

JERUSALEM'S LOCUST PLAGUE

Being a Description of the Recent Locust Influx into Palestine, and Comparing Same with Ancient Locust Invasions as Narrated in the Old World's History Book, the Bible

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HEAR ye this, ye elders, and give ear, all ye inhabitants of the land,—hath this ever happened in your days? or in the days of your fathers? Concerning it to your children tell ye the story,—and your children to their children, and their children to the generation following:—That which was left by the creeping locust hath the swarming locust eaten, and that which was left by the swarming locust hath the grass locust eaten; and that which was left by the grass locust hath the corn locust eaten. Awake . . . and weep and howl . . . For a nation hath come up over my land, bold and without number" (Joel 1:2-6).*

Thus Joel, writing some seven or eight hundred years B. C., begins his description of a locust plague, which then as now must have laid waste this land. We marvel how this ancient writer could have given so graphic and true a description of a devastation caused by locusts in so condensed a form.

* From the Emphasised Bible, critically translated by Rotherham.

FORMER LOCUST INVASIONS

One often finds among the old peasant men those who are gifted with telling stories, whether true or imaginary, and thus, as in Joel's days, history is still handed down to the children, children's children, and another generation. The oldest men have thus been recounting the stories of havoc caused by flying locusts fifty years ago that used to sound like "Arabian Nights" tales. Still there is no doubt that the present visitation eclipses any in the memory of the present generation, and probably equals in severity any former one.

Since 1865, so commonly called "sent el jarad" (year of the locusts), locusts have at intervals reappeared in Syria, but in smaller areas and causing nothing like a general disaster or distress, the more recent of these having occurred in 1892, in the Jordan Valley near Jericho, where waving fields of tall green barley and wheat were eaten down to the very stump in a remarkably short time. In 1899 they were found in small quantities in Galilee,

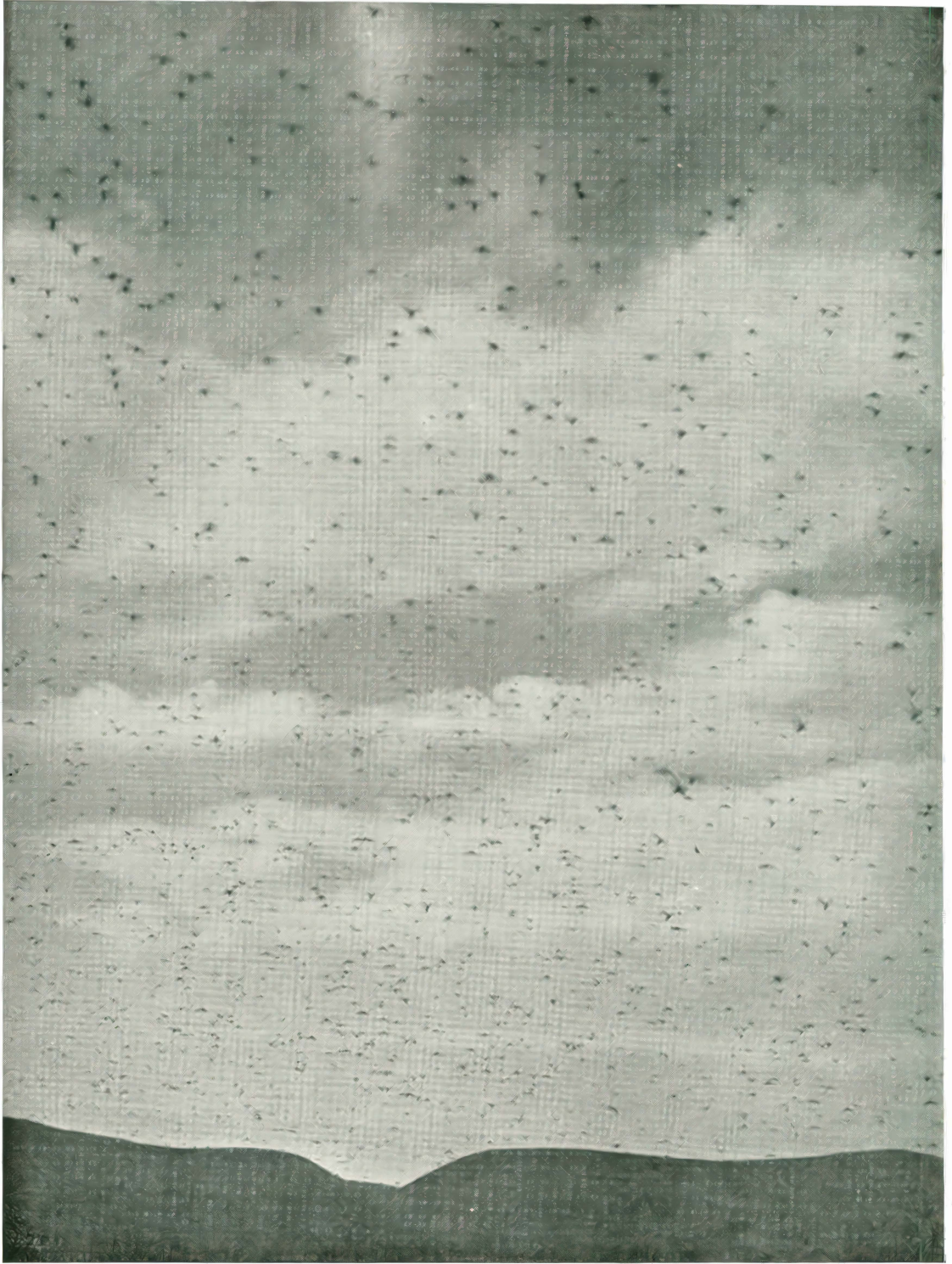


Photo by American Colony Photographers, Jerusalem

THE FIRST APPEARANCE OF THE LOCUSTS

“Attention was drawn to them by the sudden darkening of the bright sunshine, and then by a veritable shower of their excretions, which fell thick and fast and resembled those of mice, especially noticeable on the white macadam roads. At times their elevation was in the hundreds of feet; at other times they came down quite low, detached members alighting” (see text, page 513).

and in 1904 in the southern desert, also visiting Egypt.

The present influx covered all of Palestine and Syria—that is, from the borders of Egypt to the Taurus Mountains.

ADULT FLIERS FIRST APPEAR

It was one of the last days of February, 1915, that Mr. Lewis Larson, to whose skill and energy we are indebted for the superb collection of locust pictures appearing on these pages, returned from the picturesque Ain Fara gorge, which borders on the Wilderness of Judea and is only a few miles east of Jerusalem, with word that swarms of locusts had flown overhead in such thick clouds as to obscure the sun for the time being.

However, before they were seen, a loud noise, produced by the flapping of myriads of locust wings, was heard, described as resembling the distant rumble of waves, or, as St. John has it, "the sound of their wings was as the sound of chariots of many horses running into battle" (Rev. 9:9),* the picture on page 512 vividly portraying Joel's word picture

"A day of cloud and thick darkness,
As dusk spread over the mountains—
A people many and bold" (Joel 2:2).*

Immediately rumors poured in from the Christian towns of Es Salt, on the uplands east of the Jordan, and Bethlehem, that similar swarms had also visited them, causing much destruction.

In Jerusalem the first were seen one Monday of the first days of March, at noon. Attention was drawn to them by the sudden darkening of the bright sunshine, and then by a veritable shower of their excretions, which fell thick and fast and resembled those of mice, especially noticeable on the white macadam roads. At times their elevation was in the hundreds of feet; at other times they came down quite low, detached members alighting. The clouds of them would be so dense as to appear quite black, with the edges vignettted till they thinned down and faded away into the clear blue sky around.

For several days Jerusalem was thus visited. Predictions were rampant as to

the terrible results which would accrue, but now we can see that not even the worst pictured the actual ravages as severe as we now see them. They did not settle in Jerusalem, evidently seeking greener and less populated districts; so that after the first few days nothing more was seen of these adults here, while at Bethlehem they were brought to the earth by heavy showers of the late rains.

Quantities were now gathered by the poorer Bethlehemites. A few ate them roasted, describing the taste as delicious, especially the females full of eggs. Still the main reason for collecting them was in order to secure the small bonus offered by the local government of Bethlehem. Thus tons were destroyed, being buried alive till several ancient abandoned cisterns were filled, while in surrounding villages each family was required to produce a stipulated weight. Likewise in Jaffa they were destroyed by being thrown into the Mediterranean and, when washed ashore dead and dried on the beach, were collected and used as fuel in the public "Turkish baths" and ovens.

FROM WHENCE COME THE LOCUSTS?

These clouds of flying locusts, in Jerusalem at least, invariably came from the northeast going toward the southwest, and it was observed that when strong winds arose, too stiff for them to resist, rather than be carried they seemed to settle till the storm passed over.

Students of Joel, who assert that the first two chapters up to the 28th verse picture an actual invasion of locusts and not Judah's human enemies, as the Assyrians and Chaldeans, find a difficulty in the verse, "And the northerner will I remove far from you," since locusts were reported to invade Palestine from the south; the present experience not only removes this difficulty but establishes the accuracy of Joel's account.*

As to the exact region from which they migrated to visit Palestine, it is now difficult to say, especially in view of the disorganization of mails and news channels caused by the present cruel European war.

* Cambridge Bible, Driver, Joel, and Amos, page 28.

