAN ON WAY TO CEMETERY, FOLLOWED BY FEMALE ATTENDANTS: TUNIS

ARAB WOMEN WAITING AT CEMETERY GATE

olive trees under cultivation, and they cover an area of about two hundred thousand hectares.

The cereals now grown in Tunisia are wheat and barley, oats, corn, and what is known here as "sorgho." The latter is of great value to the native, and is a sort of poor man's wheat when other crops fail. Three varieties are grown—white sorgho, used for food; yellow sorgho, which makes rather a coarse meal, and another variety, used as a chicken food.

April 13 marks the commencement of the Jewish "Feast of Unleavened Bread," or Purim, when no business is done and unleavened bread must be eaten for seven days (Exodus 12 : 3-30). Beside each door in the Jewish quarter of Tunis was a bloody stain of the hand of "Fatima."

It is curious to see how Moslem and Jewish traditions become intermingled in the course of centuries. Fatima was the beloved wife of Mohammed, and her hand is supposed to bring good luck. Yet today on all doorways was the blood stain or imprint of a woman's little hand.

Last night 90 Jewish weddings took place, and that quarter of Tunis was "en fête," and every one, dressed in their best clothes, was walking about in the narrow streets to see the wedding processions.

The noise was deafening, as each marriage procession was preceded by native Arabs beating tom-toms and playing bagpipes or flageolets; small Jewish children in native costumes followed, carrying flowers. Then came men relations and friends bearing very tall and gaudy

COSTUME OF ARAB WOMEN, WHITE HAIKS AND BLACK FACE-VEILS: TUNIS

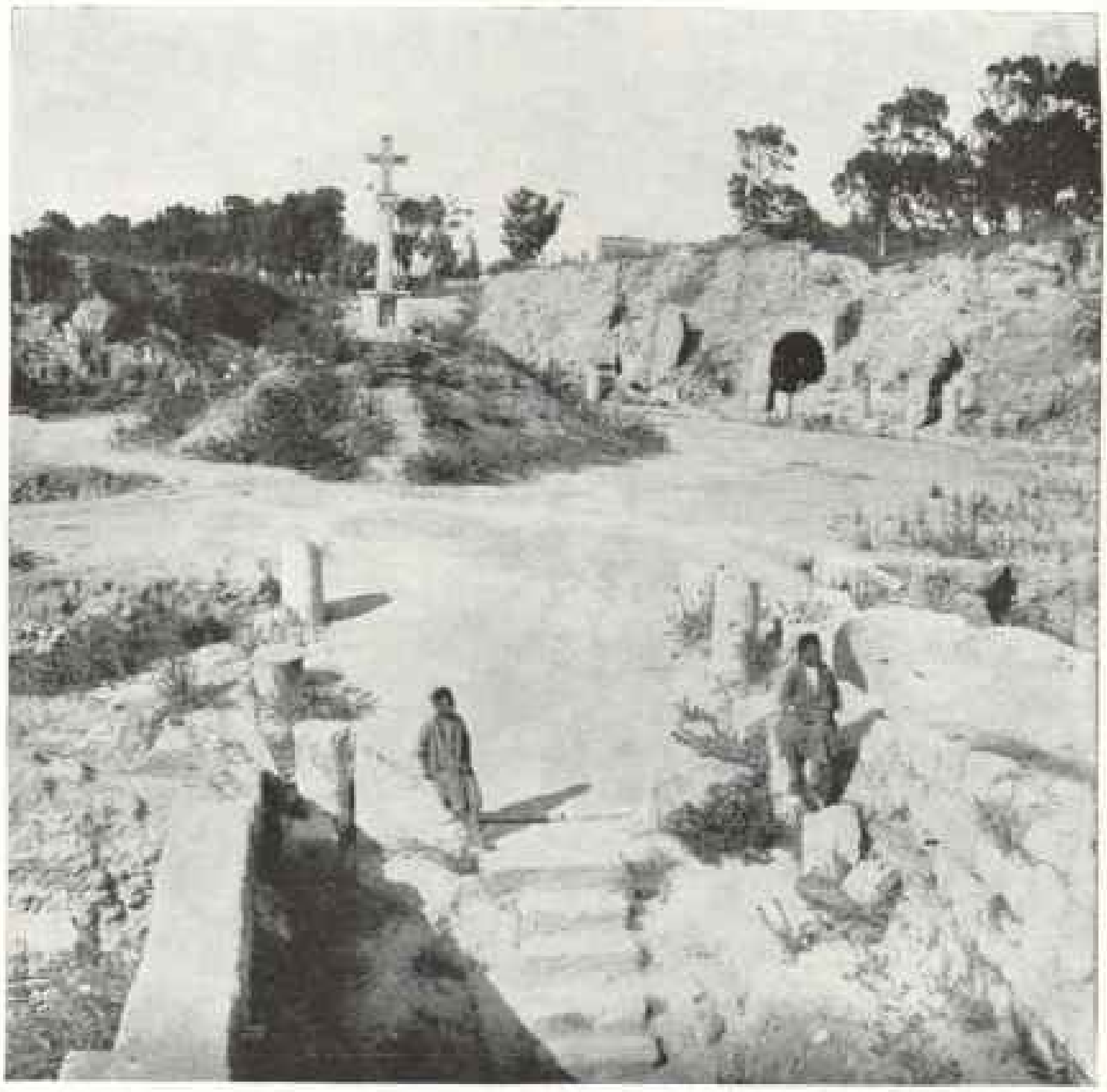
JEWISH WOMEN WALKING: TUNIS

candles. Then the bride and groom, dressed, alas, in European clothes, with bridal veil and orange blossoms, followed by the wedding guests in all the Jewish oriental splendor.

When the bride passed the houses of her friends, the procession would halt while the bride's veil was lifted, and the women would kiss her. Many of the young girls and brides were very beautiful, and the brides seemed young—between 15 and 17 years old. But in this country women develop far more rapidly than with us.

The wedding ring is worn on the first finger of the left hand, and the finger-nails and toes are stained red with henna, and on the day of her marriage her eyebrows are painted so that they meet over the nose. Over the entrance to the home of the newly married couple is fastened a gilded pair of horns and a hand of Fatima to keep off the "Evil Eye."

Saturday afternoon (the Jewish Sabbath) many of the women are to be seen walking in the belvedere (the large park) in their curious costumes and their peaked golden caps. Unlike the Arab



THE ROMAN ARENA: CARTHAGE. CROSS SHOWS WHERE CHRISTIAN MARTYRS WERE THROWN TO WILD BEASTS, 202 A. D.

women, they never go veiled. Civilization is changing ancient customs and costumes, so that today the wealthy Jewish families dress in European clothes. A smart station wagon with fine horses dashes into the park. Out step three very stout but handsome Jewish women, dressed in the latest Parisian fashion. Their children, two boys and one girl, jump down and run off to play with their French poodle. All are talking French.

Twenty years ago I saw these same women, then young girls of about 16, walking with their mothers, who were tremendously stout, weighing at least 250 pounds each. They were dressed in skin-tight satin knee-breeches, golden gaiters, short slippers ending under the instep, a sort of bolero jacket with masses of golden embroidery, a tall cornucopia-shaped cap of gold, with a fine veil flowing from the point.

On a hill just outside the walls of Tunis is one of the large cemeteries. Friday mornings are devoted to the Arab women, no men being allowed. Each one that comes picks up a small stone and places it on the top of the tomb of their relative or friend, so that every one can see how many persons have cared to come and visit the grave. Often there is quite a pile of stones; at other graves only a few. The graves of

the women are plain; those of the men have a round stone on top to denote a turban. All graves have a sort of cup or small hole cut into the top of the slab. This cup is supposed to fill up with water when it rains, and the birds of the air come and drink out of it. If they do, it is a visible sign from Allah that the soul of the departed is at peace. It is a good omen to the members of the bereaved household, who go on their way rejoicing.

Tunis is supplied with pure and abundant drinking water piped over 100 kilometers from "Mount Zaghouan," the same springs that supplied Carthage two thousand years ago. Portions of the Roman aqueduct remain and were restored and used by the Spanish during their invasion of northern Africa. The Roman cisterns of Carthage were very numerous and so well preserved that the French government has at little expense restored the best and made them into a reservoir that supplies the surrounding towns of La Marsa, Sidi-Bou-Said, La Goulette, and others.

Bedouins have utilized the older cisterns, that look like great caverns, and made homes out of them, and their children run after you for miles, begging for pennies.

The Bedouins that cannot find room in these old cisterns use primitive nomad tents that they pitch under the shelter of some prickly-pear hedge to break the sharp wind that sweeps over Carthage during the winter months.

The foundation of Carthage dates from the ninth century B. C., under Dido, a Phœnician princess. It was built on and around a hill called the "Byrsa." A large Roman Catholic cathedral, St. Louis of Carthage, occupies the site today, and was built by the "Pères Blancs," or White Fathers, a brotherhood founded by the late Cardinal Lavigerie. Besides doing a great deal of good among the natives, the Pères Blancs have excavated the ruins of Carthage under the supervision of Father Dulatre, one of the greatest authorities on Phœnician and Roman antiquities.

The Roman arena is small. The cross was erected in memory of early Christian martyrs, thrown to wild beasts on this spot 202 A. D. The "Theater of the Odeon" has some fine old capitals and columns lying about, and one can form an idea of its former beauty on going to the Museum of the Bardo, where it seems as if almost every other statue or bas-relief is marked as coming from the Odeon-Carthage.

The two lakes with the island in the center are all that remains of the famous ports of Carthage, where the Phœnician war galleys laid at anchor. The admiral of the fleet and his officers lived in quarters on the little round island, now partly filled in by the shifting sand. From the Byrsa the view spreads over a wide and placid bay of wondrous color, dotted with lateen sails of the fishing craft.

In the distance looms up "Bon-Kornain," or the Mountain of the Bull, where during the centuries the Phœnicians lived at Carthage hundreds of captives, slaves, and children were sacrificed at one time to Baal, Moloch, or Tassit. The two peaks of Bon-Kornain are supposed to have resembled the horns of a bull, and here between the horns was one of those "high altars of Baal" spoken of in the Bible.

A JOURNEY IN MOROCCO: "THE LAND OF THE MOORS"

By THOMAS LINDSEY BLAYNEY, PH.D., CENTRAL UNIVERSITY OF KENTUCKY

THE expression "Classic land of the Arabian Nights" has been applied to Morocco so often by travelers that it has almost become trite; yet no other phrase seems to the writer to portray so well the life, glamour, and color of this unique land. While other oriental countries—Palestine, Egypt, Algeria, Turkey—have been profoundly modified by external influences, the "Land of the Moors" has preserved almost inviolate the manners, customs, and racial appearance of the East of ancient days. It has withstood with success the blandishments of civilization on the one hand and the threats of cupidity on the other. The traveler in search of novelty may approach its shores with confidence; the student of civilization can be assured of rich reward.

Morocco is about the size of Spain. The high chain of the Atlas Mountains, which to the south separates it from the desert, renders the climate healthful and pleasant. Prof. Theobald Fisher, of the University of Marburg, the best-known scientific student of Moroccan climatology, credits this most western land of Barbary with unusual climatic and physical advantages. These he believes, under proper conditions, will render Morocco an even richer agricultural country than Algeria and Tunisia and even enable it to rival the fertile regions about Malaga and Valencia.

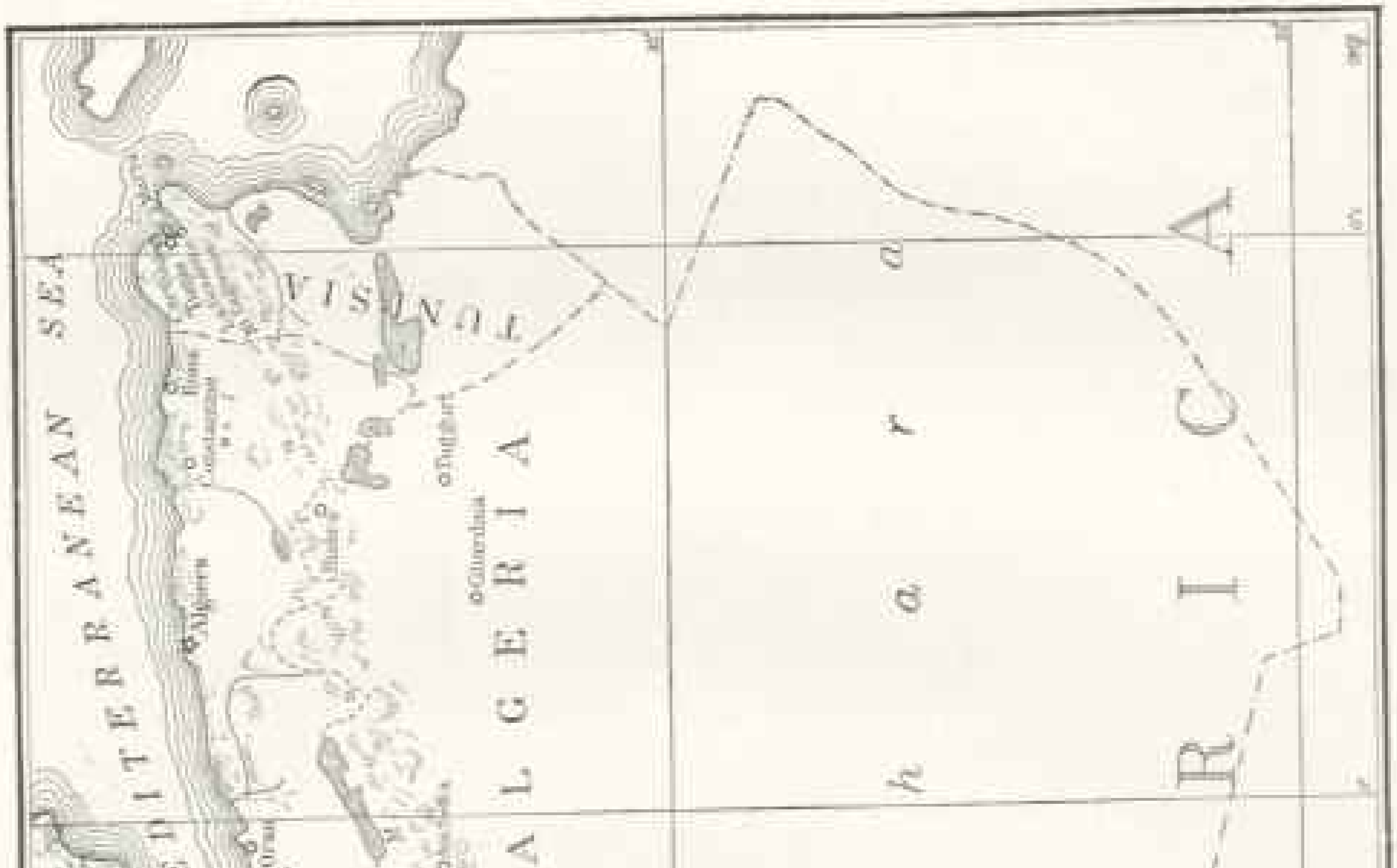
Owing to the fanaticism of the inhabitants, it has not been possible to make any thorough study of the possible mineral wealth of the land, but it is known that gold, silver, copper, antimony, iron, iridium, and palladium are present. The intense antipathy of the inhabitants to foreigners and to foreign ideas has rendered the mineral and agricultural wealth of the country practically useless.