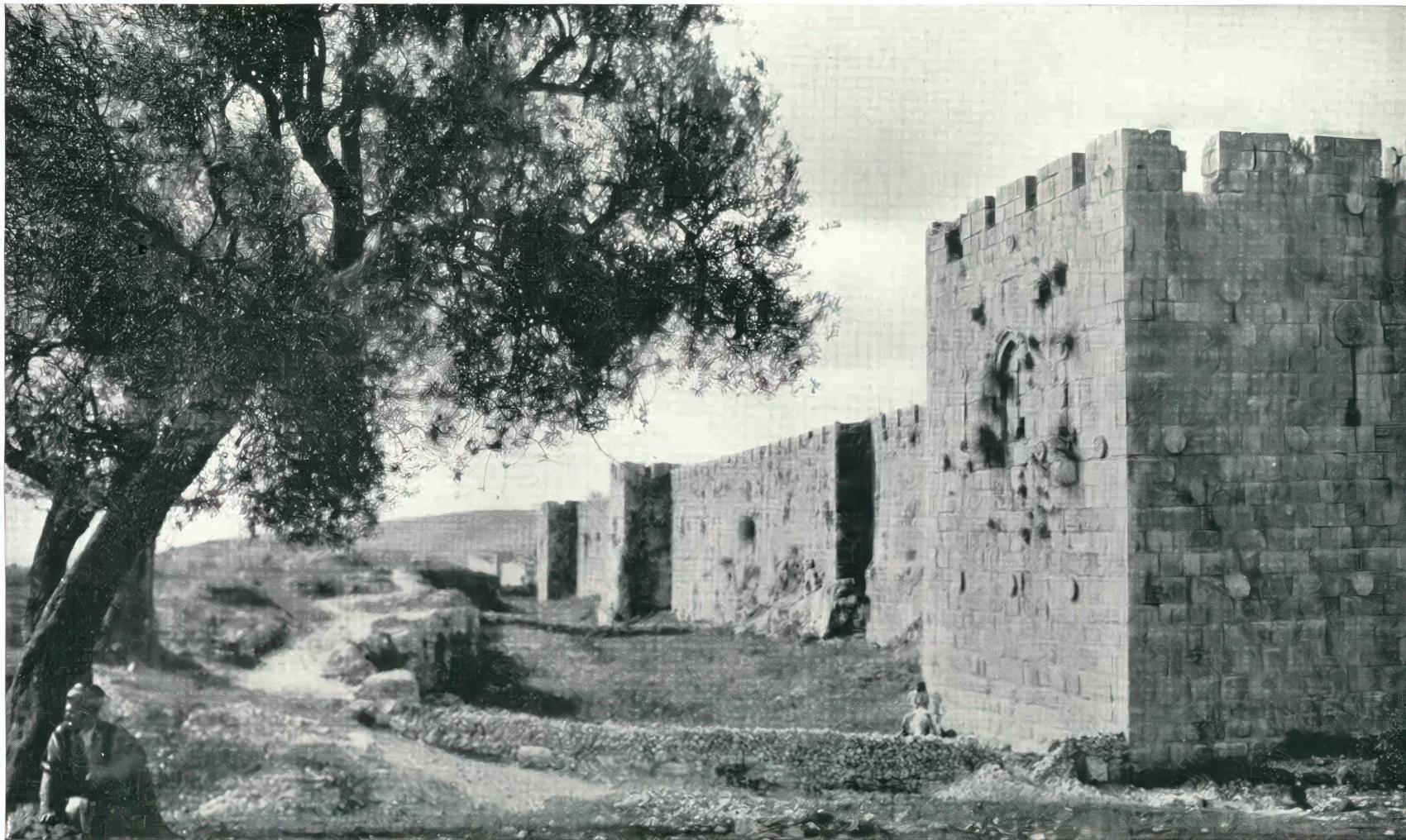
* The Emphasised Bible, Rotherham.



Photo by American Colony Photographers, Jerusalem

NATURAL ENEMIES OF LOCUSTS

"Large flocks of storks flew past Jerusalem during the early days when the adults arrived and after the larvæ were hatched, consuming abnormal quantities, for which reason the natives have always given 'Abo Saad' a warm welcome" (see text, page 521)



THE WALLS OF JERUSALEM

“During the Egyptian plagues we find Moses announcing the locust scourge in terms of which our present experience is such an exact duplicate, as follows: ‘Behold tomorrow will I bring the locusts into thy coasts: and they shall cover the face of the earth . . . and they shall eat the residue of that which is escaped . . . every green tree which groweth. . . . And they shall fill thy houses, and the houses of thy servants, and the houses of all the Egyptians.’” (Ex. 10:4-6) (see text, page 533).

With these adult locusts, the *Acridium peregrinum*, more commonly termed *Schistocerca peregrina*, the males and females are readily distinguished, for, like most creatures, human beings excepted, the males are by far the handsomer. Both are about 2½ inches long, the female being slightly larger. The wings are semi-transparent and filled with veins, or, more correctly, strengthening tissues, and are white with brown spots. The male has a vivid yellow body, while that of the female is a deep brown.

LAYING THE EGGS AND DYING

At once these numberless hosts began to prepare for the destruction that was to follow. Each female, now loaded with eggs, seeks a place suitable to deposit them, and with her ovipositors is able to sink a hole as much as 4 inches deep, through hard compact soil, such as would try the strength of human muscles even with iron tools (see also page 521). How so small and frail a creature can bore in such hard ground and to such a depth seems a marvel which only nature can accomplish or explain. While boring the hole the female sits, wings outstretched, upon the earth, and possibly moistens the soil to facilitate the work. She evidently has the ability to stretch or lengthen her *annulea*, pressing her body into the hole till the depth required is attained.

The eggs, averaging about a hundred in number, are now deposited in the bottom of this hole, not haphazard, but neatly arranged in a long cylindrical mass and enveloped in a sticky glutinous secretion, with which frothy substance the top of the hole is also sealed to prevent enemies encroaching, and at the same time of such a nature as to allow the newly hatched brood to get out readily. It was found, in digging for these eggs, that when newly laid they could with ease be removed from the soil in one piece over an inch long and as thick as a slate pencil; but once a few days had passed, they crumbled apart when touched.

The eggs require a certain amount of moisture, for once dried or exposed to air they never hatch, which no doubt accounts for the depth to which the mother

parent at times deposits them into the ground.

Once the female locust has laid the eggs, her life mission is done; she flies away—where to one cannot say—and soon dies.

One remarkable feature is the variety of soils and climatic conditions under which these eggs were laid. In the Jordan Valley, earth's lowest spot, 1,300 feet below the Mediterranean, we find them deposited on the very banks of this historic river, notably at "the Ford," where it is supposed the Children of Israel passed over into Canaan (Josh. 3); also farther down toward the Dead Sea, in soil heavily impregnated with alkali, where are the "slime pits" into which probably, during their retreat, the kings of Sodom and Gomorrah fell when in full flight from Chedorlaomer and his allies (Gen. 14).

Then they were to be found on the highest mountain tops; in the beautiful olive groves about Bethlehem and Zelzah, birthplaces of David and Saul, Israel's first kings; also in the vicinity about the fields and village of the Shepherds, where, eighteen hundred years ago, mortal ears heard an angel chorus; in the chalky soil of Wad el Nar (Valley of Fire), which is the extension of the Vale of Hinnom, a place where Israel caused "his son or his daughter to pass through the fire to Molech" (2 Kings 23: 10).

They were deposited in the barren districts of the wilderness of the "scape goat" (Lev. 16: 7-26), as well as in the richest soil of the Philistine Plain, where Samson turned loose the 300 foxes with firebrands into his enemies' wheat fields (Judges 15: 4, 5); also in the soft, moving sand-dunes along the seacoast of Tyre, Sidon, Askelon, and Gaza, cities once ranking with the greatest of the earth; among the world-famed Jaffa orange orchards; in the rocky and rugged valley between Mickmash and Gibeah, on whose precipitous sides "Jonathan climbed up on his hands and his feet" into the Philistine garrison and slew a score of them (1 Sam. 14: 4-14). In fact, in all parts of the country so laden with historic events, whether in open fields or standing grain, in the plain or in



Photo by American Colony Photographers, Jerusalem

THE TOWER OF DAVID

“Did not Joel then see the already ancient walls of Jerusalem in his day, as we do now, form so slender an obstacle to tiny soldiers composing immense armies, causing him to so graphically exclaim: “They shall run like mighty men; they shall climb *the wall* like men of war; and they shall march every one on his ways, and they shall not break their ranks!” (Joel 2: 7) (see text, page 526).