The forbidding, precipitous chain of the Rif Mountains, which forms, along the Mediterranean, the northern confine of Morocco and is the southernmost of the famed "Pillars of Hercules," gives no hint of the rich, rolling land beyond. This northern chain, where "Mauretania's giant shadows frown," and the Atlas range are the Nature-built citadels of the warlike, robbing Berber tribes, the remnants of the original inhabitants of the Barbary States. These Rifian Berbers, fierce but frank, have furnished the sinews of war to conquering African armies from the days of Carthage to the present.

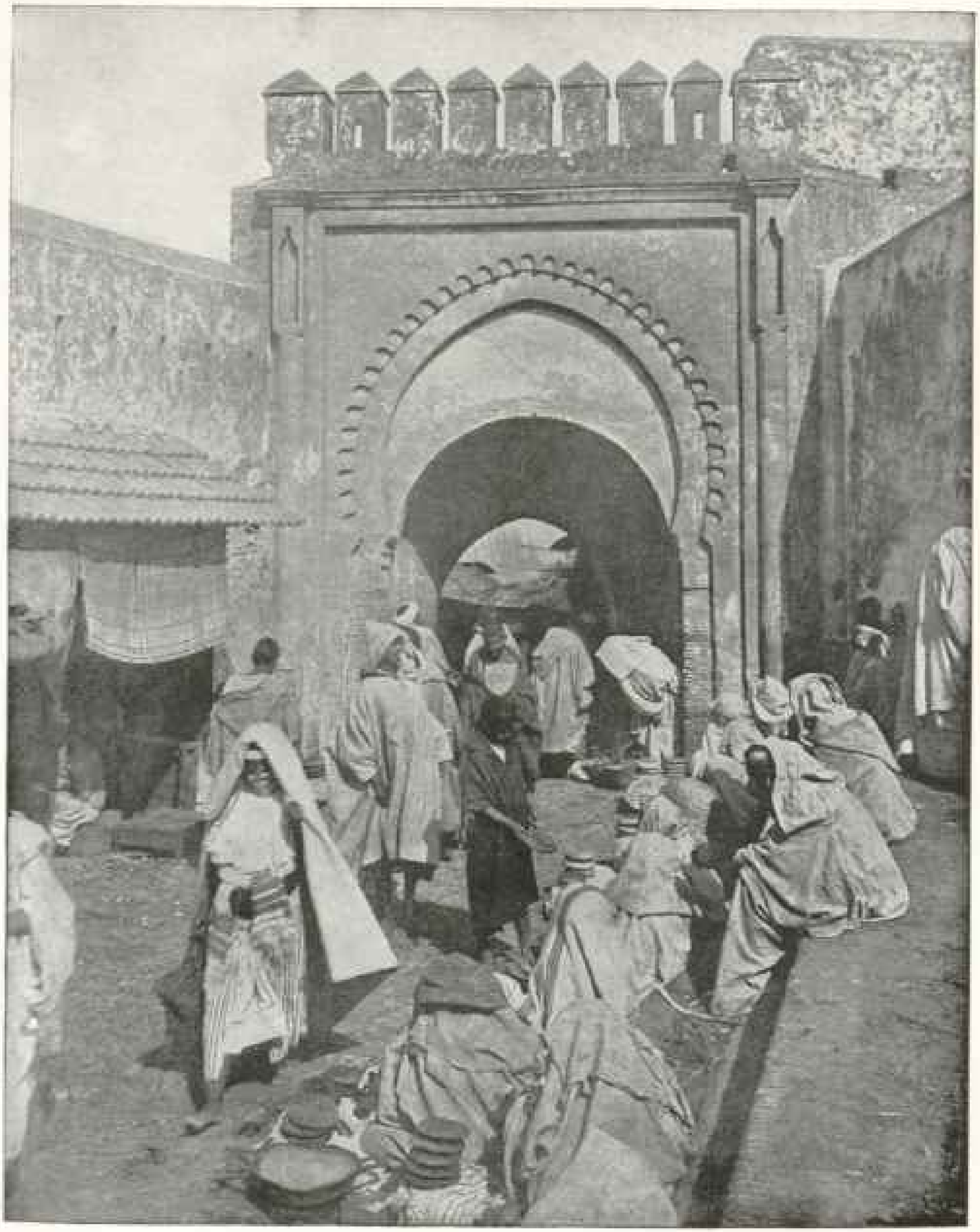
FIGHTING, A BIRTHRIGHT

The conquerors of Spain were not Saracens (Easterners), but Berbers, among whom at an early date Mohammedanism had been introduced by the Arabs. The very name "Morocco" is a misnomer, derived through the Spanish from the name of one of the capital cities (Spanish, Marruecos; Arabic, Marrakesh; English, Morocco City). The Arabic name of the country is El Moghrib el Aksa, "Most Western Land," but the natives refer to it as "El Gharb."

A large proportion of the population of the valleys and towns is of Arab extraction, though mixed with Berber and negro blood. These Arabs are principally descendants of Arab tribes from the south of Egypt, who overflooded North Africa about the year 1050. This is the only Arabic-speaking part of the population, the Berbers having preserved their primitive, unwritten language. Many of the Moors have a complexion



OUTLINE MAP OF PART OF NORTH AFRICA



BREAD MARKET OUTSIDE THE CITY GATE IN TANGIER

The empty grain baskets are put to practical use. Some of the women can scarcely be distinguished from heaps of rags. Photo by Thomas L. Blayney, Ph. D.

A MOROCCAN CITY GATE

Pedestrians have difficulty in holding their own against the stream of horses, donkeys, camels, and dogs that obstructs the narrow passage. Photo by Thomas L. Blayney, Ph. D.

of a chalklike fairness, betraying the presence of the blood of Gothic mothers, infused at the time of the Moorish ascendancy in Spain. The negro element, slaves from the Sudan or offspring of such, is everywhere in evidence. Those that have been freed, or who are sons of Arabs by negro mothers, enjoy all political and religious privileges of the dominant race. There remain to be mentioned the Jews, despised by all true Moslems, who are compelled to live in separate villages or quarters of the cities (Mellāhs), but who here, as in other oriental lands, form the well-to-do, progressive merchant class.

Phœnicians, Romans, and Vandals in turn have held transitory sway here, but have left no lasting imprint upon the population or customs. Contrary to the accepted opinion, the land was not originally invaded by a Moslem host, who forced their religion upon the inhabitants, but on the other hand was converted to the faith of Islam by peaceful missionaries fleeing from the Kahlifa of Mecca. The new faith spread rapidly among the Berbers of the surrounding tribes, but they always have been, and are today, less strict observers of the laws of the Koran than the Arab population. The coalition of these Mohammedanized Ber-

WOMAN OF MIDDLE CLASS (STANDING) AND SLAVE MOTHER WITH CHILD

Illustrations of similar water jars can be seen on Egyptian ruins. Photo by Thomas L. Blayney, Ph. D.

A MOROCCAN REPAST

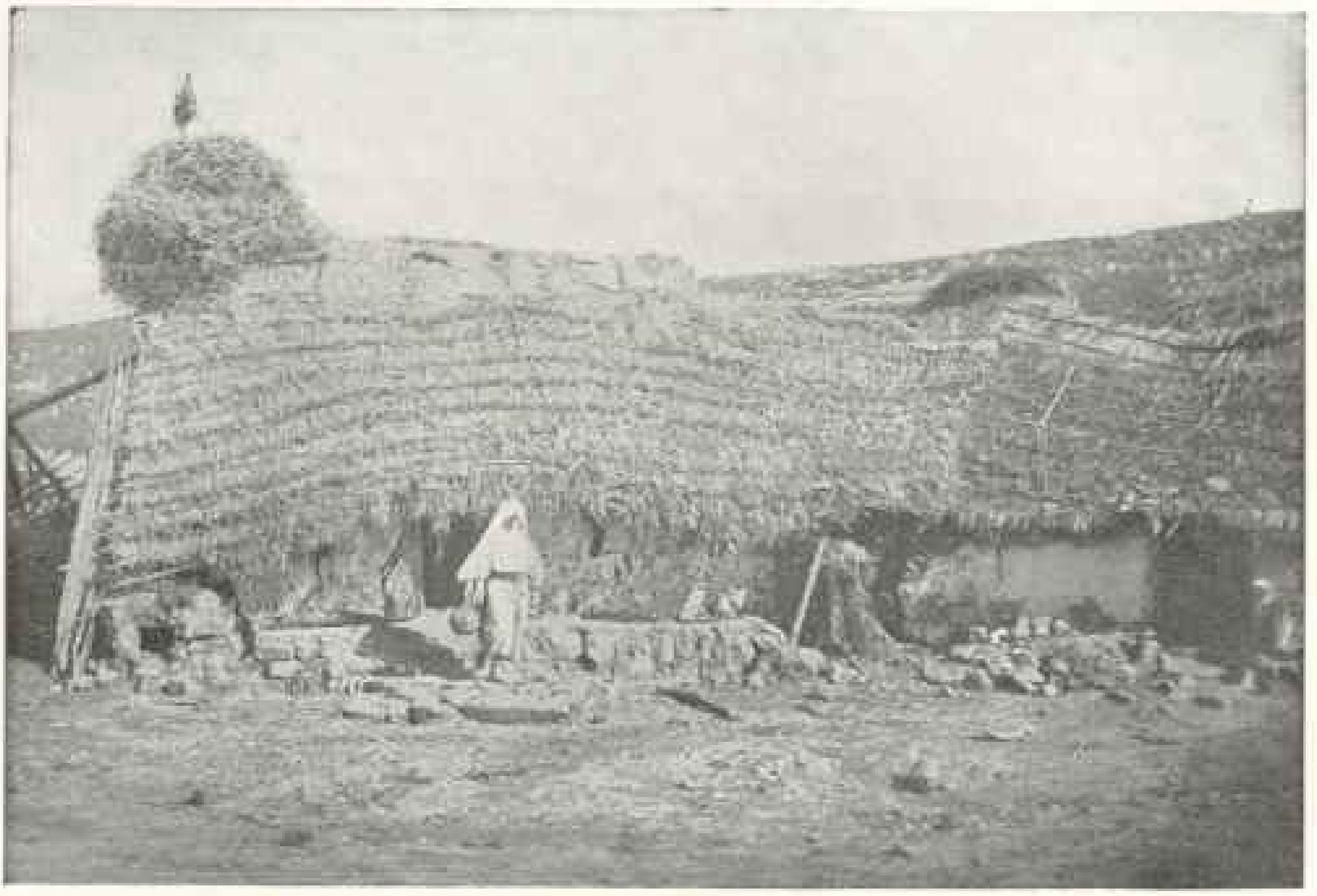
"Bah!" say the Arabs. "We don't stick into our mouths what but yesterday was in the mouth of some one else. We put our own hands in our own mouths." Photo by Thomas L. Blayney, Ph.D.

ber tribes began to look for new lands to conquer. From here set out under Tarik (Gibraltar, "Rock of Tarik") the expedition which placed the Crescent above the Cross in Spain, where for more than seven hundred years it waved victoriously.

THE INFIDEL CITY

It was a bright October day that the writer, with his wife and brother, set out from the frowning rock of Gibraltar to traverse the narrow stretch of water which some convulsion of nature has placed between Europe and Africa. In a little more than two hours' time our small steamer brought us within sight of Tangier, called by the natives in Arabic "dog of a town" on account of the fact that Christians have acquired the right of holding property there; incidentally perhaps because electric lights, a drainage system, cafés, and other outgrowths of civilization are in evidence. From the sea, and to the traveler fresh from Broadway, Pall Mall, or the Champs Elysées, Tangier is the Arab city of North Africa par excellence, for the ugly dashes of yellow, green, and red, with which scattered modern constructions have marred the otherwise glistening whiteness of the native city, are not distinguishable until the steamer lies close in.

It is hard to realize that this peaceful, silent city is the diplomatic capital of a land of almost continual bloodshed. The actual capital cities of the country are Fez, Mequinez, and Morocco City, in each of which the Sultan resides a part of the year. In Tangier, though not



A VILLAGE HOME IN THE INTERIOR OF MOROCCO

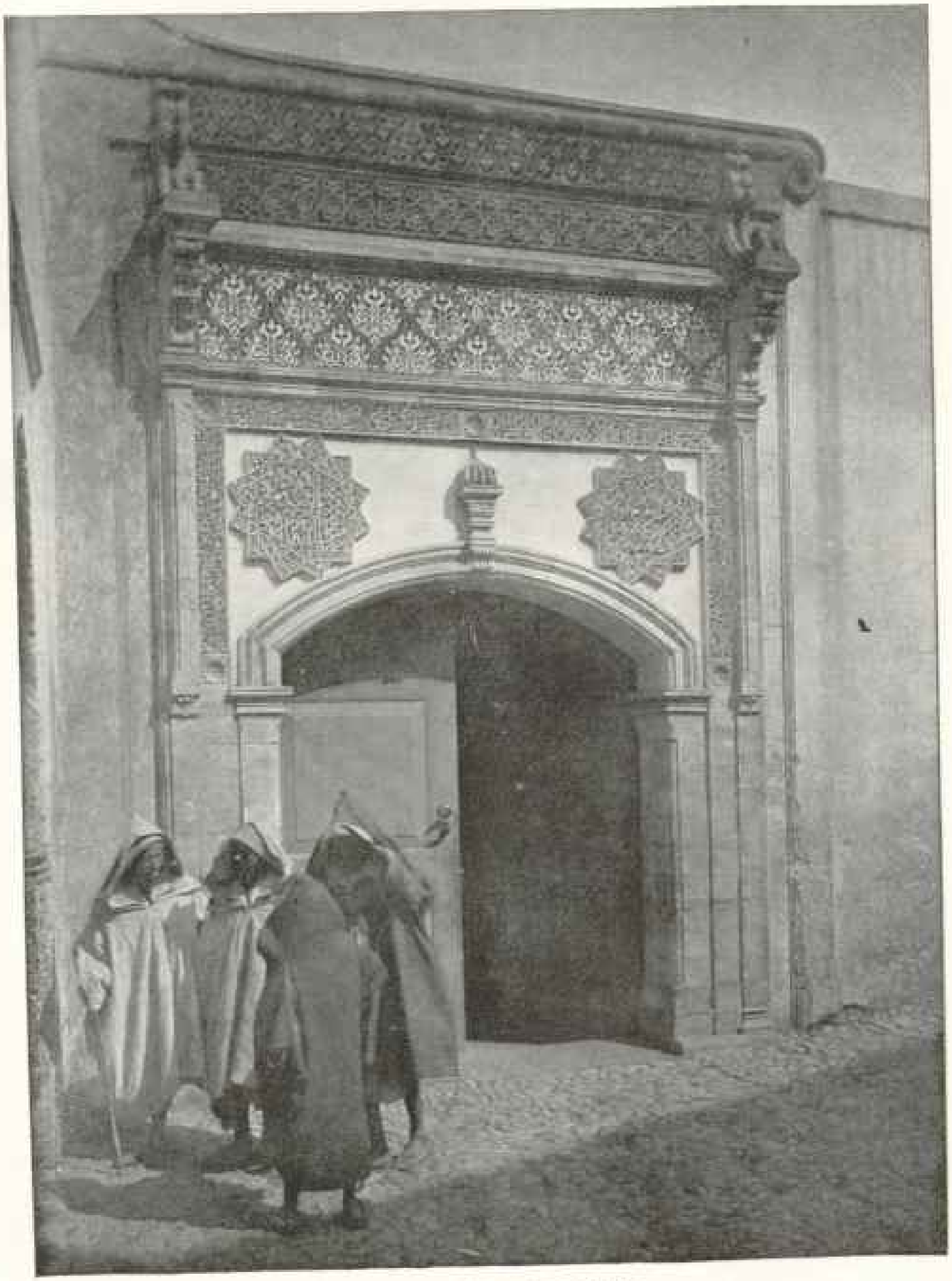
Note the stork's nest. The women believe the stork is a bearer of love messages. Photo by Thomas L. Blayney, Ph. D.

officially a capital, reside the accredited representatives of the great powers and the Moroccan minister of foreign affairs. Being a city of "infidels," it has been visited only on rarest occasions by any of the sultans. This arrangement, while being very convenient for the ministers of European nations, is still more suited to the ways of "oriental diplomacy," for long and advantageous delays can be secured by the Moroccan government "while the wishes of His Sharufian Majesty are consulted" in some one of the distant capital cities. Lack of space will prevent me from discussing more than incidentally the government and history of the country, for which I would refer the reader to the excellent article by Mr. Ion Perdicaris in THE NATIONAL GEOGRAPHIC MAGAZINE, March, 1906.

Our party was fortunate in securing apartments overlooking the beach to the south of the city, the hard sand of which makes it an important thoroughfare. Before our windows an entrancing panorama of city, sea, and mountain unfolded itself. To the left the white city, with its minarets; to the right, long stretches of green coastline, terminated by the old fortress at Cape Malabat; in the foreground, quaint Moorish craft, resembling the dahabiyehs of the Nile, whose strange white sails sent them darting across the bay; in the background, across the Strait of Gibraltar, rose the mountains of Andalusia, cutting off from view the storied land beyond.

NATIVE TYPES IN THE CITY

In the near foreground the white surf on the beach caused the strange procession of figures, that came and went on the sands, to stand out the more boldly. At one moment it was an Arab from a village, fat and content, enveloped in a "bournous," a white—or what was once



MOROCCAN GATE AND GUARDS

In this case the Moorish style shows strong Renaissance leanings. Photo by Thomas L. Blayney, Ph. D.

Photo by George E. Holt

HIGHWAY ALONG BEACH: TANGIER

white—flowing garment with peaked hood. He was seated well toward the tail of the smallest imaginable donkey, and behind trudged two or three of his wives, loaded down with the produce of their lord and master for the market. Next passed a rich Moor from Tetuan, mounted on a gaily caparisoned white mule. As he cantered placidly along his mantle vied in whiteness with the surf, for these "*h'sa*" of the rich are as delicate and gauzelike as the most fastidious woman could wish.

At the next moment passed a group from the country to the south. Their heads were closely shaven, with the exception of a tuft about the size of a dollar a little above and behind the right ear, which falling in a plait about a foot long gave them a very uncanny appearance. They beat along unmercifully their overladen and horribly chafed donkeys, loaded down with country produce, a great part of which is destined for His Britannic Majesty's red-coats at Gibraltar. These men are clad in a single dirty, short mantle of a material resembling potato sacking, which falls considerably short of reaching their coppery knees. The airy costume of their veiled women, of similar material, modestly reached the knee. Now and again an Arab on a high saddle, with shining Moorish stirrups, astride a fiery, slender-limbed horse, came coursing by, his long, creamy garments streaming to the wind, in his hand the six-foot brass or silver mounted rifle, which the Spaniards have learned to their grief to know so well.

The traveler from Europe will be struck at once by the total lack of the well-known rumble of city streets, for though the uneven thoroughfares are in most part paved with cobblestones, wheeled vehicles are practically unknown, not only in Tangier, but throughout the Empire. The streets are nevertheless crowded with other means of transport. So narrow are some of them that at the oft-repeated "*Balak!*" "Look out!" one must again and again spring into some doorway in order to let donkeys, mules, and horses, with their spreading burdens, pass by.

Camels have to be unloaded on the "soko," or market-place, outside the

Photo by George E. Holt

SCENE IN THE MELON MARKET

walls. Things too heavy to be carried by a single animal must be transported by men, and it is no unusual sight to see great stones five and six feet long slung on poles and borne by a dozen or more half-naked Arabs.

In these narrow streets the little box-like shops, waist high, give the proper oriental setting to the whole. In them we see the owner reclining and sedately reading, seemingly oblivious to the stirring scene around him, until he is "disturbed" by a purchaser for his goods, all of which are within arm's reach.

THE PRISON CONDITIONS

Another of the "sights" of Tangier is the prison. One can pass the guards at the outer gate and, stooping down, peer through a hole at the miserable creatures within. Practically all of them are heavily chained, some having heavy chains even about the neck. They are in every stage of misery and sickness. The government does not feed them, when not forced to do so by the powers, and sad indeed is the state of those who have no money or friends. They weave little baskets, which they sell to visitors, and so manage to keep body and soul together a little longer.

It will be recalled that one of the wrongs alleged against the government by Rasuli, the noted bandit chief, who captured Mr. Perdicaris, was that he had been chained for four years in such a way that he could neither lie nor stand. The slightest pretext suffices to bring a prison fate to high and low, for the grand vizier of today may be the half-naked prisoner of tomorrow. The laws are supposed to be based upon the Koran, and all cases not involving foreigners are decided by the judge, either civil or religious, who sits in the open several times a week and decides at once all cases brought before him. The penalties are fines, imprisonment, whipping, burning out of eyes, chopping off of hands, feet, or head.

Photo by George E. Holt

WAITING GATE OF A PRISON: TANGIER

Our party remained in Tangier only long enough to make arrangements for horses, pack animals, men, and supplies. No great amount of the latter is necessary, for the kaids of villages are compelled to furnish what is necessary at a reasonable price. However, the system of quartering passing troops, etc., upon the villages is so oppressive that the inhabitants have withdrawn from the important caravan routes. For this reason, and on account of delays, we might find ourselves compelled to stop near some poor "*douar*," a sort of Bedouin-like roving village, whose inhabitants might not be in the position to supply our needs, when we would, of course, be forced to fall back upon our own resources.

Our guide, Jelalli, was an Algerian Arab, in whose veins flowed some negro blood. He spoke French fairly well, was extremely polite and obliging, and was always well groomed. He was invaluable to us, for aside from being a good organizer his suavity of manner and conversance with people and things Moroccan enabled us to do and see many things otherwise not attainable.

MAKING UP THE CARAVAN

One other member of the caravan who should be mentioned was "Hashmed," the soldier furnished us by the government, without whom the Sultan could not have been held responsible for our safety. Though officially his only concern was to guard us, yet he was always willing to lend a helping hand. During the long days of our Moroccan travels he followed us like a faithful dog, and everywhere his tall figure, erect in spite of the weight of sixty years, and pointed turban of the Sultan's guard commanded instant respect.

As we rode through the crowded streets of Tangier on the day of our departure for the interior, I think we will all confess to having felt a little "queer," as we noticed the glances, half scowling, half curious, of the faces of the throng. In the midst of that motley element the towering form of our soldier, who stood responsible with his head for our safety, seemed slender protection indeed for a lady and two white men in what has been called the most oriental country of the world. My brother and I realized

only too well that few women had ever penetrated into the interior of the country, and that the presence of Mrs. Blayney complicated matters considerably. To the credit of my wife be it said that if she realized the dangers that surrounded her, she preserved the same outward coolness and nerve she has so often shown in trying moments in various parts of the world. As we emerged into the open country and new scenes began to present themselves, our spirits began to return. Now and then we passed squalid villages, with their ever-present dung-heap, on top of which often sat the chief man of the village, as upon a throne, surrounded by his wives, slaves, and others, all wrapt in oriental silence and eyeing us curiously. My wife, being unveiled and upon a European side-saddle, was always the center of attraction.

THE ARTERIES OF TRAFFIC

The road we were traveling that day deserves description, for, being one of the chief arteries of traffic, what is said of it applies equally well to all other roads of the Empire. It consisted of a series of bridle paths, more or less parallel (generally less), varying from three to a dozen or more in number, according to the nature of the ground. Where the soil is soft, these paths or trails are worn three feet or so deep and are just wide enough to admit the legs of a horse or camel, so that at times the rider must hold up his feet to prevent them from touching the ground. A curious sight it is to stand some distance to one side of a trail of this kind and watch a moving horseman, for he has every appearance of gliding over the plain on a legless steed. There are no cuttings, no bridges.

Not wishing to make a long stage that first day, our caravan had received orders to await us at the first low range of hills to the south. Just before sunset we found our tents pitched and tea and cakes awaiting us. Having refreshed ourselves and taking one of our muleteers as a guard, we climbed to the top of a high, rocky hill dominating the plain and lower foothills toward Tangier.