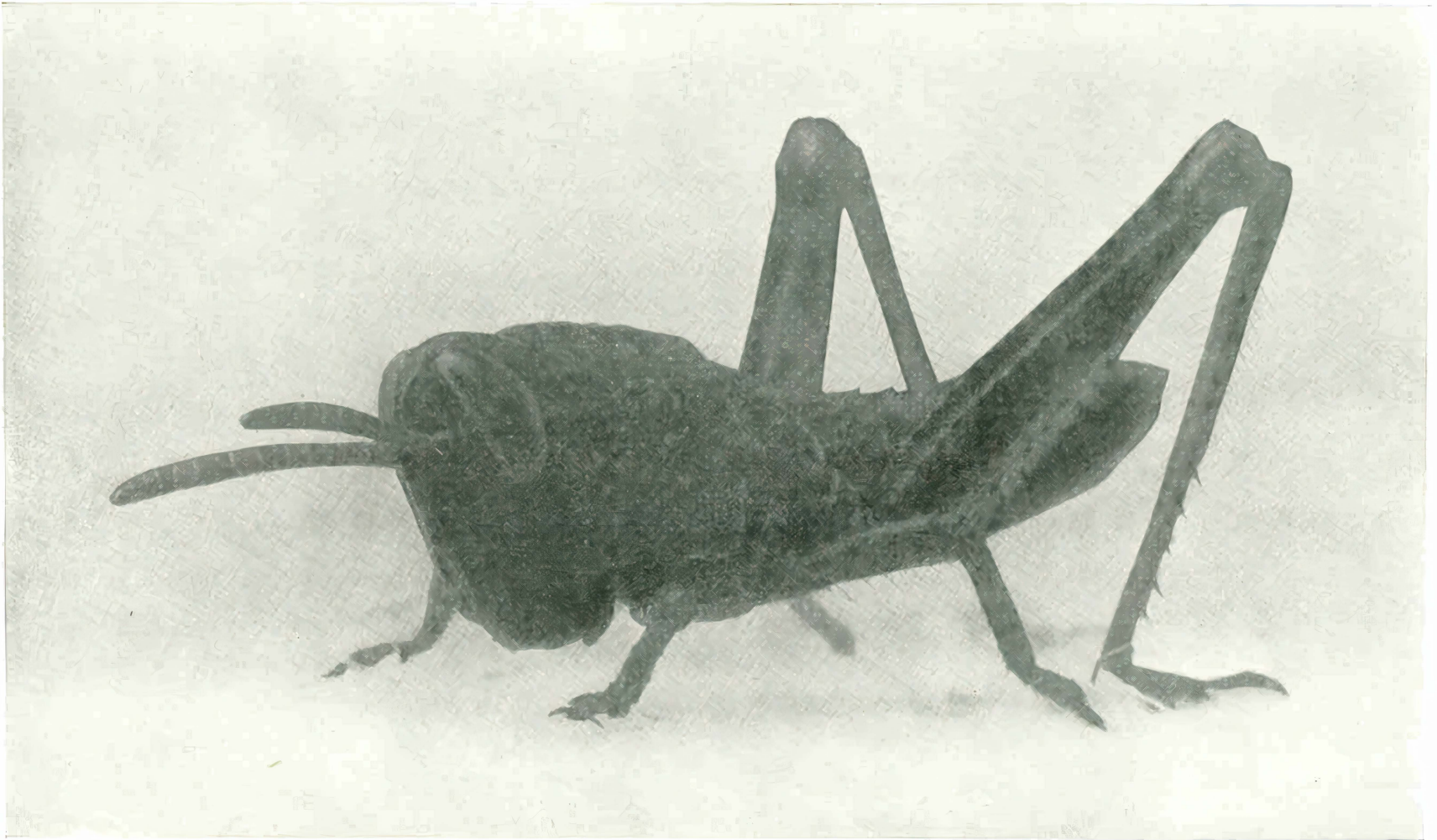


Photo by David Fairchild

A YOUNG LOCUST IN THE LARVA STAGE, BEFORE IT HAS ANY SIGNS OF WINGS (SEE TEXT, PAGE 543)

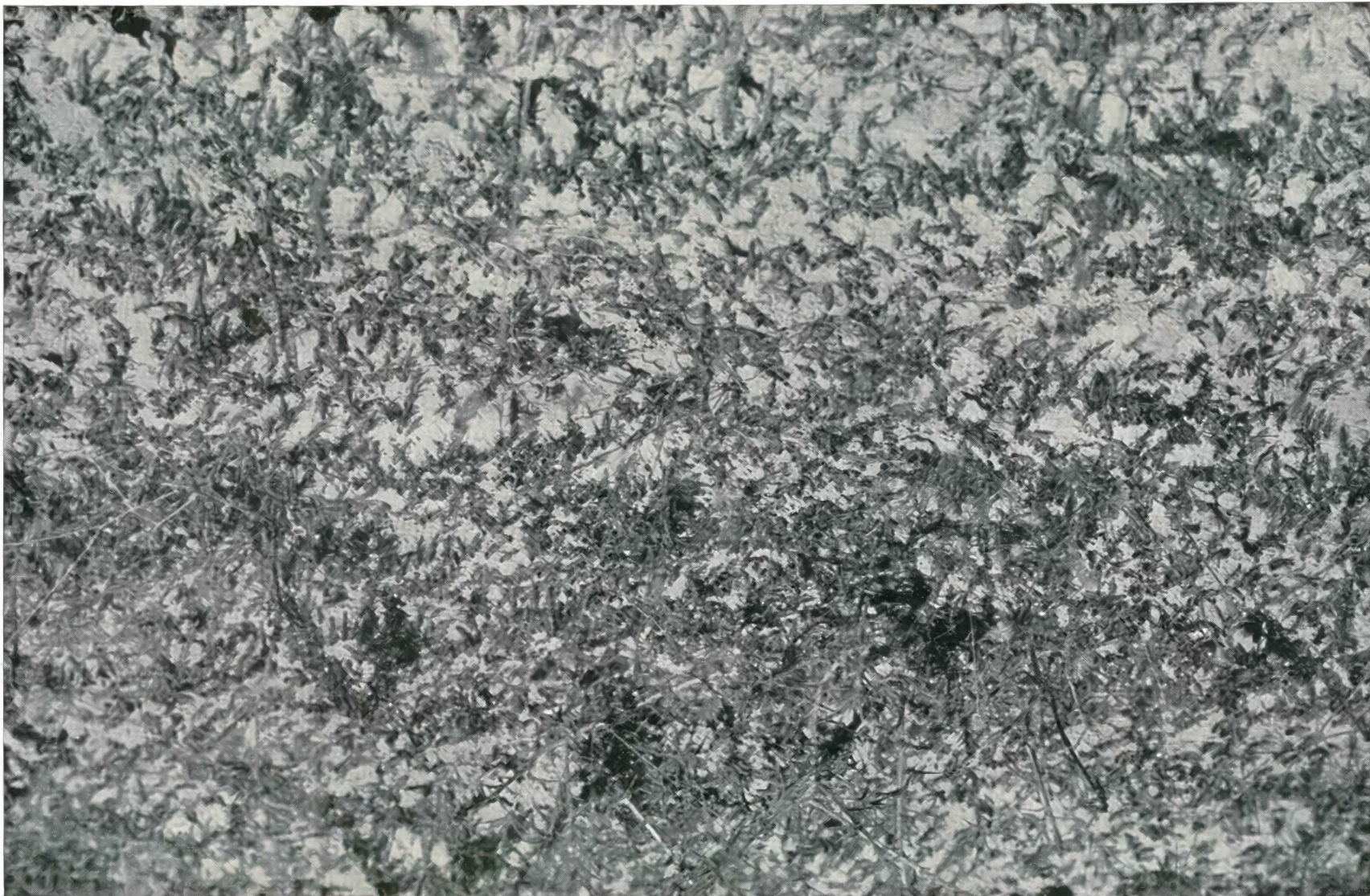


Photo by American Colony Photographers, Jerusalem

THE LOCUST LARVA AS FIRST SEEN NEAR JERUSALEM (SEE PRECEDING ILLUSTRATION)

“No wonder, then, that the writer of the book of Judges likens the hordes of the Midianites, who for years devastated Israel’s land, to locusts, and ‘as the sand which is upon the sea-shore for multitude’” (Judges 7: 12) (see text, page 522)



Photo by American Colony Photographers, Jerusalem

A VINEYARD STRIPPED BY LOCUSTS OF ALL ITS LEAVES

“Once entering a ‘vineyard,’ the sprawling vines would in the shortest time be nothing but bare bark, the long, dark stems lying flat on the ground much resembling snakes” (see text, page 529). Note how even some of the shoots have been barked, leaving them snow-white.

the sterile and rocky mountains, whether it be damp grounds or those absolutely parched and dry, there seemed to be little difference.

While going to the Samaritan Pass-over we* observed in the valleys we passed between Bethel and Mount Gerizim swarms of the adult locusts flying about. At Zahtara the entire mountain side, a rocky slope facing south, with sparse wheat patches between the boulders, was simply covered with locusts preparatory to laying eggs. On the homeward trip the next day they were still there, and while climbing a short-cut on foot we each trod to death several hundreds, so thick were they. Five days later, returning for the ceremony on the last day of the Passover, not a trace of one was to be found.

COLLECTING THE LOCUST EGGS

Once the alarming extent to which these eggs were laid was realized, the authorities issued a proclamation, dated April 19, requiring each male person from 16 years to 60 to gather eleven pounds of the eggs.

To be among the first to set a good example, the young men of the American colony at once began the work of collecting; for so steeped are the natives in fatalism (Allah has sent the "jarad" and they are helpless to fight them) that, unless forced or shown how to, few would turn a finger over in self-defense. The fields chosen for our work were those last mentioned about "Gabah" (Gibeah), now a poor village, possibly the very Gibeah whose inhabitants were once the cause of the first Israelitish civil war, in which the tribe of Benjamin all but perished (Judges 20).

As we started out, loaded with small knapsacks of food and blankets, and armed with small picks, the clouds gathered and the winds blew. It was so late in the year that hard rains had not been anticipated; but when the party got to Ain Farah, where headquarters were to be established with "Abid el Waleh," a

* The party mentioned were the three responsible for the present article—Mr. Lewis Larson, photographer; Mr. Lars Lind, and the author.

character few who have been to Ain Farah do not know, sleeping outdoors had to be abandoned because of the downpour.

Seemingly the only alternative was to accept the host's hospitality in his sheepfold, a large natural cave with but a small opening, of which the precipitous cliffs here are full. Such were the "sheep-cotes," by the way, at Engedi, in which the pursuing King Saul lay asleep at the mercy of his fugitive David, who even now refrained from killing his life-long enemy, but, instead, only "cut off the skirt of Saul's robe" (1 Samuel 24).

But not relishing the enjoyment of passing the night in a flea-infested cave, the like of which kings in the past had not despised, Yankee ingenuity constructed instead a small roof out of a few sheets of corrugated iron, which were Abid el Waleh's share of booty from a recent pillage, and although the rain beat down relentlessly, it afforded some little protection. After two such nights and rainy days the party returned home with but a handful of eggs; but, better still, with fields for future egg hunting well located.

The storm once over, a little tent afforded protection for the second campaign. Most of the locust eggs we discovered were in uncultivated fields of the hardest dark-red soil, covered with a thin sod. A small patch would be found only a few meters in extent literally honeycombed and filled with the eggs; then for a space no more would be found till a new spot was located. A warm, sunny place with a southern exposure seemed to be the rule.

It is estimated by competent authorities that as many as 65,000 to 75,000 locust eggs are concentrated in a square meter of soil, and allowing for a loss of 30 per cent in hatching, some 60,000 destroyers can emerge from a space 39 inches square (see also page 516).

NATURAL ENEMIES OF LOCUSTS

Locusts are not, however, without their own enemies provided by nature. Large flocks of storks flew past Jerusalem during the early days when the adults arrived and after the larvæ were hatched, consuming abnormal quantities, for which

reason the natives have always given "Abo Saad"* a warm welcome (see page 514).

While collecting these eggs many of the cells were found to contain eggs laid by certain species of flies, probably the *Ida lumata* Fabr. and the *Anthomya cana* Macq., the young worm or larva of which, when hatched, lives upon the locust eggs, sucking them dry, till developed into the chrysalis and emerging a full-fledged fly. Wild birds and domestic fowls developed a ravenous appetite for locusts, while with the smaller larvæ and pupæ turkeys and chickens simply gorged themselves, with the result that the yolk of their eggs became a deep-red color.