Photo by George E. Holt

A "HURDY-GURDY" IN TANGIER

Pastoral indeed was the scene at our feet. To the right wound a little sparkling river across the green plain, on the banks of which grazed cattle and sheep. Near the foot of the hill stretched a rambling village, the thatched roofs of the huts giving a dash of dark brown to the green of the plain. Here and there a Moorish doorway of horseshoe form stood out at that late hour like a black geometrical figure on the white walls. Just outside the village lay our camp, the tents glistening white in the last rays of

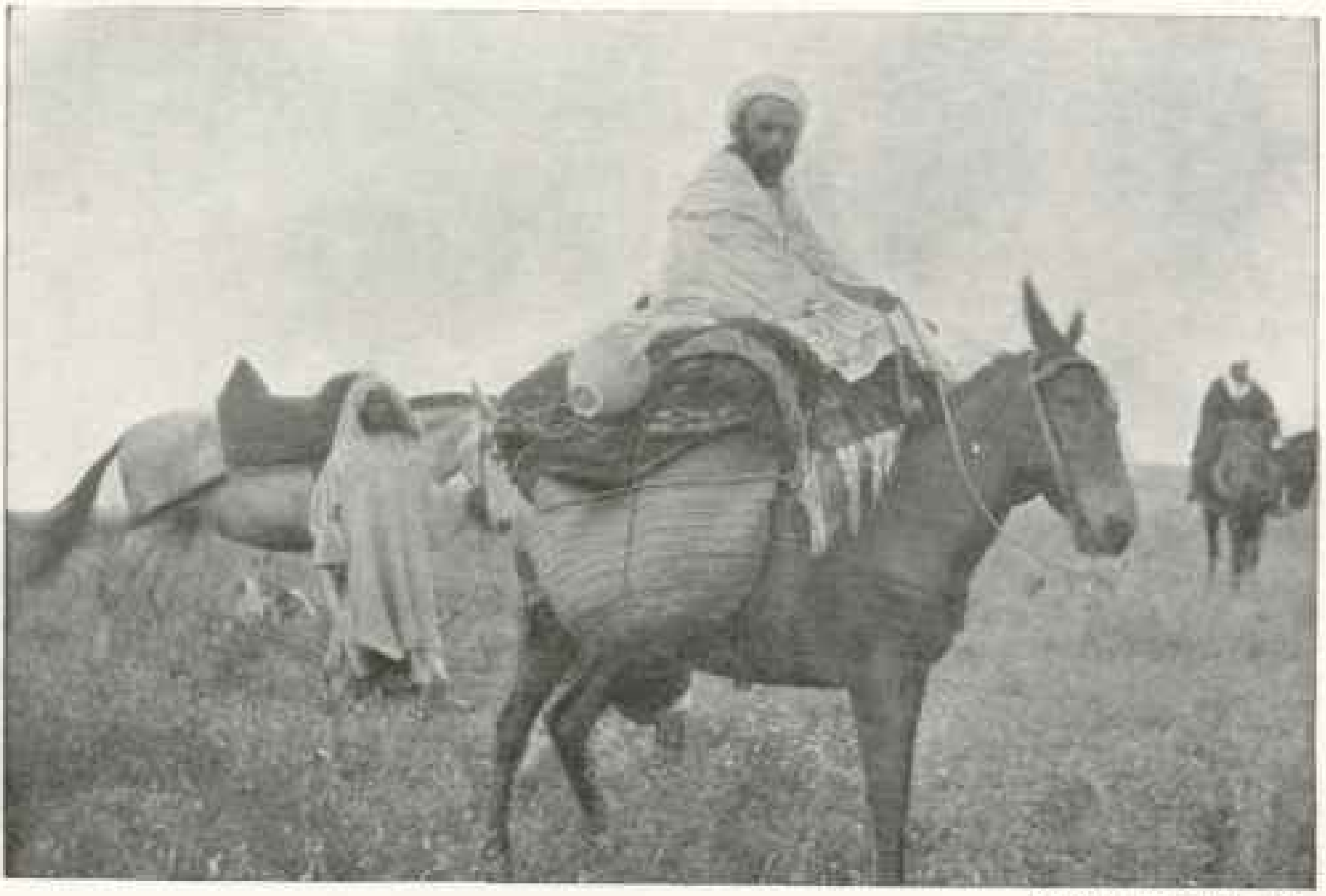


Photo by George E. Holt

A MERCHANT EN ROUTE

the sun, while in and out among them moved the picturesque figures of our Arabs. The pale smoke curling lazily upward indicated that Hamed, our chef, was scolding away among the pots and pans of his kitchen tent. Near our camp a caravan of some twenty camels was being relieved of their loads. In the distance sparkled the Atlantic, to which we must now bid farewell.

Close to us an Arab lad, reclining motionless on a ledge of rock, was regarding us fixedly. So still was he that we had not been aware of his presence. Farther down the hill on a projecting rock the tall, white figure of our soldier could be seen. At one moment he would stand erect, with his face toward Mecca; at the next he would sink slowly upon his knees and kiss the bare rock, all with indescribable grace of movement. He was praying, for the sun was sinking to rest. The distant range of hills to the north hid from view the last outpost of civilization, Tangier by the sea. Above all played the glorious colors of that African sunset, transforming the whole into a fairy scene.

THE FIRST NIGHT'S CAMP

Returning to our camp, we found dinner awaiting us, consisting, as it always did afterward, of seven courses—a soup, two meats, a vegetable, salad, dessert, fruits, and nuts. When near a river we usually had a fish, which increased our menu by one course. Our evenings were usually spent lounging in comfortable camp chairs, sipping our coffee and discussing the events of the day. Sometimes we would call Jelalli in and have him entertain us with descriptions of life in Algeria and Morocco. Near, or in, the important towns the "kaids," with a number of their chief men, would visit us, and many a pleasant hour was passed in conversing with them, with Jelalli as interpreter.

At about 10 o'clock of the second day we began to ascend the "Red Mountains," so called partly on account of the color of the soil and partly, we were told, by reason of the amount of blood that has been shed here. On approaching these mountains we could not, as usual, ride with Jelalli and the soldier ahead of our caravan, but were compelled to keep together for mutual protection. No caravan dares pass here after nightfall, for it would be most certainly set upon. Near the summit we passed a band of wild-looking men, armed with the long Moroccan rifles, who are stationed here by the Pasha for the protection of travelers, but who, according to Jelalli, plunder on their own account when darkness sets in.

We now began passing picturesque caravans of camels, horses, or mules bringing silks, fruits, eggs, chickens, etc., from the interior. The chickens were transported in what looked like long barrels without tops or bottoms, slung on either side of the animal, the ends being closed by netting. When one of the caravans stopped, the almost barren plain presented a strange appearance, dotted over with these barrels, each surrounded by its hungry flock of feeding chickens, which showed no inclination to desert their own barrel.

Whenever a caravan of camels camped near us, we could not resist visiting it in order to fathom, if possible, the mystery of this strange animal's ability to placidly devour the cactus plants, with which the whole country is covered. These plants have thorns on them as strong and sharp as large needles and will easily pierce shoe leather, and yet these beasts will bite off a great thorn-covered piece of one of these terrible plants and chew it as sedately as though it were but bran. The operation over, I always felt like taking off my hat to the "ship of the desert."

Photo by George E. Holt

A CANDY SELLER

Just before sunset on the third day we came in sight of Alcazar, nestled away among its groves of olives, oranges, and lemons. The whiteness of its houses, gleaming amid the green girdle of verdure, with here and there a minaret or tall palm to break their flatness, was restful to our eyes after a three-days' ride across treeless mountains and plains. Our camp was pitched close to the town, and we soon received an invitation to take tea with one of the more prosperous citizens. Our host tasted each cup of tea before passing it to us. Arab etiquette also compels one to make as much noise as possible in sipping the tea, so that our party soon sounded like several horses trying to drink in too shallow water. Here also we were treated (?) to butter, said to be ten years' old, but we agreed that it tasted a thousand. On the next day we received as a present a great steaming bowl of "kous-kous," one of the best known as well as best tasting Arab dishes. It is composed of pieces

Photo by George E. Holt

VARIED TYPES: MOROCCO

of chicken buried in a great heap of barley meal, raisins, and spices and cooked by steaming.

HONORING A GUEST,—THE POWDER PLAY

Here also was instituted a "powder play" in our honor. A number of Moors in flowing garments and mounted on handsome horses formed in line at some distance from our camp. Placing the reins about their own necks in order to have their hands free to handle their long guns, they started toward our tents in a slow canter. After going some fifty yards, at a given signal they dashed forward at full speed, twirling their guns about their bodies and over their heads, then pitching them into the air and catching them again. Arriving immediately in front of us, they discharged their guns and reined in their steeds so suddenly that the horses fairly slid over the ground on their haunches in their efforts to check their mad career. They would then return in a sedate walk to the starting point and repeat the "play." We remained two nights at Alcazar in order to have some necessary repairs to our outfit made.

After leaving this rather unimportant town, the country became wild and hilly and quite unsafe. The guards, from six to ten in number, whom the kaid of each village or town had been compelled to place about our camp and who had seemed so useless, were from now on appreciated.

The second night after leaving Alcazar our camp was thrown into a state of turmoil. We were preparing to retire for the night when the evening stillness was rudely broken by most unearthly yells and sounds of blows close at hand. Thinking that at last the bandits were upon us, we snatched up our revolvers, but before the tents could be unbuttoned the sounds began to die away in the distance.

Tragedy was turned into comedy. It seemed that the chief of our village guards of that night on making his round had found one of his men lying on his face asleep. Seizing the convenient opportunity for chastisement, he "lit in" with a club and landed several well-directed blows before the luckless son of Morocco, emitting lusty howls of pain, could get to his feet and seek his more inviting home.

We were beginning to feel that the stories about the lawless condition of the country had been grossly exaggerated, when upon the night following the one just mentioned we heard distant shoot-

Photo by George E. Holt

A STREET SCENE: TANGIER

ing. The next morning we learned that a "little" raid had been made by one village upon another, in the course of which eight men had been killed and fifteen wounded.

PRIMITIVE AGRICULTURAL METHODS

In the region through which we were now passing we had ample opportunity to observe the primitive agricultural methods. The implements are what they were a thousand years ago. The seed is sown before the soil is touched. It is then turned shallowly into the ground with a plow made entirely of wood with the exception of a piece of metal about four inches long on the point. Though this plow does little more than scratch the surface of the earth, yet so rich is the soil that the harvests are quite good.

On one occasion we saw a horse, a donkey, and the plowman's wife or female slave (the distinction in the country is often quite fine) hitched before the plow. To all appearances the team pulled well together.

As one observes these agricultural scenes from a little distance, the sower slowly scattering the seed, and the plowman clad in short shirt, which leaves his bronzed legs and arms completely bare, following the primitive plow behind his oxen, one is strongly reminded of the scenes depicted on Egyptian ruins. The women at the wells by the wayside, with huge water jars upon their heads, or working the soil with infants astride their backs, securely bound on by a cloth which completely covers them when the sun is warm, or men entirely naked with the exception of a cloth about the loins, washing clothes upon slabs of stone by treading upon the articles with their feet—these and many other scenes too numerous to mention carry the mind back nearly two thousand years to a succession of biblical pictures.

On the fifth and sixth days of our journey we were passing over low mountains, traversing almost treeless plains and plateaux, and fording rivers, some of them so deep that we had to hold our feet up

A CARAVAN ARRIVING AT TANGIER FROM THE INTERIOR

Note the shaven head of the central figure. The single tuft of hair is turned from the spectator. Photo by Thomas L. Blayney, Ph. D.

as high as possible to keep them out of the water. The scene at some of these fords, when various caravans were crossing, was always interesting and sometimes very amusing. In arranging their attire for a deep ford, the country women seemed to adopt the philosophy of the ostrich, for they appeared to deem themselves sufficiently and modestly protected from gaze so long as their faces were carefully covered.

Just before reaching the mountains to the north of Fez we crossed the most barren plain that we encountered on the journey. From early morning till late in the evening we toiled on, looking in vain for a little water to give our famished animals. Although it was nearly the first of November, the African sun had lost none of its strength, and in spite of our cork helmets all three of us were nearly overcome by the broiling heat. Hour after hour we rode on, hoping to find at least a cactus plant to afford us a slight bit of protection, where we could choke down a bite of lunch; but there was no sign of vegetation more than a hand high. A chafed horse caused us delay, and it was not till the middle of the afternoon that we reached the dry bed of a stream, under the banks of which we could crouch in a few feet of shade and attempt to strengthen ourselves with a little food. To make matters worse, when our caravan arrived we found our great jar of boiled water empty, the excuse being that "it had slipped off the mule's back and been spilled." We had our own opinion, however, as to where it had gone. But as we watched our muleteers trudging along on foot, urging on the unwilling animals, we could not begrudge them the water in spite of our own parched throats. To avoid fevers we were compelled to be very careful about our own

SALLY PORT OF OLD FORTRESS Photo by George E. Holt

Note storks on ramparts.

supply of boiled water, but our Arabs would often drop down by the first best fetid puddle, little better than a hog wallow.

As toward nightfall we neared the last mountains separating us from Fez, how refreshing looked the white villages high up on the mountain sides, half hidden in olive groves! These were the villages of the wild Berber tribes, who make frequent raids into the plains and are almost continually at war with the Sultan. They were the first villages we had seen built substantially of stone. As we gazed up at these bandit aeries, perched high among the fastnesses of the mountains, and later had occasion to look into the fearless faces of these men of the mountains, whose ancestors had once reclined in the gilded halls of Andalusia, we could begin to appreciate the seriousness of the proposition that confronts any Sultan of Morocco when compelled to deal with this hardy, primitive race.

On the morning of the eighth day out from Tangier we began to descend the slopes into the great and fertile plain, "El Gharb" (the name of which is applied by the natives to the whole of Morocco). Through this extensive plain flows the largest river of the Empire, the Sebou, and in it are situated two of the three official capitals, sacred Fez and once splendid Mequinez. We had descended into the plain at about 3 o'clock in the afternoon, before we first caught sight of the minarets of the great city, and not till about 5 o'clock did we reach the massive walls. In order to enter the city we had to pass along the frowning, embattled walls of the Sultan's palace and harem, which conceal the houses of the city from view and give the place the forbidding aspect of a city of the Middle Ages. As we passed under the great frowning arch of the Moorish city gateway, in the midst of a wild-looking throng, out of which many dark glances were directed toward us, the full realization came over our party that "infidel dogs," we were entering one of the sacred cities of the Moslem world.

PROSPEROUS NATIVES OF TANGIER

Photo by George R. Holt

A CITY OF ARABIAN NIGHTS

We had no sooner passed the several gates of the city walls than we seemed to have been transported, as if by enchantment, back a thousand years into the storied world of Harun-al-Rashid; for, by a fortunate accident, just as we passed a great horseshoe archway, giving access to a walled inclosure, it framed a strange scene. A Moorish wedding was being celebrated. Animated groups of white-robed men were engaged in dancing and firing their long guns, while a company of Arab musicians brought forth startling tones from flutes and drums.

It took us nearly an hour to reach the house that had been put at our disposition, for the streets are so narrow that circulation is difficult. So badly paved and uneven were the streets that our horses slipped badly, and Mrs. Blayney was finally compelled to dismount. We were forced to go in Indian file, the old soldier holding her by the wrist close to his horse's side, for, being still unveiled, she was the object of many a scowling glance. My brother and I brought up the rear in order to keep her in full view. At one moment we thought she was being attacked, for two savage-looking men quite close to her had each other by the throat, but, fortunately, they were only settling a private difficulty.

We were very fortunate in securing an attractive house during our stay in Fez. It lay in the midst of a large garden, in which almost every imaginable kind of fruit grew semi-wild. Our dining-room was a commodious veranda, paved with mosaic and inclosed by Moorish columns and arches. Just in front of the veranda a crystal pool, into which the water tumbled joyously, cooled the air by day and lulled us to sleep by night. A mosaic walk around the fountain was shaded by orange and lemon trees bearing golden fruit. The rooms were paved with brilliant mosaics and the walls decorated with bright tiles. The beds were alcoves, some three feet above the floor and ornamented with mosaic work and tiles, on which a single mattress was laid.

How romantic were those moon-lit evenings on the veranda, as we watched the play of shadows among the trees and listened to the music of the splashing waters, while Mohammed in his white robes glided back and forth serving us

tea and cakes! No less graven in our memory are the hours spent on the flat roof, with the great, mysterious, silent city stretching white out into the moonlight, the foliage of slender, nodding palms only serving to make the graceful outlines of the minarets stand out the more boldly upon the dark shadows of the mountains. Fairyland in the midst of barbarism! For many are the stories that could be told, did but space permit, to illustrate existing conditions.

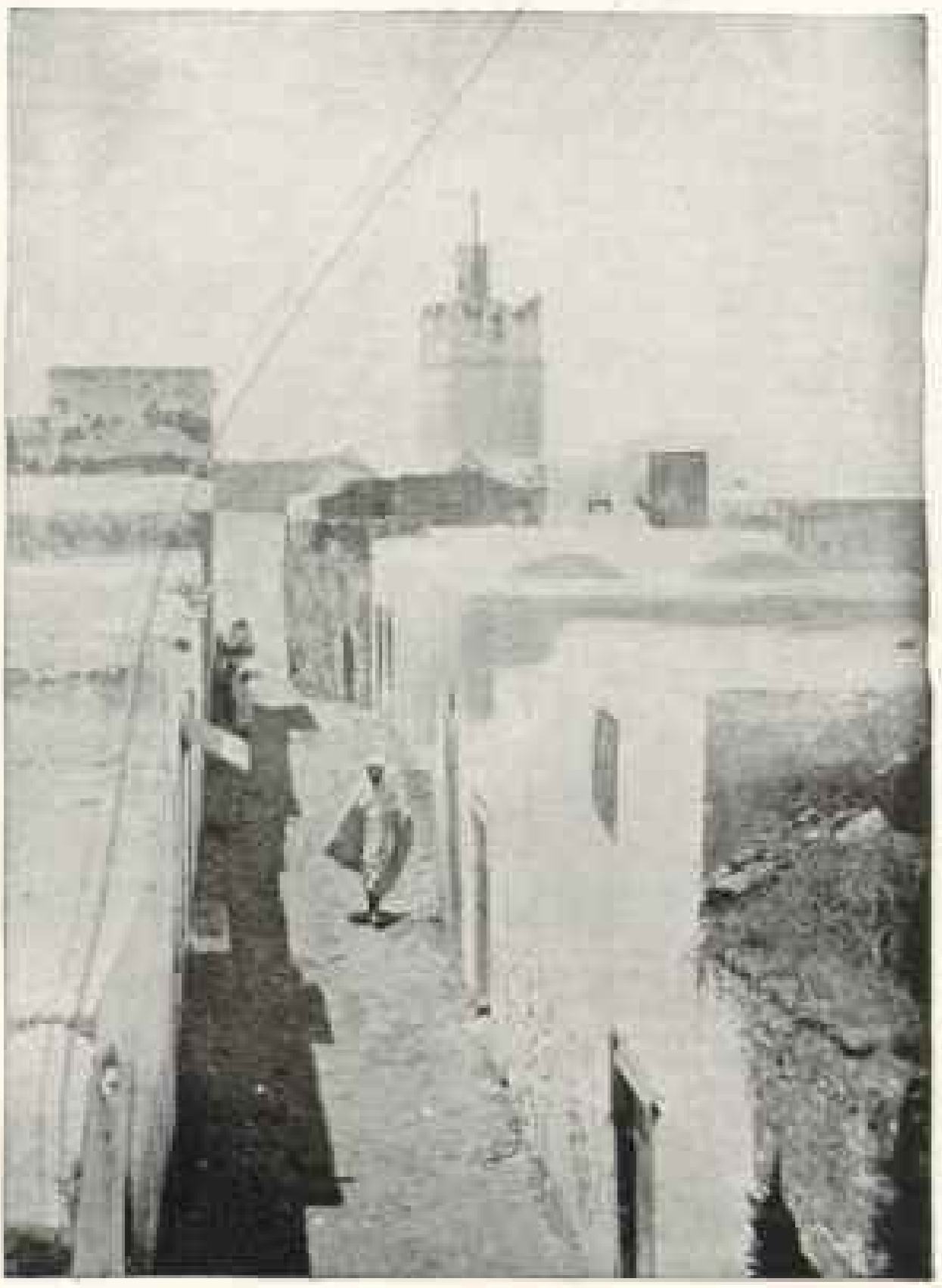


Photo by George E. Holt

STREET IN A MOORISH TOWN

THE ANCIENT GLORY OF FEZ

The golden days of Fez began in the ninth century and continued till about the thirteenth. It was then celebrated as a paradise. Around the city were splendid gardens of rarest fruits. The soil, watered by a thousand streams, was of extraordinary fertility. Its numerous schools and libraries and its famous university attracted students even from Europe. The climate, its fruits and flowers, its fountains and wells, its verdure and beauty, caused the city to enjoy a reputation unique in Islan. Its glories have departed, but it still boasts one of the most sacred mosques of the Mohammedan world, that of Mulai Idress, "the Younger," the founder of the kingdom. We were not permitted to even pass through the streets near this famous mosque, nor could we as "infidel dogs" set foot in any of the mosques of Morocco on pain of death.

The sights of Fez are its teeming streets, bazars, and markets. Weeks can be spent in this interesting city and yet new and strange scenes be met with at almost any moment. Snake-charmers, medicine-men, story-tellers with their gaping crowds, slave markets, artisans, and tradesmen of every description, costumes from the four quarters of Morocco and beyond interest the traveler at every turn.

But all is not poetry in Fez. Revolting are the horrible diseases to be seen on every hand. Men, women, and children in all stages of suffering, with nose, lips, eyes, and even limbs eaten away. In the narrow streets before some of the mosques we had actually to pick our way on certain days among the disease-covered bodies of those placed there by relatives or friends to beg. So near death's door were some of them that they could only beckon for alms with a finger. At times we saw dead bodies lying there, for those dying in the night are not removed till late the next day.

Such sights seemed bad enough at first, but worse were yet to come, for several times we were compelled to pass through one of the great city gates, over which hung forty-nine bloody, grinning

COURTYARD OF AN INN

Photo by George E. Holt

human heads. They had been salted and sent to the city by the Sultan, who had just completed a successful raid against an insurrectionary province, and had been hung up by the Jews, whose duty it is to do such disagreeable jobs. In this connection I might say that Morocco Jews are not permitted to till the soil, nor ride except on a mule, nor cross certain streets; they are heavily taxed; they must dress in black or dark colors and throw their cloak over the right shoulder.

A MOORISH WEDDING

Soon after our arrival in the city Mrs. Blayney donned Moorish attire. She had the good fortune to be invited to a wedding celebration at the house of the bride. The celebration took place in the court of a handsome house, with a fountain in the center and graceful Moorish colonna on all four sides. This court was filled with a crowd of women in long "haiks," or mantles, the groom and his friends being at another house celebrating his part in the affair. Above the chatter of the women could be heard the mournful strains of flutes and pipes, accompanied by the booming of the great drums. Around the walls of the court under the arches were hung gay Rabat carpets. Dozens of tea glasses hung in racks between the colonnades for the refreshment of the guests. The alcove in which the bride was holding her reception was piled high with beautiful Moorish mattresses and gay cushions embroidered in gold and silver, all presents from the relatives.

High throned on mattresses and cushions in the center of the room sat the bride of thirteen summers. For seven days she must sit thus with downcast eyes, exposed to the admiring gaze of the curious. She was clothed in a costly red silk dress embroidered in white Arabic designs. Her headdress was high in front, of gold-embroidered cloth draped with silks. Her hair, parted in the middle, was pulled down over the ears and fell in long plaits in front of her shoulders. Emeralds and pearls were wound about her forehead and hung down in thick clusters over her wide sleeves to the elbow. Two fat, black slaves were

constantly busied with the arranging of the strings of pearls and with spreading out her silken robes.

The principal guests wore costumes similar to that of the bride. Their faces were painted scarlet, while eyes, under lip, palms of the hands, and fingers up to the first joint were all stained brown. Rings were worn on the thumbs and anklets as well as bracelets. Their feet, dyed the color of fresh iodine, were incased in gaudy slippers. Around their huge waists (a sign of great beauty) they wore heavy-colored belts a foot wide, in some cases studded with jewels. Each was followed by two slaves bearing cushions, upon which they would assist her to place her unwieldly bulk.

On the seventh day the bride is borne in a sort of box to the home of her future husband amid the firing of guns and Arab music. If not pleased with her, the groom has the right to return her to her father within three months, paying again the price originally paid for her.

The residence portion of the city is strikingly unattractive. We could scarcely believe that we were being taken to call on one of the wealthiest Moors of the city, when we stopped one afternoon in a narrow street, barely five feet wide, inclosed by high, prison-like, windowless walls. And yet these walls were the houses themselves. A massive, iron-studded door was opened, and in semi-darkness we were conducted along a tortuous, dingy passage, through several doors, when suddenly we emerged into one of those inner courts which are the masterpieces of oriental architecture, with its mosaics, tiles, fountains, colonnades of light Saracenic arches supporting a second gallery above, all covered with a profusion of colored and gilded arabesques and pendentives.

There is a twofold explanation for the marked contrast between the exterior and interior of Moorish houses. The first is that this court, upon which all the apartments of the house open, is the center of oriental home life and is the only part that is really ever "viewed"; the other is that, in lands where "might makes right" and property is insecure, no man cares to advertise his wealth to any but his most intimate friends.

THE SOCIAL LADDER

Almost rivaling these inner courts in popularity, especially with the women, the flat roofs of the houses must be mentioned. Here, however, during certain hours the men are never expected to appear, for they are then sacred to the women of the families, who resort to them unveiled to enjoy the cooling breezes from the Atlas Mountains. This is the popular hour for female visiting. The process, however, is not a simple one, since to insure privacy many of the roofs are shut in by a wall from four to six feet high.

In order, therefore, literally to "drop in" on a neighbor, the Moorish lady calls for her ladder instead of her carriage. This mode of calling presents insuperable difficulties to the most "attractive" ladies of Fez, for it must be remembered that the fame for beauty of a Moroccan lady increases in direct proportion to her increase in avoirdupois.

The journey from Fez to Mequinez through the valley of the Sebou can easily be made in two stages. Owing to the proximity of the Berber fastnesses, it is considered quite dangerous, but we were enabled to reach this second capital of the country without mishap. A letter from the Pasha of Tangier procured for us a camping ground in an outer court of the Sultan's palace, completely surrounded by its great crenelated walls and somber gates. A detachment of sixteen men was sent by the Pasha of the city to guard our camp.

It was a fine, clear night, that first night in the once brilliant capital of Mouley Ismael, "the Cruel." The canvas of our tents gleamed white as snow against the dark background of the embattled walls. The dark forms of our tethered horses and mules cut clear in the moonlight. Around our camp sat or reclined the white-robed figures of our guards, the mountings of their long rifles glittering as by day. Now and again

Photo by George E. Holt

MOROCCAN WOMEN OF THE ATLAS MOUNTAIN DISTRICT

their chief arose and silently made a tour of inspection and again seated himself as motionless as the forms of his men.

MEQUINEZ THE BEAUTIFUL

From out the silence of the night voices of the past seemed to speak. The spirit forms of the great Mouley and his four thousand wives seemed to people the shadows of the frowning walls. It was he who made Mequinez the most beautiful city of Morocco. Here he established his famous and dreaded "Black Guard," whose descendants are everywhere to be seen. Half the city is yet occupied by the remains of his palace, surrounded by immense gardens, in the midst of which stands a kind of fortress, reputed to contain the treasures of the Sultan. In his day slaves guarded this treasure, whose eyes were afterwards burned out or who were walled up in subterranean dungeons, the opening to one of which yawned close to our camp.

Mequinez might be called the monument to Mouley Ismael, the great contemporary of Louis XIV, who even dared sue for the hand of a daughter of the great French king. His mania for building is everywhere in evidence. For miles along the road leading to the quarries to the north great blocks of stone can still be seen lying, just as they fell from the hands of the slaves when they heard that their tyrant sovereign was dead. But a melancholy interest is attached to these great buildings, for it must be remembered that hundreds of Christian slaves toiled and died on these gloomy walls.