At breakfast one morning Allie brought on a most gorgeously tinted omelet, when little Spafford, fixing his astonished eyes on it and hearing that the chickens feeding on locusts were responsible for the change in color, broke out with "Mama, if we hatched those eggs, would locusts come out with the chicks?"

But while countless numbers thus fall prey to the appetites of tiny worms or these larger birds, it is said that the locust is its own worst enemy, as later we shall see (pages 544 and 547).

A TRICK IN EVERY TRADE

Of late the city natives have revived an old dish called "ishareyeh," a sort of macaroni rolled by hand from dough into small particles which exactly resemble locust eggs. While many forms of evading the law were sought, one of the trickiest ways was by a certain Jerusalemite who, not wishing to exert himself in collecting the locust eggs, shirked the burden in true Oriental style onto his wife. She, procuring some white clay, rolled it like "ishareyeh" into forms so like the locust eggs that, when presented to the officer in charge, they readily passed for the genuine article. She, of course, could not keep the secret; it was too good to keep, and that is how it is now known.

THE CREEPERS REACH JERUSALEM

Scarcely had Jerusalem gotten over the

*Abo Saad (Father of Good Luck), the Arabic name for the stork.

excitement of the search for eggs, scarcely had they relapsed into a sense of something like safety from disaster as a result of those efforts, than word poured in that first the lowlands, or Plain of Sharon, and then the hill country to the west of the city, were teeming with the young larvæ.

At Jerusalem proper no eggs had been laid, as above noted, the nearest fields being in the Valley of the Roses, out of which the railroad emerges on approaching Jerusalem. From here, then, and from the Bethlehem district came the forces to attack the "Holy City."

When first hatched they were quite black and resembled large ants, having no signs of wings; but as they developed, passing through one stage and into another, they cast their little outer skins, now no longer large enough to contain the growing body. Thus they pass through several moults, of which, however, but three stages are plainly distinguishable—the larva or wingless stage (see page 518), the pupa, with small wings, or properly wing sacks developing (see pages 536 and 543), and the full-fledged flying locust (see page 538).

Once hatched the little fellows seemed to hold together for a few days, till a little developed and in sufficient numbers, when they would start their forward march of from 400 to 600 feet per day, clearing the ground of any vegetation before them.

It was observed that these new broods instinctively went in the reverse direction to that from which their flying parents had come, making practically for the northeast. None but those who have seen them can begin to imagine their countless multitudes and the destruction to follow. No wonder, then, that the writer of the book of Judges likens the hordes of the Midianites, who had for years devastated Israel's land, to locusts, and to "the sand which is upon the sea-shore for multitude" (Judges 7:12) (see page 519). "For they (Midian) came up with their cattle and their tents; they came in as locusts for multitude; both they and their camels were without number: and they came into the land to destroy it" (Judges 6:5).



Photo by American Colony Photographers, Jerusalem

A FRESHLY ATTACKED FIG TREE

In an inconceivably short time every leaf is consumed, leaving bare and barked twigs only



Photo by American Colony Photographers, Jerusalem

A FIG TREE JUST BEFORE THE LOCUSTS ATTACKED IT (COMPARE WITH NEXT PHOTO)

LOCUSTS CAUSE SEASICKNESS

One evening it was heard that the locusts had already reached the German colony and the railroad station, and as we went out the next day to see them, scarcely had our carriage swung around from the Jaffa Gate than we found the white road was already black with them. Ever in the same direction they pushed

up the "Western Hill," still commonly called Zion, even entering the houses about the "Tomb of David." The roads now became so slippery from the masses of the little, greasy bodies crushed beneath the horses' hoofs that the horses could scarcely keep a footing and had consequently to be driven slowly and with great care. Afterward it was heard



Photo by American Colony Photographers, Jerusalem

A FIG TREE JUST AFTER THE LOCUSTS ATTACKED IT (COMPARE WITH PRECEDING PHOTO) (SEE TEXT BELOW)

that likewise trains throughout the country had been stopped for hours at a time, notably on the Damascus-Haifa line near the Lake of Galilee.

Below the Lower Pool of Gihon old olive trees, yesterday green, were now nothing but bare trunks and twigs, and further up the valley a couple of beautiful mulberry trees had just been attacked, the leaves falling like rain, and already the ground was deeply strewn with them, and long before evening they, too, were leafless. This, however, proved to be but a sample of coming things.

The locusts, when advanced into the second or pupa stage, walk like ordinary insects, leaping only when frightened into a quicker pace, which they readily accomplish by the use of their two long and powerful posterior legs. However, while still in the first or larva stage, they seemed to hop much like fleas, so that when anything neared their thickened masses it seemed as if the entire surface of the ground moved, producing a most curious effect upon one's vision and caus-

ing dizziness, which in some was so severe as to produce a sensation not unlike seasickness. The same was also true when watching them undisturbed on tree or field.

SCALING THE TOWER OF DAVID

One of our most interesting experiences, while noting the locusts' methodical but stubborn moves, occurred when they first reached Jerusalem. Countless numbers of the young locusts poured into the broad, walled road leading into the city from the west, past the United States Consulate to the Jaffa Gate. For three or four days an incessant and unending stream filled the road from side to side, like numberless troops marching on parade, and in spite of the traffic at this junction, which to this city is like lower Broadway to New York, their ranks, although thinned, entered the ancient gateway and the New Breach. "Though in among the weapons they fall they shall not stop" (Joel 2:2).*

* The Emphasised Bible, Rotherham.

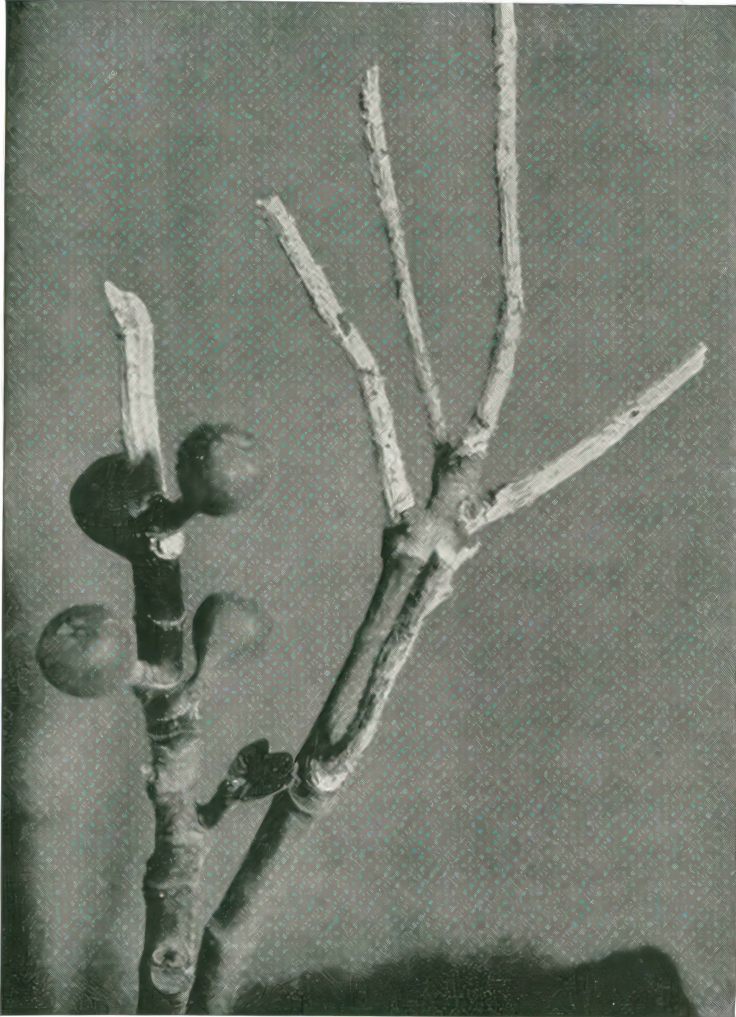


Photo by American Colony Photographers, Jerusalem

"He hath . . . barked my fig tree; he hath made it clean bare. . . . The branches thereof are made white" (Joel 1:7). This photograph was taken about two weeks after the locusts had destroyed the tree (see text, page 529).

Thus the moat around "David's Tower" was so filled that the dry earth seemed to be a living mass. Up and up the city walls and the castle they climbed to their very heights.

The origin of this tower, as all will infer, has been attributed to King David ever since the Middle Ages, and while it may not be the very "Castle of Zion," the foundations, and especially the site as a natural defense, must have dated back many centuries, if not to the days when Jerusalem was created an Israelitish city from the older Jebus, wrested from the Jebusites by David. The castle now affords a fine example of the ancient style of fortifications (see page 517).

Did not Joel then see the already an-

cient walls of Jerusalem in his day, as we now do, form so slender an obstacle to tiny soldiers composing immense armies, causing him to so graphically exclaim: "They shall run like mighty men; they shall climb *the wall* like men of war; and they shall march every one on his ways, and they shall not break their ranks"? (Joel 2:7). What should have impelled them thus, against odds, to make for the old walled town; for, as all who have been here know, "Jerusalem is built as a city that is compact together" (Psalm 122:3), affording nothing in the way of forage for them? Seemingly it can only be explained by their instinct leading them in a definite direction.

After a few days' effort, however, they reversed their course, and for several days streams of them made for the opposite direction, but only far enough to escape the barrier which the city afforded; and,

this once attained, they swung around into the very direction heretofore pursued.

Again, what could have instructed them thus to escape the difficulty? Solomon, the first naturalist, if we may thus call him, says of them: "The locust hath no king, yet go they forth all of them by bands" (Prov. 30:27).

At the consulate the fight was taken up to save the garden. It lay, as we have seen, in the main path of the locusts. The inclosure, about the size of an ordinary American city lot, required five men to keep incessantly brushing the locusts down from the walls on the three sides attacked. At the southern end, so persistent were they that but a few seconds



THE ATTACKING HOSTS

“Disastrous as they were in the country, equally obnoxious they became about the homes, crawling up thick upon the walls” (see text, page 533).