The population of the present city has been estimated at about fifty thousand. The streets are wider and more even than those of Fez. The walls of the city are mounted by batteries to repulse the Berber tribes, whose villages on the mountains are a constant menace to the peace of the city. Viewed from the hills to the north, lying on a slight elevation, surrounded by olive groves and little valleys and with the dark mountains in the distant, it offers one of the most charming

THE WALLS OF AN OLD MOORISH FORTRESS

TETUAN: ONE SIDE OF THE GREAT MARKET

Photos by George E. Holt

Photo by George E. Holt

ANCIENT BATTLEMENTS AFFORD SHADE AND A COMFORTABLE RESTING PLACE

panoramas in Morocco. Despite its smiling environment, however, it is reputed to be the most depraved city in morals in the Empire. While at Mequinez we enjoyed several rides in the vicinity with kaids, who seemed glad to give us information about their city and its inhabitants.

THE MOST NORTHERLY SEAPORT

On leaving Mequinez we turned our horses' heads toward Larasche, the most northerly Atlantic seaport of Morocco. The first day's march brought us quite close to the most sacred town of the Empire, Mulai Idrees Zarhon, or simply Zarhon. Here is the sacred shrine of Mulai Idrees, the Elder, the first missionary of Islam to Morocco, buried here in 791. No Christian or Jew dare enter the town.

The whole region is quite unsafe. Of this fact we were thoroughly convinced. We had not been long on the march that day when we overtook and passed a caravan of camels coming from beyond the Atlas Mountains. Soon afterward, among the foothills of the Zarhon Mountains, we passed a group of men strikingly handsome in both face and figure. Jilalli informed us that they were Berbers. Some were standing, others reclining near their handsomely caparisoned Arab steeds. From their animated gesticulations we could see that they were discussing some important question. Jilalli surmised that they were planning a raid of some kind. An hour or so afterward we heard sharp firing from that direction. That night a couple of camel-drivers, belonging to the caravan we had passed, arrived at our camp and related how they had been set upon by Berbers at the point where we had seen the group of horsemen, and that the

caravan had been captured and four of their comrades killed.

A GLIMPSE OF DOMESTIC LIFE

Such incidents lend rather disagreeable zest to Moroccan travel, in spite of the fact that we knew that our caravan offered but slight inducement for an attack. Those inclined to attack us knew that we carried only sufficient money to suffice for the journey from one principal town to another, having orders on Jewish money-lenders in the various towns for any cash needed.

On the night before we reached Larache we had just seated ourselves for dinner when we were startled by a confusion of shrieks, cries, and ejaculations. Rushing out we were confronted by a ludicrous sight. A portly Moroccan gentleman, turbanless and with disordered garments, was sitting astride a confused mass of drapery and of kicking and scratching arms and legs, and dealing with both hands wild but solid blows upon it. On nearer examination the dusky members and piercing cries resolved themselves into three helpmeets, who had seemingly rashly revolted against the scepter of their liege lord. A number of the men of the village looked on in calm indifference for a while and finally pulled the enraged husband off. The eloquent glances cast back at him by his three irate wives, as they betook themselves homeward, did not augur well for his evening meal that night.

There is little to interest the traveler in Larasche. It is a small, poorly built coast town, lacking a good harbor. Did it have the latter it would soon supersede Tangier in importance, as it is much closer to the cities of the interior. We spent but one night there, pressing on toward Tangier. Toward noon on the second day we came in sight of the mountains of Andalusia, on the other side of the Strait of Gibraltar, and soon afterward the blue water of the Bay of Tangier came in view. It was with a feeling of relief, tinged with regret, that we found ourselves once again in civilization, for after the days spent in the heart of Morocco, Tangier, with its narrow streets, its snake-charmers, its bazars and Arab cafés, seemed civilized indeed.

As we bade our men farewell in front of the hotel and patted our horses for the last time, a feeling of sadness came over us. Railroad travel has its advantages, caravan life its discomforts. But let no one judge between them who has not felt, day after day, the exhilaration of breathing in the bracing air of sunrise in the saddle, anticipating a day sure to be filled with strange, new scenes, or who has not experienced the keen pleasure of cantering toward an inviting camp when the setting sun is throwing fairy tints on earth and sky; or who has not tasted the enjoyment, after the evening meal, of giving one's self over to the romance of the Orient while the moon climbs high behind the palms!

For him whose heart is open to the poetry of such a life, who shuns not its risks and discomforts, who desires to understand and appreciate more thoroughly the history of the Moorish ascendancy in Spain, who cares to realize what life was and meant two thousand years ago, for him is awaiting "the Land of the Moors."

WOMEN AND CHILDREN AWAITING THE COMING OF THE DANCERS

Photo by Gaumont E. Hish

THE TWO GREAT MOORISH RELIGIOUS DANCES

By George Edmund Holt

American Vice and Deputy Consul-General, Tangier, Morocco

With Photographs by the Author

TWICE each year does Tangier, which is called by the Moors "the Infidel City" and is left off the map of Morocco designed by the follower of the Prophet, lose its right to the charge of infidelity. Twice each year is the tinge of Christianity overcome by the glowing, barbaric colors of Mohammedan fanaticism, and twice each year does the Christian in Tangier feel himself as an insignificant atom in the mass of Moorish life. These two occasions are those of the celebration of the great Mohammedan religious dances, the Aisawa and the Hamadsha.

All the rest of the year, even during the joyful observance of the Moûlood, or birth month of Mohammed the Prophet, when there is much feasting and praying and *fantasia*, the foreigner in Tangier may feel that Mohammedanism and all its followers and possessions are things for his amusement or for his boredom; but when this same foreigner stands for three or four hours or more on the safe balcony of his hotel or watches from his window a hundred white-robed figures, the center of a crowd of thousands of Mohammedans, dancing wildly without cessation; when he hears the interminable beat of the low-voiced drums and the never-ceasing monotony of the shrill pipes; when he sees the banners of the Prophet, malignant green and red and gold, then this Christian foreigner feels that here is something which he cannot understand; that here are people voicing the ideals of the Mohammedan world, which somehow seems to become suddenly larger, and that he himself has had a mistaken conception of what Mohammedanism means. And when his eyes behold the rise and fall of glittering axes upon shaven heads of man and boy, and he hears the peculiar rattle of contact between head and weapon, and sees the beginning of the red flood, which gradually spreads down over face and neck and garments, witnesses the ecstasies of pain in the name of Allah, then somehow the sun seems to become unbearably hot, the air stifling, the shriek of the pipes and the beat of the drums simply infernal, and with it all comes just a faint impression of what fear might be, and the desire to get away from it all to the realities of life, for certainly this mob of dancing, singing demons is not real!

The two annual dances are given by separate sects, which have wide influence not only over Morocco, but over Algeria and Tunisia and eastward as far as Egypt. Tales there are told of the sect of the Aisawa which now, it is said, in interior Tunisia, along the French Sahara, in interior Algeria beyond the French railroads, and in the wilderness of Morocco, is planning a crusade under the red banner which shall drive out the contaminating Christian from Africa. It is claimed by those who have seen much of North African life and have traveled much among the people who have never seen the coast that the Aisawa is a secret organization, now less religious than political; that its members are united with the secret object of raising a *jehad*, or holy war, which will restore to the North Africans their old-time independence and supremacy. Knowing this, the gradually decreasing influence of the annual dance in Tangier becomes a consideration of interest.

Time was when Christians at the time

Photo by George E. Holt

THE AISAWA, SHOWING THE ROWS OF DANCERS

of the dance closed themselves within their houses; at a later date, when the Christian dared to go forth, he was frequently pulled from his horse and maltreated by the population, which had been worked into an anti-Christian frenzy by the religious fervor of the dancers, and at the present time the Christian may pass freely from one spot to another during the dance, provided he is careful not to pass through the throng of dancers themselves. If he were to do this he would undoubtedly, unless help were at hand, meet the death which comes to the dog who tries to pass through the dancing circle and which is torn to pieces by a score of crazy hands.

Gradually, in civilizing Tangier, the frenzy of the dance is being done away with by the unrecognized influence of the Christian. One year a slight control is exerted on one side, the next year upon the other, and this, after many years, has caused it to be safe for the Christian to watch the dance at close quarters.

Coming only once a year and lasting only a few hours, few persons not resident in Tangier or other Moroccan towns see either of these dances. The tourist who is lucky enough to be in Tangier while one of them is in progress goes away with a much different impression of things Moroccan than he who has not seen them, and with cause, for not only is the aspect of the populace entirely changed, not only are the streets and roofs of houses thronged with white-robed and veiled-faced women and by men in brilliant new garments, but there is a thrill in the air—a thrill that causes peculiar little shivers to go up and down the spinal column of the foreigner. Some tourists when they first view the dance are weak enough to be overcome by the thrill and the heat and the strangeness of it all and to faint.

The Aisawa are followers of one M'Hammed Ben Aisa, a saint who lived about two centuries ago, in the reign of the great Mulai Ismail. M'Hammed Ben Aisa was a poor man who knew not the feeling of gold. One evening, returning from prayer, he was met by a very much excited wife, who told him a tale which caused him to run with great haste to his home, and there, sure enough, was confirmation of the peculiar story that she had been jerking out to him during their homeward trip. A jar full of gold she had in some strange manner drawn from the well while trying to draw a jar of water.

Presumably M'Hammed Ben Aisa and his wife spent much of that night lowering the jar into the well and drawing it up again. History does not say whether there was any more gold in the well, but it does say that M'Hammed Ben Aisa got enough sleep to have a vision, in which he was commanded to form a brotherhood in the name of Allah.

Thus was founded the Aisawa brotherhood which gathers at Maknez, the home of their founder, some thirty miles from Fez, where there is a shrine to the saint, M'Hammed Ben Aisa. To attend this gathering members of the brotherhood come there from Algeria, from Tunisia, and less frequently from Egypt. They are supposed to dance most of the way. As a matter of fact they dance only through the larger cities.

They are supposed to eat alive any animal which crosses their path; but this has been gradually modified until it applies only to animals which are more or less edible, and still it is said they eat many things which the ordinary person cannot eat, such as red-hot coals, thorns, and poison, for they are supposed to be immune from the effect of poisons. But at the gathering at Maknez, which is attended by thousands of the brotherhood, there is feasting aplenty, and the sheep which are eaten are numbered by the thousands. After two days of feasting the dancers bid each other farewell until the following year.

The complete possession of the city of Maknez once each year by the followers of M'Hammed Ben Aisa is somewhat interesting, in view of the fact that the old

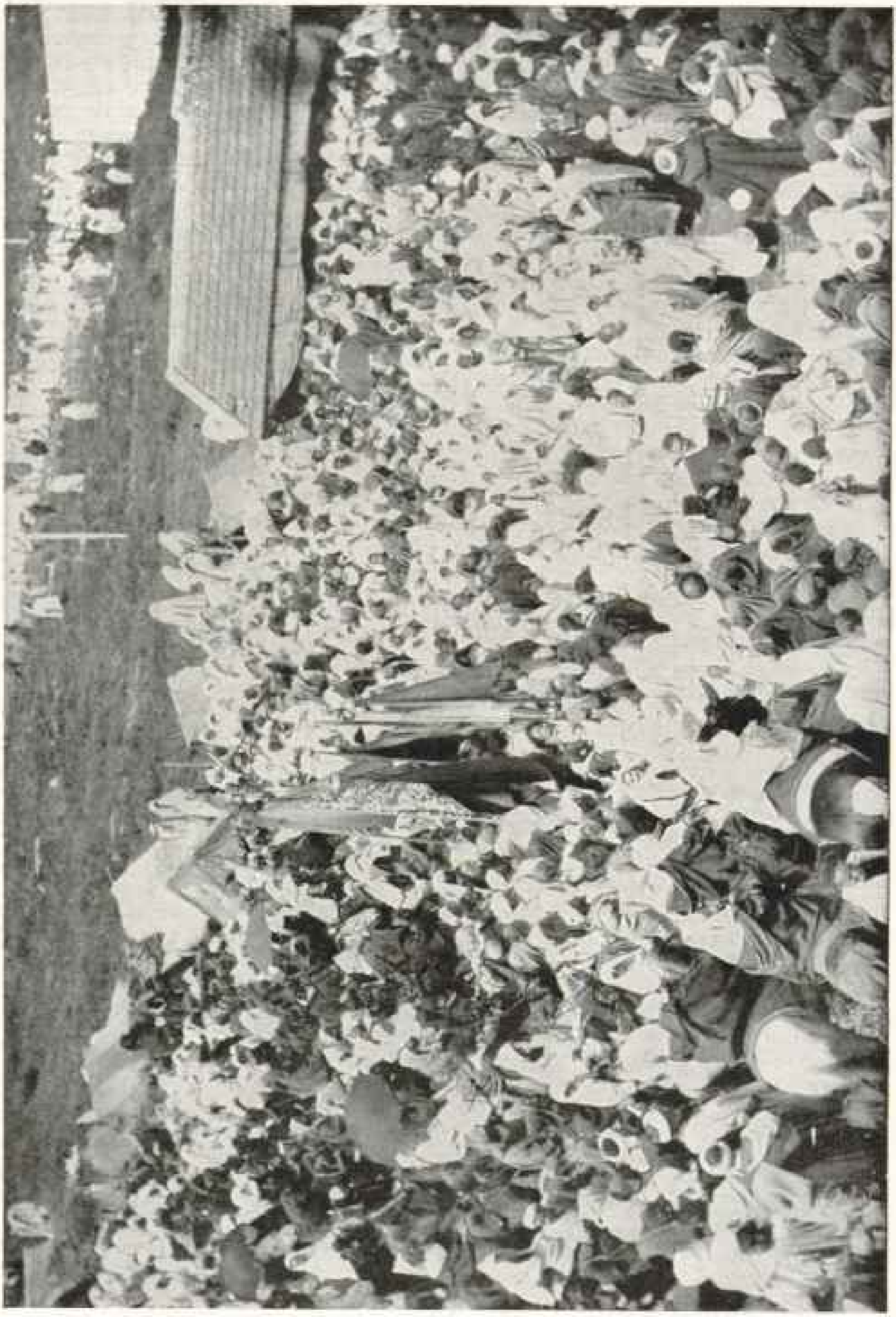


Photo by George E. Holt

GROUP OF WOMEN DANCING THE AISAWA DANCE

AISAWA DANCERS EATING EARTH Photo by George E. Holt

Sultan, Mulai Ismail, fearing the continually growing power of the brotherhood founded by his contemporary, M'Hammed Ben Aisa, banished that person; whereupon M'Hammed, who apparently had taken no inconsiderable sum from his well, offered to buy the city of Maknez from the Sultan and to pay therefor no small price. The Sultan, thinking that M'Hammed—in American vernacular—was "bluffing", agreed to this, and was much surprised when the saint produced the cash and took possession of the city.