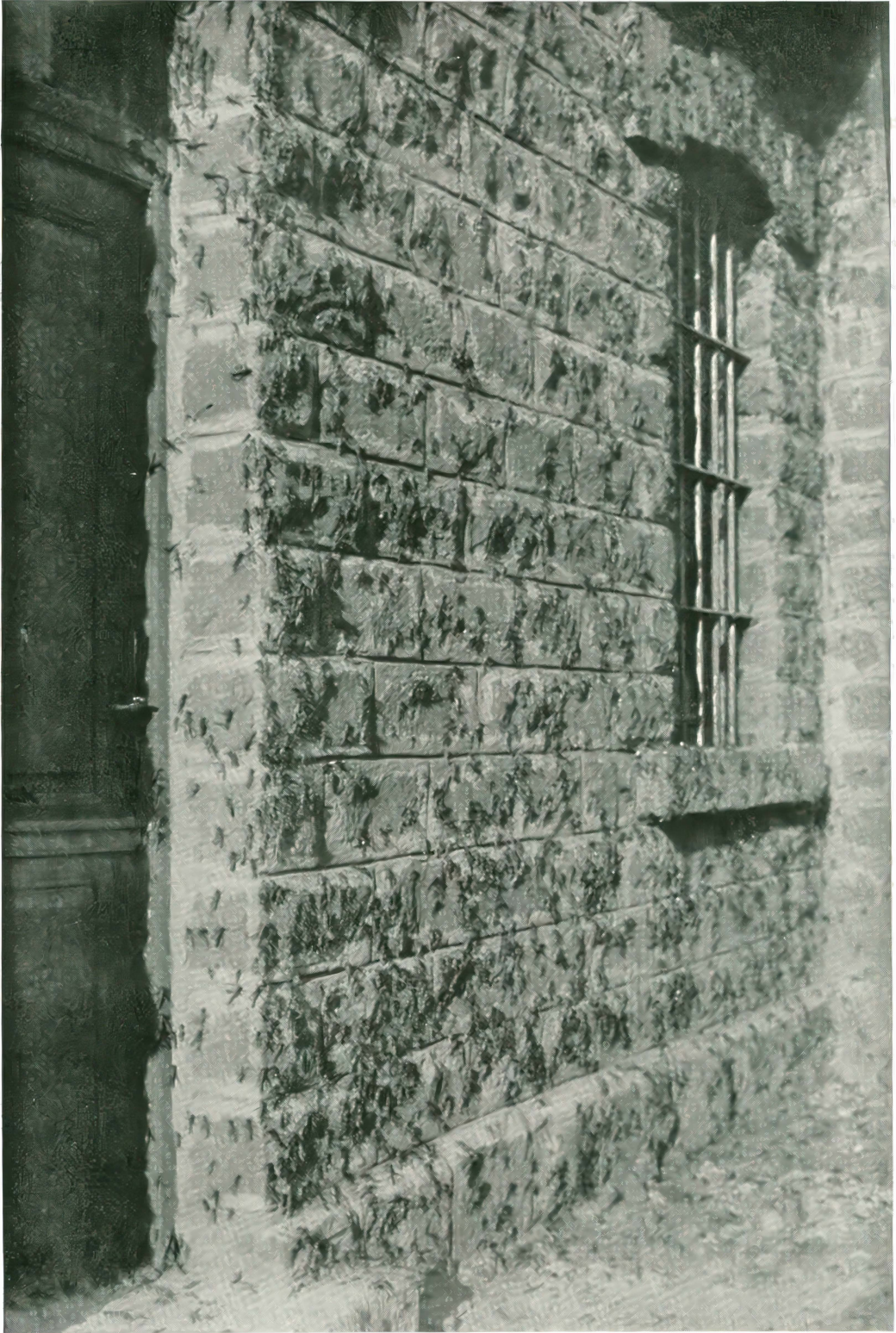


Photo by Dr. P. Mühlens

“AND THEY SHALL FILL THY HOUSES. AND THE HOUSES OF THY SERVANTS, AND THE HOUSES OF ALL THE EGYPTIANS”

Thus during the Egyptian plagues we find Moses announcing the locust scourge in terms of which our recent experience was such an exact duplicate (Exodus 10:4-6) (see text, page 533).

after being cleaned the wall would again become a living mass.

It was the 28th of May when the larvæ, already passing into the pupa stage, reached the quiet of Gethsemane, now in its full summer bloom; but scarcely had a day passed before every tender thing was consumed, and even the leaves of the woody cypress and of the olive trees, the latter about 1,000 years old, were threatened. "The land is as the garden of Eden before them, and behind them a desolate wilderness; yea, and nothing shall escape them" (Joel 2:3).

But now, after passing up this narrow defile between the city and Olivet, and to the west of the city, making through the more sparsely built new Jerusalem, they at last reached the northern suburbs; so that the entire town, with the exception, as before noted, of the portion within the walls, fell a prey to their ravages. We shall now try to depict what was here seen and befell the entire land from "Dan to Beer-sheba"* (see map, p. 542).

VINES AND FIG TREES FIRST ATTACKED

Fortunately by the time these young broods had hatched the grain crops were too far advanced to be much hurt. The reaper had already thrust in his sickle. But alas for the fruits and summer crops!

The native vineyards and orchards are always planted here in perfect confusion. Between the vines one finds figs, olives, pomegranates, quinces, and other trees. These were the places at which the locusts naturally halted, for the rapidity of their marches and the frequency of their stops seemed to be regulated by the amount of forage encountered.

Once entering a "vineyard," the sprawling vines would in the shortest time be nothing but bare bark, the long dark stems lying flat on the ground, much resembling snakes (see page 520). Fig leaves perhaps of all things best suited their taste, and when once a tree fell a prey to them the ground about would be literally layers deep, and the trunk so covered with crawlers as to make it a bright yellow color. On every leaf dozens

*An expression taking in all of the land once belonging to the Hebrews (1 Kings 4:25).

would be perched (see page 523). They first ate away the tender parts, leaving a perfect skeleton of the large broad leaves. But soon these, too, were devoured, and usually after one day's work the tree stood naked of any leaves, with nothing but the hard unripe fruit protruding stiffly from the branches (see page 525).

When the daintier morsels were gone the bark was eaten off the young topmost branches, which, after exposure to the sun, bleached snow-white. Then, seemingly out of malice, they would gnaw off small limbs, perhaps to get at the pith within. The effect thus caused was a weird one, resembling white candles on a dried-up Christmas tree (see illustration on page 526).

"He hath laid my vine waste, and barked my fig tree: he hath made it clean bare, and cast it away;* the branches thereof are made white" (Joel 1:7).

In the same manner all fruit and many shade trees were deprived of all that made them attractive and useful. The quinces (probably the "apple" of the Bible) were stripped of leaves, and, like the figs, the fruit was left on to wither, harden, and fall off, while the pitted fruits, like the apricots, had the meat of the fruit consumed and the seed left still adhering mockingly to the tree; so that, in but a few days, Jerusalem, although never too verdant in summer, presented a sad and desolate aspect. But worse was yet to come.

FRUIT AND VEGETABLE MARKETS EMPTY

The vegetable and fruit seasons were just setting in as the young brood was hatching. Even to one looking over the local desolation the vastness of the destruction could not be realized. One day David's Street markets were full of fresh vegetables at the usual low prices. The commoner apricots from Ramleh† made their first appearance that day and were not seen again. The better ones from near Bethlehem likewise only on that day made their appearance, and it was not

*"And cast it away," no doubt referring to the clipping off the twigs.

† The second station on the railroad up from Jaffa, supposed to be the home of Joseph of Arimathæa, who claimed Jesus' body and laid it in his new tomb.



Photo by American Colony Photographers, Jerusalem

AMERICANS FIGHTING LOCUSTS

"In the path of the locusts was sunk a bottomless box, the inside lined with shining tin, up which the locusts could not crawl, while on each side a wing was provided, similarly prepared with a smooth metal face, with the object of directing them into the box. The fighters made two long lines, one on each side of the trap. . . . A large flag, the darker the better . . . proved to be the most formidable tool one could employ to make them move in the desired direction" (see text, page 535). Note the thickened masses driven together and just entering the trap. The locusts at this stage of their development cannot fly.



Photo by American Colony Photographers, Jerusalem

A LOCUST TRAP

“As long as they came in these endless chains, with but a little guiding, their ranks could be narrowed and practically driven from morning to night into the sunken box” (see preceding picture and text on page 535).



Photo by American Colony Photographers, Jerusalem

A LOCUST MOULTING AND HIDING PLACE (SEE PAGE 543)

The Prophet Nahum, allegorically speaking of Judah's enemies, likens them to the moulting locusts thus: "Make thyself numerous as the swarming locust. . . . The grass locust hath stripped itself and flown away! . . . Which settle in the hedges on a cold day. The sun hath broken forth and they are in flight" (Nahum 3: 17. The Emphasised Bible, Rotherham). We have before noted how the locusts hide from the cold in loose stone walls. The Hebrew word here rendered, "hedge," is "*gedarah*," identically the same as the present Arabic name for these rubble walls, as shown in the picture.

difficult to perceive that they had been prematurely and hurriedly plucked to save them.

But these are but drops in the bucket. Miles and miles of water- and muskmelon fields fell a prey to the locusts on the plains. Likewise were destroyed the cucumber, vegetable marrow and tomato fields, and the truck gardens in plain and hill, to say nothing of the absolute annihilation of the grape and fig crops. Thousands of acres of dura, or native corn, still but a few inches tall, were eaten to the ground.

In fact, nothing escaped their ravages except the orange gardens at Jaffa, due to the heavy sea breezes and strenuous human efforts, while those of the suburbs were entirely eaten. The only vegetables now entering the Jerusalem markets came from Jericho. Here the eggs laid in the alkali fields seemed not to hatch, while those near the Jordan were thoroughly dug out; so that not a single wingless locust was seen there, and the crops remained undisturbed, till suddenly enveloped by the new fliers, as we shall see later (see page 544). The only vegetables and fruits now available came from the Jaffa gardens, but instead of being, as usual, the food for the poor, they were so rare that none but the richest could pay the price at which they sold.

INVADING THE HOMES

Disastrous as they were in the country, equally obnoxious they became about the homes, crawling up thick upon the walls and, squeezing in through cracks of closed doors or windows, entering the very dwelling rooms (see page 528). When unable to find an entrance they often scaled the walls to the roofs, and then got into the houses by throwing themselves into the open courts, such as most Oriental houses are built around. Women frantically swept the walls and roofs of their homes, but to no avail.

In Nazareth it required several hundred men to sweep the locusts together and to destroy them, and many donkeys to carry away to near-by fields the miniature carcasses. Stores were closed and some houses abandoned, for there it seemed as if the locusts were even more active than in other towns.

During the Egyptian plagues we find Moses announcing the locust scourge in terms of which our present experience is such an exact duplicate, as follows: "Behold tomorrow will I bring the locusts into thy coasts: and they shall cover the face of the earth, . . . and they shall eat the residue of that which is escaped . . . every green tree which groweth. . . . And they shall fill thy houses, and the houses of thy servants, and the houses of all the Egyptians" (Ex. 10:4-6).

About our houses they became so thick that one could not help crushing them with every step. They even fell into one's shirt collar from the walls above and crawled up onto one's person. Women were especially troubled with them, and on one occasion a lady, after being away from home for half a day, returned with 110 of them concealed within the skirts.

Whenever touched, or especially when finding themselves caught within one's clothes, they exuded from their mouth a dark fluid, an irritant to the skin and soiling the garments in a most disgusting manner. Imagine the feeling (we speak from experience) with a dozen or two such creatures over an inch long, with sawlike legs and rough bodies, making a race-course of your back!

One warm, breathless night they were found crawling thick into our windows, which were left open after sundown, for usually during the cool nights they never moved. "They shall run to and fro in the city; they shall run upon the wall; they shall climb up upon the houses; they shall enter in at the windows like a thief" (Joel 2:9).

A FELLAH PESSIMIST

One evening of the first days of June, while fighting the locusts on Scopus, the mountain adjoining Olivet to the north, and the very ground on which Titus' Roman army pitched camp in 70 A. D., when Jerusalem was entirely destroyed (Mark 13:2), an aged fellah walked up, and notwithstanding the wholesale capture befalling the locusts, broke out with: "All this is no use; go home and rest; you can do nothing. They are Allah's army, and once they fly they will destroy everything. So it was 'sent el jarad'



Photo by American Colony Photographers, Jerusalem

AN OLIVE ORCHARD JUST AFTER THE LOCUST INVASION

The natives all spoke of how the orchards looked as if they had been attacked by fire, calling to mind Joel's words, "The flame hath burned all the trees of the field" (Joel 1:19) (see text, page 543)

(year of the locusts) when I was young. In four minutes they left all the olive trees as wood."

He walked away seemingly amused at our optimism, while we smiled, not knowing from experience, as he did, the truth of his apparent exaggerations.

ALLAH'S ARMIES

It is interesting to note that the natives all speak of them as "Jaish Allah" (God's army), they even finding the word "askar" (soldier) written in the Arabic characters upon the wings of the invading locusts. In the same way they were looked upon by the Hebrews of old. Thus: "The Lord shall utter his voice before his army: for his camp is very great" (Joel 2:11).

From the "Hadith," or books containing the collected oral sayings of Mohammed, with explanations, we translate the following: "Do not kill the locusts because they are the host of God the Most Mighty." It was so said (thus it is explained) provided they did not attempt to spoil the grain fields (that is, of the Mohammedans). For (so the story runs) a locust fell between the two hands of the Apostle (Mohammed), and it was written on its two wings in Hebrew: "We are the host of God the Most Mighty, and we have ninety-nine eggs, and had the hundredth remained to us we should have eaten the world with all that is in it." Therefore the "Apostle" said: "Our God, destroy the locust; kill its great ones and cause to die its little ones, and corrupt its eggs, and close their mouths against the plantings of the Mohammedans and their places of getting a living."

FIGHTING THE LOCUSTS

A few words of our personal experience fighting locusts may not be amiss.

At first the locusts, already having marched a considerable distance from the place of hatching, were found in endless columns "as a strong people set in battle array" (Joel 2:5). It was now easy to entrap them. In their path was sunk a bottomless box, the inside lined with shining tin, up which the locusts could not crawl, while on each side a wing was provided, similarly prepared

with a smooth metal face, with the object of directing them into the box.

The fighters now made two long lines, one on each side of the trap. To noise and racket the locusts seemed only to turn a deaf ear; but a large flag—the darker the better—with which to cast a deep shadow upon the ground, proved to be the most formidable tool one could employ to make them move in the desired direction; in fact, countless numbers could thus be guided and held in check if one but anticipated the general direction they wished to go (see page 530).

As long as they came in these endless chains, with but a little guiding their ranks could be narrowed and practically driven from morning to night into the sunken box (see page 531). Now and then the trap would have to be emptied; or if the place the trap was set was to be abandoned in favor of a better position, it was an easy matter when this bottomless box was almost full to raise it out of the ground, leaving the locusts behind in the hole, and then hurriedly bury the contents. It was found by actual test that when thus buried in great masses they quickly died, and in 24 hours would develop into a putrid mass.

As the evening advanced they became sluggish and hard to move, and would crawl under individual stones, such as the fields are full of, or into small piles of rock and the common rubble walls; but by the morning again instinct would have rejoined them into bands moving together on their plans of destruction.

However, toward the end of their pupa stage their columns became shorter and less constant. They seemed to form into smaller pillaging groups, with only the acquisition of food in view. Now it became more troublesome to trap them, as they had grown large and wary. Often, after anticipating their course and while sinking the trap into the hard and rocky soil, they would become alarmed and, turning tail, escape in all directions.

TRAPPING THE LOCUSTS

One evening while trapping them on the upper side of the hill we learned just in time that an immense number were just about to enter the property from the

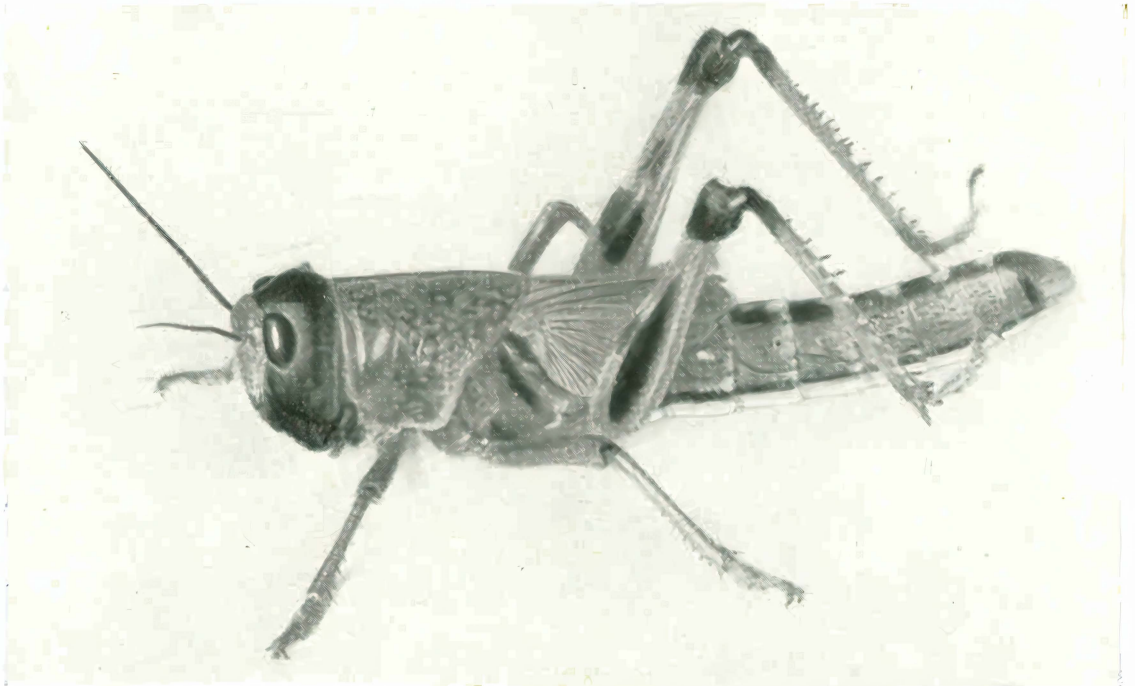


Photo by American Colony Photographers, Jerusalem

THE LOCUST (PUPA) JUST BEFORE ITS FINAL MOULT AND TRANSFORMATION INTO
THE FULL-GROWN FLYING INSECT

The large wings of its future state are fully developed and neatly folded up in the four membranous cases, resembling tiny wings (see text, pages 522 and 543)

opposite side. At once all efforts were turned in this direction, and the trap was sunk into the lower edge of the field toward which they were making; but no sooner had it been set in place than the locusts again changed their course. Notwithstanding the laborious task involved, the trap had to be moved, during which process it was nip and tuck to keep the locusts from escaping. Once, however, they made in the right direction, they jumped, hundreds at a time, into this death trap.

The evening hours were now upon us; the locusts, weary from being driven and benumbed from the cool breezes, seemed to near the trap exhausted, while those behind kept piling up till the earth for a small space was covered layers deep. To facilitate matters, with spade and rake they were scraped into the trap, now constantly being emptied.

Thus in about an hour's time four large sacks full were caught and destroyed, each containing no less than 100,000 of these insects. Many escaped and made for a near-by thorny patch, on which was now piled more dry sticks and thistles,

which when set afire burned alive many thousands more. The above is but an average example showing how and in what quantities they were caught.

To overcome the difficulty of the labor and time required in shifting the sunken trap, Yankee ingenuity again came to the rescue. An old box, tin-lined, was set on top of the ground, with an inclined plane leading up to it. The locusts, which can make ascents so much easier than descents, were driven into it just as easily as into the sunken trap. It was so quickly and easily placed that it proved to be a great success, the only drawback, as with the older type, being the labor of emptying it and the numbers that unavoidably escaped. The next development was a tin hopper set on legs high enough to admit of fastening a sack below. To this the inclined plane was similarly attached. Thus the locusts jumped directly into the bag, which, when full, was readily detached and replaced with another, while the full sacks, not a locust of which could escape, were so handy to carry away for destruction.