Whereupon the Sultan, with true sultanic powers, refused to abide by the terms of the agreement, as a consequence of which it was agreed between them that from the twelfth to the nineteenth day of *Sefar* only should the members of the Aisawa be allowed on the streets of the city. Whether or not the wise old saint anticipated the result of this it would be hard to say, but it is an historical fact that in order to avoid being shut up in their houses for seven days all the inhabitants of the city joined the Aisawa brotherhood, which was not what the Sultan had anticipated.

Time passed and the saint M'Hammed Ben Aisa was gathered to the smiles of the Prophet. Then the Sultan Mulai Ismail became busy. He prepared a nest of snakes and commanded the Aisawa, who had boasted of their immunity to snake bites and poisons that would kill the average person, to enter the pit and face the reptiles and to eat poison food. Naturally there was at first some hesitation, but finally one Khamisah, a wife of one of the Aisawa, and braver than the rest, sprang into the pit and the rest followed. It is said that they suffered not the least, either from the snake bites or the poisonous food, and also that the woman Khamisah became upon her death Lalla Khamisah, herself a saint.

No one ever knows exactly when the great dance will take place in Tangier. Usually it is definitely set for half a dozen different days before it finally comes, and when it does it is almost

Photo by George E. Holt

"ALL IN": A HAMADSHA WHO HAS OVERWORKED.

without preliminary notice. In some peculiar manner a few hours before the appearance of the dancers the word is spread about. On the housetops and balconies and windows overlooking the great market-place, as well as on the slopes of the cemetery and tops of the walls, begin to gather white-robed Moorish women, gaily-dressed children, and stately Moors, with here and there groups of Christians, while the great market-place itself is thronged with thousands of spectators.

Then one may hear in the distance the rumble of drums, the shrill notes of pipes, and finally the crowd at the lower gate breaks apart and the red and green banners of the Aisawa brotherhood pass through. The music becomes louder, having the free air of the soko to swell in, half a dozen pipes shriller than the shrillest bagpipe, three or four drums louder than any drum ever heard on battlefield, shouting, crying, wailing together in an indescribable ecstasy, in which the monotonous repetition of notes seems to focus on one small point all the delirium which uncivilized man has been able to put into his barbaric music.

And then, worked into a frenzy, come the dancers, two lines of white-robed figures rising and falling in regular cadence. For perhaps five minutes they dance in one spot; then they pass on a few feet, never ceasing their dancing. The rhythm of the dance is two short notes and one long one. To the first two notes the dancers, their hands held in front of them, raise themselves on tiptoes; with the third long note they sink on bended knees and raise themselves to their toes again, gradually adding, as the dance continues and the ecstasy increases, a hundred other motions, but never getting away from the rhythm. They may whirl about, they may wave their arms

or dance on one foot, but the rhythm, the one, two, *three*—one, two, *three* is always there.

And after a person has listened to them awhile he catches himself keeping time to the music, maybe at first only with a fan or walking stick; then perhaps one finds the muscles of one's knees stiffening in time to the music, and one may even go so far as to rise on one's toes and fall back again as the beat, beat, beat of the drums and the wail of the pipes sink deeper into one's blood.

The road through the great market-place of Tangier is not over one thousand feet long, and yet so slowly do the dancers move that the time occupied in passing from one gate to the other is sometimes five hours, during all of which time no foreigner, unless he be overcame by the noise or the heat or the barbaric splendor, can take himself away, and as he watches all the peculiar tales of the Aisawa dancers recur to him. Servants, who for three hundred and sixty-four days a year are model servants, not over religious, and apparently more than half European, on the day of the dance feel the resistless call of the faith and surprise their masters by casting aside much of their clothing and throwing themselves into one of the rows of the Aisawa and participating with equal fervor in the religious dance.

One cannot understand how the dancers can live through such a long ecstasy of effort; and yet they do, and when after passing through the upper gates of the market-place they gather in the walled inclosure which they maintain, they eat vast quantities of food and show no effects whatever of their terrible dance of endurance.

The Hamadsha, which is a less numerous and influential religious order, confined more to Morocco, are the followers of Sidi Ali Bel Hamdush, who made his appearance as a saint on the pages of Mohammedan history at a later date than M'Hammed Ben Aisa. Sidi Ali Bel Hamdush founded his brotherhood upon the tenet "Who pardons our past sins will pardon those of the future." This seems to be a somewhat inadequate excuse for the rites of the Hamadsha, who also make a pilgrimage each year to the tomb of their founder and patron saint. This tomb is at Zarhom, a sacred city on the hill near Maknez, a city whose streets have never yet been polluted by the foot of a Christian. Many Christians have tried to go there, but they have never succeeded. It is not the policy of Zarhom to let a Christian enter and then kill him, but to kill him before he enters.

The Hamadsha who dance each year in the sōk at Tangier are not numerous. There are perhaps a dozen adult dancers, which number is increased during the different dances by the addition of certain spectators, who are overcome by religious fervor, among which, unfortunately, are usually a number of boys varying in age from ten to fifteen. And when one considers that the thing which differentiates the Hamadsha dance from the dance of the Aisawa is that the Hamadsha have a pleasant way of chopping their own heads with a small axe shaped like an old-time battle-axe, the introduction of small but impulsive boys into the equation causes the average foreign spectator to have a peculiar feeling in the pit of his stomach.

Some way one feels that if a man from thirty to fifty years old wants to whirl around and chop his head with an axe he is old enough to know what he wants to do, but when after the spectacle has reached a point where the blood and the heat of the sun are beginning to have rather a depressing effect, one sees a small boy rush into the circle of dancers, seize an axe from the hand of a man who should have been dead some time, and with a shout of religious joy bring the sharp edge of that axe down upon his little shaven head—well, one wishes that one could have about a five-minute session with the old gentleman and a good-sized base-ball bat to argue with.

The old dancers either have such thick heads or else have learned so well how to handle the axe that they can draw the

Photo by George E. Holt

THE CHIEF OF THE HAMAISHA

The cuts may be observed on his head, and what seems to be a braid of hair down the back is a stream of blood

maximum of blood with the minimum of pain, but the small boy has not learned that, and therefore the small boy sometimes falls down among the dancers and has to be revived and carried home.

The Hamadsha dancers dance fully as long in the market-place as do the Aisawa, but they are not watched as long by the average European, especially if he be a tourist unused to the weird sights that one may see. The Hamadsha, too, has the weird, shrill, monotonous music, the strangely inscribed red and green banners and fantastic whirling of the dance.

Besides the chopping of heads they also have a dance of the whirling dervish and a peculiar symbolical dance performed by two adult dancers. These two, upon beginning the dance, strip themselves to the waist and then, almost exactly like two pugilists who are simply exhibiting the various curves and passes and strikes without touching each other, they go through their performance.

Each motion is the symbol of some phase of the Mohammedan religion or Hamadsha faith. A certain position on the defensive means, for example, the attitude of a Moslem against the Christian invasion. Another, in which attitude the dancer seems filled with anger and about to strike his opponent, means the attitude of Mohammedanism when it shall finally drive the Christian from its domains.

The symbolism of this dance is also participated in by women, who, although they do not chop their heads, dance with equal fervor. One peculiar symbolical incident of the dance is where one woman dancer and one male dancer throw themselves upon their knees facing each other, and then bend forward until, with the tops of their heads touching, they may dig with their teeth a mouthful of earth. This is symbolical of the creation, when Adam and Eve lived upon the fruits of the earth and of the necessity of all their descendants to do the same. There are a thousand similar things of which the Christian may seek in vain for an explanation, and it is only the most apparent and most spectacular which are noticed.

It is like awaking from a nightmare to hear the cry of the pipes die away through the upper gate, to have one's senses released from the thrall of the music, and to lose in the gray mist of evening the sight of the bold covered figures, whirling, dancing, singing, shouting, begging; and one turns back to the things of life wondering that such a thing as this may take place within sound of the guns of Gibraltar.

RECENT POPULATION FIGURES

By Henry Gannett

IN the same year that we were counting noses, 1910, a number of other nations were doing the same, and the results of many of these counts have been made public. In addition, the population of the United Kingdom, which was enumerated early in the present year, has just been published.

The population of the countries follows, with the rates of increase in the preceding decade:

	Population	% Increase
United Kingdom	45,216,665	8
England and Wales	36,075,269	11
Scotland	4,739,445	6
Ireland	4,381,951	2 loss
Germany	64,903,423	15
Austria	28,567,898	9
Hungary	20,850,700	8
Spain	19,503,098	5
Norway	2,392,698	7
Sweden	5,476,441	7
Netherlands	5,898,429	15
Switzerland	3,741,971	13
Bulgaria	4,284,844	14
Japan	50,751,919	12
Mexico	15,063,207	11

The above countries show rates of increase ranging from 5 per cent. in Spain, up to 15 per cent. in Germany and Netherlands. The corresponding rate of increase in the United States was 21 per cent.

Ireland continued to lose population, as she has done for the past 60 years or more.

The above countries of Europe, ten in

number, contain altogether about 45 per cent of all the people of Europe. Collectively they have increased at the rate of 10 per cent.

France and its colonies and the colonies and dependencies of the United Kingdom take a census during the present year, but the results are not yet available.

THE FORM OF GLACIER TERMINALS

AS IS well known, the lower ends or terminals of glaciers differ greatly in form, ranging from a gentle slope, through a curve more or less steep, to a sheer cliff.

Glaciers waste in two ways: by ablation; that is, melting and evaporation, and by breaking off in fragments at the terminal, or cleaving. As there is everywhere more or less ablation, the form of the terminal is determined by the presence or absence of this cleaving. If there is no cleaving, the longitudinal profile of the terminal is a curve, more or less steep and convex upward.

All glaciers which project into the sea or other deep water (tidal glaciers) end in cliffs. The main reason for this is well known. The comparatively warm water melts the ice in contact with it, and so undercuts that above, which therefore cleaves off, precisely as a hard bed of rock does when the softer underlying bed is eroded from under it.

Occasionally glaciers ending on land are found with cliff terminals, like those of tidal glaciers, but the method of their construction is quite different.

Such terminals can be formed only when the glacier is moving more rapidly than it melts. Like a river, the movement of the lower part of the glacier is retarded by friction on its bed; the higher parts travel faster and at the lower end project over the lower. Thus unsupported they cleave off, forming a cliff.

Cliff terminals are found on land in moderate latitudes only on glaciers which are advancing. In high northern latitudes, where, owing to the low temperature, melting is at a minimum, such ice fronts are common.

The ordinary form of terminal glaciers ending on land is a curve, convex upward. This form is produced by ablation, coupled with the forward movement of the ice. The more rapid this movement—provided it does not result in an advance of the glacier—the steeper the profile curve of the terminal, and the slower this movement, the flatter the curve. If there is no movement—if the ice at and near the terminal is stagnant—the terminal is a gentle slope.

It follows from the above that the form of the terminal of a glacier may change with the seasons, becoming steeper in winter and less so in summer. It would be interesting to know if this is true.

H. G.

BOOK REVIEWS

"A Tenderfoot with Peary." By George Borup. 8vo., pp. 317; 16 illustrations. New York: Frederick A. Stokes Co. 1911.

It is scarcely necessary to introduce the author as a young Yale graduate who made his maiden trip to the Arctic with Peary on his latest and successful dash to the Pole.

That he was a tenderfoot in the sense that every experience was absolutely new—that, consequently, he saw everything there was to see and felt everything to the full, is plainly written on every page. He was not at all, however, the kind of tenderfoot who never learns, for he became one of Peary's most efficient assistants.

His book is filled with vivid descriptions of scenes and experiences, seen and told as no one but a tenderfoot could. After reading Peary's strong narrative, this book fills in the flesh and blood of the story.

There are few books of travel as captivating as this. The book is beautifully illustrated, mainly from photos taken by the author.

PERU—The Land of the Incas

OF all the lands comprised in the vast South American continent, there is none more richly endowed by Nature with everything that is magnificent to the eye of the traveler, none whose history is more fascinating, whose relics of a former age are more potent to cast a spell over the imagination, than Peru. It was here that, in the fulness of time, a handful of daring Spanish adventurers, emboldened by pride of race and lust of gold, subjugated an entire and almost unknown nation, planted the Cross over the ruined temples of the Sun, and turned the current of history. Such a land cannot but offer irresistible attractions to the modern tourist, and we will be glad to furnish information of a general character to prospective visitors, and to convey some idea of the nature of the country.