After over two weeks' steady and re-

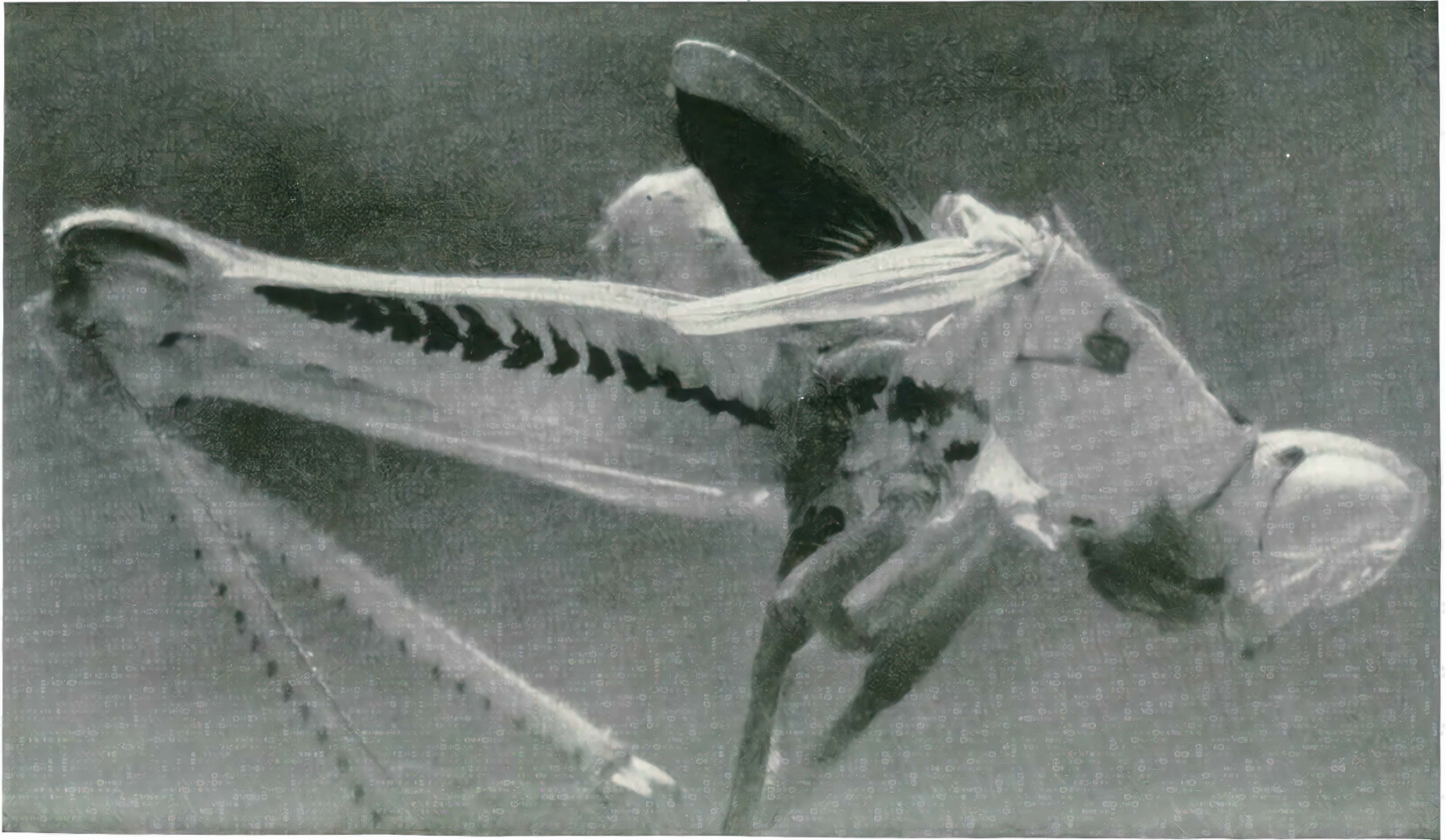


Photo by David Fairchild

THE SKELETON WHICH THE LOCUST SHOWN ON THE PRECEDING PAGE LEAVES BEHIND IT AFTER ITS FINAL MOULT
(SEE PAGES 522 AND 543)



Photo by American Colony Photographers, Jerusalem

DRYING THE WINGS

The locust now has its wings in their normal shape and is ready to try to fly. As the new flying locust casts its nymph skin the colors of its body are the most delicate hues, but after a couple of days of flying they deepen into a pronounced red effect.

lentless work, after faces were crimson and peeling and hands blackened from wind and sun, the fight to save the fields was given up and efforts concentrated upon protecting our homes and garden plots. Was it a losing fight? The aged fellah who predicted that it was useless to combat "Allah's army" surely would have said it was. From the standpoint of dollars and cents' worth saved to ourselves, it certainly was. But when we calculated the tons' weight and countless numbers of the pests eliminated from the

coming stages of disaster, to say nothing of the value of a good example and the engrossing interest in observing their habits and development, we felt that the results more than outweighed the costs and efforts.

ESSA'S PARABLES

During the latter stages of the fight Essa had stayed at home protecting a garden from the locusts that by this time were encroaching upon the newer residential sections of Jerusalem. One evening Essa was found perched upon a rubble wall, two flags in hand, mechanically waving off the stubborn intruders. He looked as if he had an attack of something akin to St. Vitus' dance, for having been on the job for about two weeks his motions seemed automatic and almost without effort. Up to that time the locusts had tried to get into our garden only by the back wall, and at the time the writer was ignorant of their fresh efforts from other directions.

"Well, Essa, the Wrestler (for such is his nick-name), are you a gaining or losing wrestler?" Essa dropped his flags a moment as if to rest, stroked his shaggy beard and adjusted his clumsy headgear, and then added with a twinkle of his small, dark eyes:

"Master, a certain son of evil on a lonely road met a peasant taking to market two large goatskins of oil, and, coveting the superior donkey carrying them, bethought himself of a method by which to get possession of it. Pretending to be anxious to buy the oil, the owner was persuaded to unload the two skins upon



Photo by American Colony Photographers, Jerusalem

A PALM FALLING PREY TO THE FULL-GROWN LOCUSTS

“Even on the scarce and prized palms they had no pity, gnawing off the tenderer ends of the swordlike branches, and, diving deep into the heart, they tunneled after the juicy pith” (see text, page 543).



A NYMPH CAMP

Photo by American Colony Photographers, Jerusalem

the ground and to open one for the supposed customer to see and taste. Once this son of evil had sampled the first skin he got the owner to hold the mouth shut while he should examine its mate. Having done so, he now pretended to wish to retaste the contents of the first skin, for which reason the owner held the second closed with his other hand. Thus the oil vendor found himself, both hands engaged, squatting between the two skins of oil, while the son of evil rode away on the donkey."

Essa smiled and his beady eyes again twinkled. "You see," he added, "while I am holding the locusts at bay on this west side, they are entering over the south wall, and I am in the same dilemma as the fellah who had both hands occupied holding the oil skins shut, and should he drop them to rescue the donkey the oil would naturally spill."

Visiting Essa the next day, it was observed that half the bean patch had disappeared, for despite Essa and our combined efforts the tenderer plants throughout the garden were slowly vanishing. Chaffing Essa in fun for thus yielding the bean patch to the ravages of so weak a foe, he again stopped his work (few Arabs can work and talk at the same time, the hands being needed to gesticulate with) and answered with a parable, which ran thus:

"A certain hunter secured a living by making shepherds' flutes of bones taken from eagles' wings. One day, being without his gun, by chance he stumbled upon a carcass on which a number of eagles were perched, stupefied from overeating. Crawling stealthily up, he seized the legs of the two largest birds. They struggled to escape; then, flapping their wings, started raising the hunter gently from the ground. Still so riveted were his thoughts upon the eight flutes he was going to make from their bones and the two megedies* he would get for each, that he did not realize his danger till too late. Looking down, he now saw the earth slowly receding from below him, when he heard a faint voice from a passer-by saying: 'Let go of one and hold on to one.' He

*A *megedie* is a Turkish dollar, equaling about 83 cents.

did so, and one eagle, unable alone to sustain his weight, brought him to the earth safely, with one eagle bagged. So you see," Essa drew the lesson, "half a bean patch is better than none, just like the common saying, 'Half a stomach full removes the necessity of having a full one.'"