Scenic Grandeur Unparalleled

Nowhere else in the universe had Nature laid such colossal difficulties in the way; never were difficulties more stoutly combated and overcome. Now cutting through gigantic masses of rock, now scaling precipitous heights, now crossing abysmal ravines and roaring torrents, the great military thoroughfares constructed in Peru under the Inca dynasty challenged comparison with the proudest achievements of the Old World.

Splendid Railroad Equipment

Peru is still the country of wonderful highways, but they are today roads of steel, and the engineering triumphs which so amazed the discoverers of the country are eclipsed by the modern railway man. All of them are well constructed roads, over which the passenger is borne in comfortable coaches as smoothly and safely as if he were traveling on one of the leading trunk lines of Great Britain or the United States.

How To Get There

A tempting variety of steamship routes is offered from Europe to Callao, the principal port of Peru. A regular fortnightly service of the fine steamers of the Royal Mail Steamship Company leaves Liverpool for all the principal Brazilian, Chilian, and Peruvian ports as far as Callao, and a more interesting run it would be difficult to imagine. At Montevideo the passenger may, instead of continuing the trip South to Punta Arenas and through the picturesque Straits of Magellan, elect to make a short stay in Buenos Aires, the Paris of South America, and proceed overland to Valparaiso by the Transandine Railway. The quickest route, however, is that by the Atlantic steamers from New York, whence vessels sail to Colon, train then being taken to Panama, the starting point of the West Coast steamers, the whole journey being usually completed within about three weeks. An alternative to this trip, again, is available by the Royal Mail boats to Colon via Barbados and Trinidad.

The Peruvian Corporation, Ltd.

THE CENTRAL RAILWAY OF PERU, Ltd.
THE SOUTHERN RAILWAY OF PERU, Ltd.
NAVIGATION LAKE TITICACA AND RIVER DESAGUADERO.
THE GUAQUI & LA PAZ RAILWAY.
THE PAITA TO PIURA RAILWAY, Ltd.
THE TRUJILLO RAILWAY, Ltd.
THE PACASMAYO & GUADALUPE RAILWAY, Ltd.
THE CHIMBOTE RAILWAY.
THE PISCO TO ICA RAILWAY.
THE ILO TO MOQUEGUA RAILWAY.

Full information regarding sailings, fares, etc., may be obtained upon application to the Tourist Agencies or our New York Representatives.

Messrs. W. R. GRACE & CO.

London Office:
43 Threadneedle St., E. C.

Hanover Square
New York City

The 1A Special

Folding Pocket

KODAK

Here is quality and efficiency in small compass—and such simplicity that anyone can make good pictures from the very start.

Fitted with our quiet ball bearing shutter with a range of exposure from $\frac{1}{100}$ of a second to "time", and a superior Rapid Rectilinear lens; has every adjustment that is desirable in a hand camera. Loads in daylight with Kodak film cartridges for six or twelve exposures. Made of aluminum and covered with fine seal grain leather.

A dependable camera of quality.

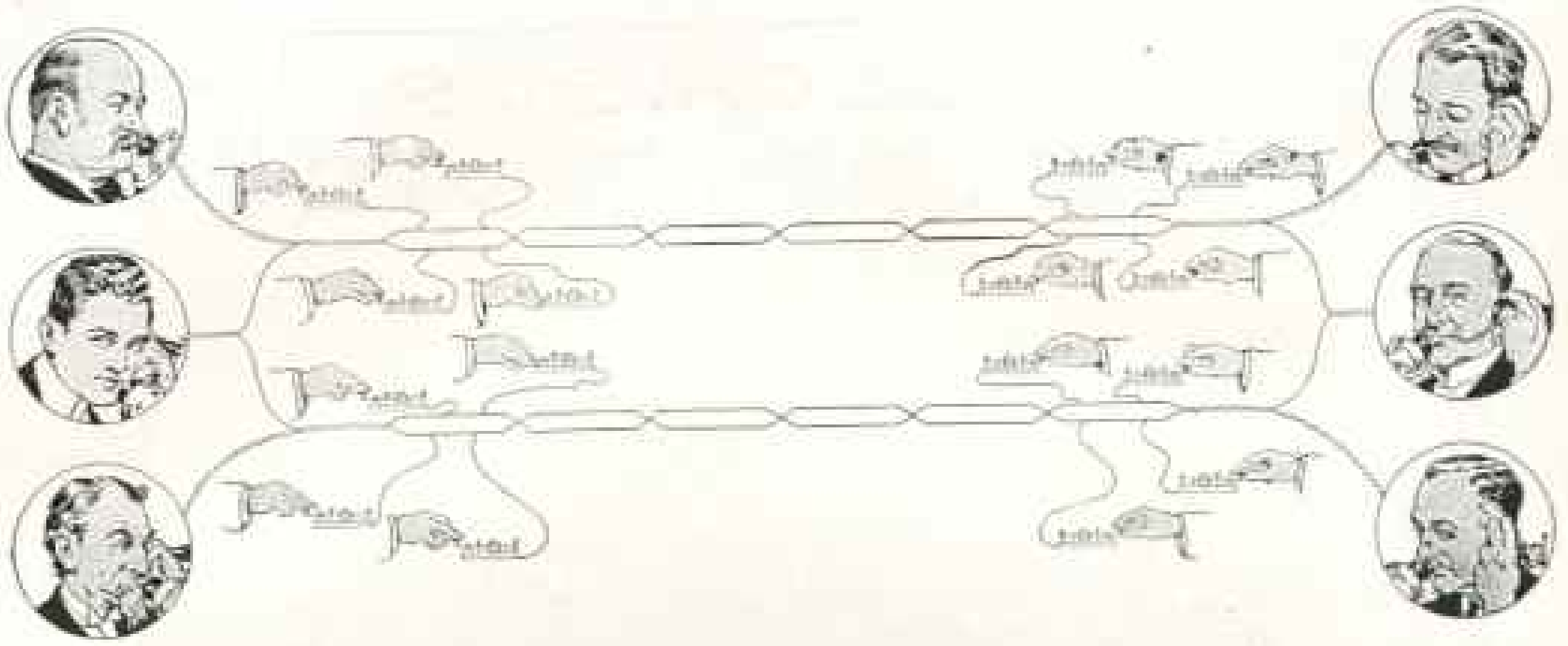
Pictures, 2½ x 4¼ inches.

Price, **$15.00**

Kodak catalogue free at the dealers or by mail.

EASTMAN KODAK CO.,

ROCHESTER, N. Y., *The Kodak City.*



Double Tracking The Bell Highway

Two of the greatest factors in modern civilization—the telephone and telegraph—now work hand in hand. Heretofore each was a separate and distinct system and transmitted the spoken or written messages of the nation with no little degree of efficiency. Co-operation has greatly increased this efficiency.

The simple diagram above strikingly illustrates one of the mechanical advantages of co-operation. It shows that six persons can now talk over two pairs of wires *at the same time* that eight telegraph operators send eight telegrams *over the same wires*. With such joint use of equipment there is economy; without it, waste.

While there is this joint use of trunk line plant by both companies, the telephone and telegraph services are distinct and different. The telephone system furnishes a circuit and lets you do your own talking. It furnishes a highway of communication. The telegraph company, on the other hand, receives your message and then transmits and delivers it without your further attention.

The telegraph excels in carrying the big load of correspondence between distant centers of population; the telephone connects individuals, so that men, women and children can carry on direct conversations.

Already the co-operation of the Western Union and the Bell Systems has resulted in better and more economical public service. Further improvements and economies are expected, until time and distance are annihilated by the universal use of electrical transmission for written or personal communication.

AMERICAN TELEPHONE AND TELEGRAPH COMPANY
AND ASSOCIATED COMPANIES

One Policy *One System* *Universal Service*

"Mention the Geographic—It identifies you."

"Geographic readers may depend upon the integrity of our advertisers."

WOULD you buy a musical instrument that limited your range of execution? Then why limit the scope of your camera when *perfect* reproduction demands the use of a

Bausch and Lomb-Zeiss TESSAR LENS

For portraits, groups, and landscapes, for the swiftest things in motion, for the most perfect detail, for use in waning light when other lenses fail, the Tessar has no equal. If you are an expert photographer, you will quickly appreciate the many qualities of the Tessar; if you are a beginner it will help you to greater achievements. Booklet H treats of better photography in an interesting manner. Write for it today.

Our name, backed by over half a century of experience, is on all our products—lenses, microscopes, field glasses, projection apparatus, engineering and other scientific instruments.

Bausch & Lomb Optical Co.

NEW YORK WASHINGTON CHICAGO SAN FRANCISCO
LONDON ROCHESTER, N.Y. FRANKFORT

PURE LIGHT SOFT HEALING

Buckhead Spring Water

Buckhead Springs, Virginia.
Chesterfield County.

Packed only in New, Clean Bottles, Sealed at the Springs

$4.00 per case, 12 half-gallons, through your dealer, or direct to you.

Rensselaer Polytechnic Institute

Established 1824
Troy, N. Y.

Engineering and Science

Courses in Civil Engineering (C. E.), Mechanical Engineering (M. E.), Electrical Engineering (E. E.), and General Science (B. S.). Also Special Courses.

Unsurpassed new Chemical, Physical, Electrical, Mechanical and Materials Testing Laboratories.

For catalogue and illustrated pamphlets showing work of graduates and students and views of buildings and campus, apply to

JOHN F. NUGENT, Registrar.

When Visiting
New York don't fail to see

Vantine's

The Oriental Store

Broadway Bet. 18th and 19th Sts.

UNLIKE any other store in the world. As interesting as a museum. Filled with rare treasures and curios from the mystic East. Thousands of different products of the heart and hand of Oriental peoples—that make the most appreciated gift articles. Fine rugs, rare bronzes and ivories, exclusive drapery and wall fabrics, individual lamps; Eastern condiments, delicious teas. **Visitors are always welcome.**

THE MAIL ORDER DEPARTMENT

is prepared to answer any inquiry, to offer suggestions for every requirement, to send samples, and (when satisfactory references are given) to send goods on approval for selection in your own home.

"A Little Journey to Vantine's," by Elbert Hubbard —an intensely interesting 20-page book describing ***this "Store Beautiful"—sent on request.***

John Wanamaker

ANNOUNCES

that on request a copy of the Fall and Winter Catalog will be sent you postpaid.

Over 1000 fine pictures of still finer merchandise.

A valuable book, for reference or for ordering goods; you should get one.

We never seem able to print enough to meet all requests, so write us TODAY:

"Send Free Catalog No. 21."

JOHN WANAMAKER
New York

Summer Traveler or Veteran Explorer
by well-traveled highways or unknown byways

The 3A Graflex Camera

fitted with Steinheil Unofocal F 4-5 lens

will give a more faithful, scientific and accurate record of events, with less trouble than any other Camera on the market today. No focusing cloth, no "finder" necessary. You see your subject right side up to the very moment of exposure. A scientific instrument; not a toy.

Write for Catalogue

HERBERT & HUESGEN COMPANY
311A Madison Avenue, New York City

"SPECIALISTS IN THINGS PHOTOGRAPHIC"

JUST PUBLISHED

An Attractive, Convincing Booklet on

"Woodlands—Their Possibilities"

IT has many beautiful illustrations, showing woodlands before their possibilities were developed and afterward. Here is a little of what the first page says:

> "In general, woodlands are waste lands, as far as the pleasure the owner derives from them is concerned. But this need not be.
>
> "To the skilled forester they hold possibilities. He knows how to convert them into one of the most interesting, walk-throughable, pleasure-giving parts of the estate.
>
> "It is just this we want to do for your woodlands. Forestry in all its branches is our business. The pages that follow will give you an inkling of the ways we develop woodlands."

Send for this booklet.

Munson-Whitaker Co.
FORESTERS
New York, 824 4th Avenue Bldg.
Boston, 624 Tremont Bldg.
Pittsburg, 744 Oliver Bldg.

"Geographic readers may depend upon the integrity of our advertisers."

THE HOME OF THE NATIONAL GEOGRAPHIC SOCIETY, WASHINGTON, D. C.
An Association Organized for "The Increase and Diffusion of Geographic Knowledge."

RECOMMENDATION FOR MEMBERSHIP

in the

National Geographic Society

The Membership Fee Includes Subscription to the National Geographic Magazine

DUES: Annual membership in U. S., $2.00; annual membership abroad, $3.00; Canada, $2.50; life membership, $50. Please make remittances payable to National Geographic Society, and if at a distance remit by N. Y. draft, postal or express order.

Please detach and fill in blank below and send to the Secretary

---

_____ 191

To the Secretary, National Geographic Society,
Sixteenth and M Streets Northwest,
Washington, D. C.:

I nominate _____

Address _____

_____

for membership in the Society.

_____

_____

6-'11

(Write plainly with pen)

A Mighty Power Rests In the Hand That Wields

Waterman's Ideal Fountain Pen

This famous pen is the instrument that has been more potent for progress, culture and refinement than any other product of our present civilization.

It has been the *Standard* pen of the world for over a quarter century. Made in Regular, Safety and Self-Filling Types. No matter who you are, or what your writing requirements may be, this pen will fit both you and them.

The mere possession of a Waterman's Ideal is an evidence of good taste, hypercritical judgment and a determination to have only the *best*. That's the class of folk to whom are sold Waterman's Ideals, and we should be pleased to have you enrolled as one of its patrons.

Wherever you are. From Stationers and Jewelers. Anywhere on earth.

Avoid Substitutes *Send for Catalogue*

L. E. Waterman Co., 173 Broadway, New York

8 School Street, Boston 115 So. Clark Street, Chicago 17 Stockton Street, San Francisco Kingsway, London
L. E. Waterman Company, Limited, Montreal 6 Rue de Hanovre, Paris

PRESS OF JUDD & DETWEILER, INC., WASHINGTON, D. C.