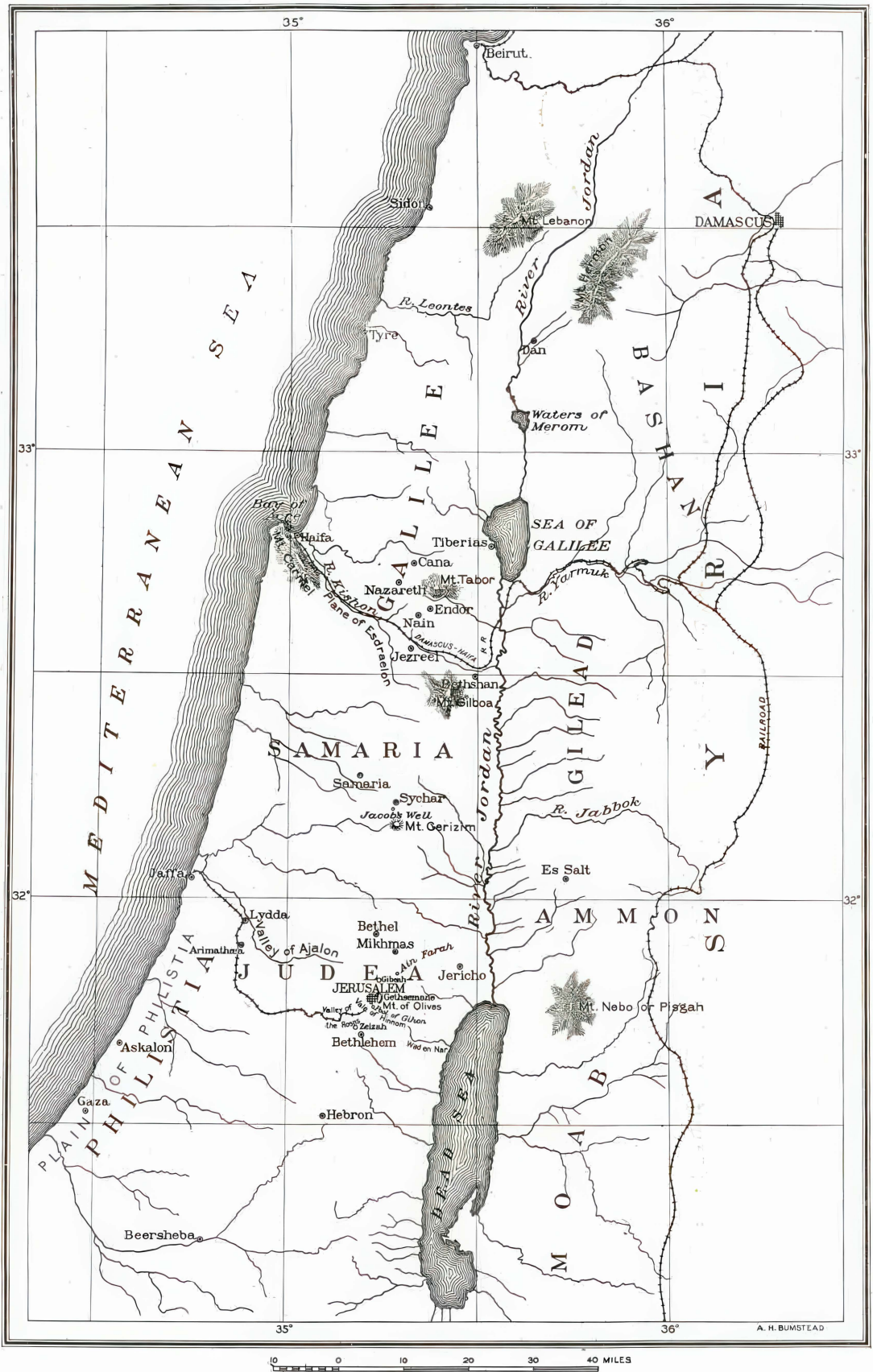
HAVOC CAUSED BY YOUNG FLYING LOCUSTS

In the early days of June a few scattered locusts of a decided red color were seen about the tree-tops. Some supposed them to be a kind of grasshopper, for they were so different in color to the fliers that first came and laid their eggs that it was difficult to detect in them the resemblance to the parents.

On the 10th of June the air all at once was filled with quantities of these new flying locusts, with the thin transparent wings, producing the effect of a large-flaked snow-storm. It was at first hard to realize that these had not, as most supposed, flown in from elsewhere, but *right under our eyes had been transformed from the small, creeping locusts—a process we shall soon describe (see page 543).*

During the day they kept busily hovering about from tree to tree or alighting on some green patch, while toward evening they settled for the night by myriads upon the olive trees, almost covering them and transforming the dark green foliage into a distinctive red appearance. At once they attacked the small berries, which fell to the ground like hail, along with occasional leaves, and as the fliers wrought destruction above, the creepers devoured what fell below; so that on the trees attacked often not a berry was to be found in the morning.

Up to this time the olive orchards had suffered comparatively little. The creeping locusts had not seemed to care for the tough, bitter leaves while better things were at hand, and as a rule only severely damaged individual trees where other food was scarce. But now that these ravenously hungry, freshly moulted fliers appeared, food had already become scarcer, obliging the creepers to seek the heretofore despised olive, crawling up



MAP SHOWING THE REGION OF THE LOCUST PLAGUE WHICH RAVAGED THE ENTIRE LAND FROM "DAN TO BEER-SHEBA" (SEE PAGE 529)

the trunks layers deep. Between the two they stripped every leaf, berry, and even the tender bark, leaving only, where such existed, the green tufts of the poisonous mistletoe.

Likewise every variety of tree was attacked and stripped, with the sole exception of the Persian lilac (*Melia azedarach* L.) and oleander bushes (*Nerium oleander* L.). The succulent cactus (*Opuntia Ficus-indica* L.) they seemed very fond of, but instead of commencing on the edge of the large leaves, they ate away layer after layer over the whole surface, giving the leaves the effect of having been jack-planed. Even on the scarce and prized palms they had no pity, gnawing off the tenderer ends of the sword-like branches, and, diving deep into the heart, they tunneled after the juicy pith (see page 539).

LAMPS NEVER BEFORE DIM ARE BEING
EXTINGUISHED FROM LACK
OF OLIVE OIL

Last spring the olive trees were overloaded with bloom and a fine crop was anticipated. Now the majority of the groves have been so severely injured as to render them fruitless for several years (see page 534). As last year was the off or bad year, olive oil, usually so plentiful, is now high-priced and almost unprocurable, and being one of the food staples of the poor, taking the place of meat and butter, the loss of this crop, combined with the grapes, no doubt will outweigh, economically and commercially, the destruction caused to all other crops combined.

From days immemorial olive oil in this land has been used as fuel for lighting sacred lamps. Because of the locusts, lamps never before dim, hanging in Christian churches in front of icons and altars, are daily being extinguished, just as the sacrifices of Judah's Temple were unwillingly suspended after the locust devastation described by Joel: "Gird yourselves, and lament, ye priests: howl, ye ministers of the altar,—for the meat offering and drink offering is withholden from the house of your God" (Joel 1:13).

One bright spot, the only silver lining to the cloud yet seen, was indirectly caused by the annihilation of the grape

crop, viz., already "drinks" have doubled in price; so that it is unnecessary with Joel to say, "Awake, ye drunkards, and weep; and howl, all ye drinkers of wine," because they are already doing it (Joel 1:5).

CHANGING THE NYMPH SKINS

At first the finding of a creeping locust in the act of changing its skin was a distinct novelty, for usually the process was effected during the early hours of the morning (see also page 522).

The pupa now had its entire growth. The large wings of its future state were fully developed and neatly folded up in the four membranous cases, resembling tiny wings (see page 536).

As the pupa neared this last moult it seemed to lose all appetite and seek a refuge from its brother locusts, for reasons we shall later see. To this end dry bushes and trees entirely devastated of any green or locust food were the usual nymph camps, while rubble walls and stone piles often formed substitutes—all such situated in a sunny, warm place (see page 532).

Just as it is about to moult the small body becomes much inflated with air; the bright yellow color of its skin seems to fade away and give place to a somber brownish red, the fact being that the outer skin, just about to be shed, as it loosens from the body, becomes semi-transparent, and we can actually look through it onto the outer skin of the future flier.

As the locust labors to release itself from the old shell, we see the new eyes emerging, leaving behind their old transparent films resembling miniature automobile goggles. With much shoving and pushing, the head alone emerges, the long wings slowly unfold from the sacks containing them, and the entire body, legs and all, drops out of its old shell.

Instead of depending upon a framework of bones within its body to give it the required strength and stiffness, the locust relies upon its tough outer skin, and therefore, now that it has lost its old shell, it cannot be otherwise than limp and soft, so that it has to remain still until the hot sun and dry air have hardened and stiffened it anew.

As the locusts moult and dry they begin to try their wings—first a few feet from the ground, then into the tree-tops, where they spend about two days and nights, and with insatiable appetites build up solidly their frail bodies, till, at some unknown and unheard signal, they fly skyward, collecting like a cloud of dust in a whirlwind, and migrate. Thus every few days, after great numbers have moulted, the air all at once would be thickened by the countless numbers leaving the country, while others of the creepers moulted and took their places, finally ending in the complete clearance of the land of the pupa.

It was noticed that these new fliers never collected for migration except when a strong west wind was blowing, which therefore carried them due east.

THEY COVERED THE FACE OF THE WHOLE
EARTH, SO THAT THE LAND
WAS DARKENED

Twice Bedouins from En-gedi, the historic spring situated on the western shores of the Dead Sea, reported that in passing many locusts had fallen into this salt lake and were washed ashore in huge piles, which news, however, lacks confirmation. One thing seems certain from the course they took when leaving here—that they must have been making for the great desert just east of the arable range of Moab.

Similar must have been the case in Joel's experience, for we read from his minute and graphic narrative: "And the Northerner will I remove far from you, and drive him into a land parched and desolate, with his face towards the eastern sea (Dead Sea), and his rear towards the hinder sea (Mediterranean),—then shall come up his ill odour, yea his stench shall ascend" (Joel 2:20).*

That Joel depicts faithfully, if not even mildly, the bad smell of the dead locusts, no one who has got even a whiff of their putrid masses can ever doubt. In Nazareth, to which we have before alluded, where so many were crushed to death in the narrow streets, actual observers state that the air for awhile was so putrid and vile as to be almost unbearable.

* The Emphasised Bible, Rotherham.

We have before noted that Jericho escaped the ravages of the creeping locusts (see page 533), but now, in passing the Jordan Valley, these fliers of recent date came in clouds sufficiently dense to darken the sun and cleared this Jericho oasis of its vegetable gardens and the leaves from the fruit trees, rendering it for a while as barren as the parched wilderness encircling it. Unlike the rest of the country, where the fliers (not to mention them in the creeping stages) remained for a couple of weeks, here the entire devastation was wrought by two visits lasting but a day or so each, after which diligent search could not produce a single locust.

Similarly, at the time of the Israelitish exodus, they formed one of the most grievous of the Egyptian plagues, and just as suddenly that plague ceased and the locusts were no more.

"And Moses stretched forth his rod over the land of Egypt, . . . and when it was morning, the east wind brought the locusts. And the locusts went up over all the land of Egypt; . . . very grievous were they. . . . For they covered the face of the whole earth, so that the land was darkened; and they did eat every herb of the land, and all the fruit of the trees, . . . and there remained not any green thing . . . through all the land of Egypt. Then Pharaoh . . . said I have sinned . . . entreat the Lord, that he may take away from me this death only. . . . And the Lord turned a mighty west wind, which took away the locusts, and cast them into the Red Sea; there remained not one locust in all the coasts of Egypt" (Ex. 10:13-19).

LOCUST CANNIBALISM

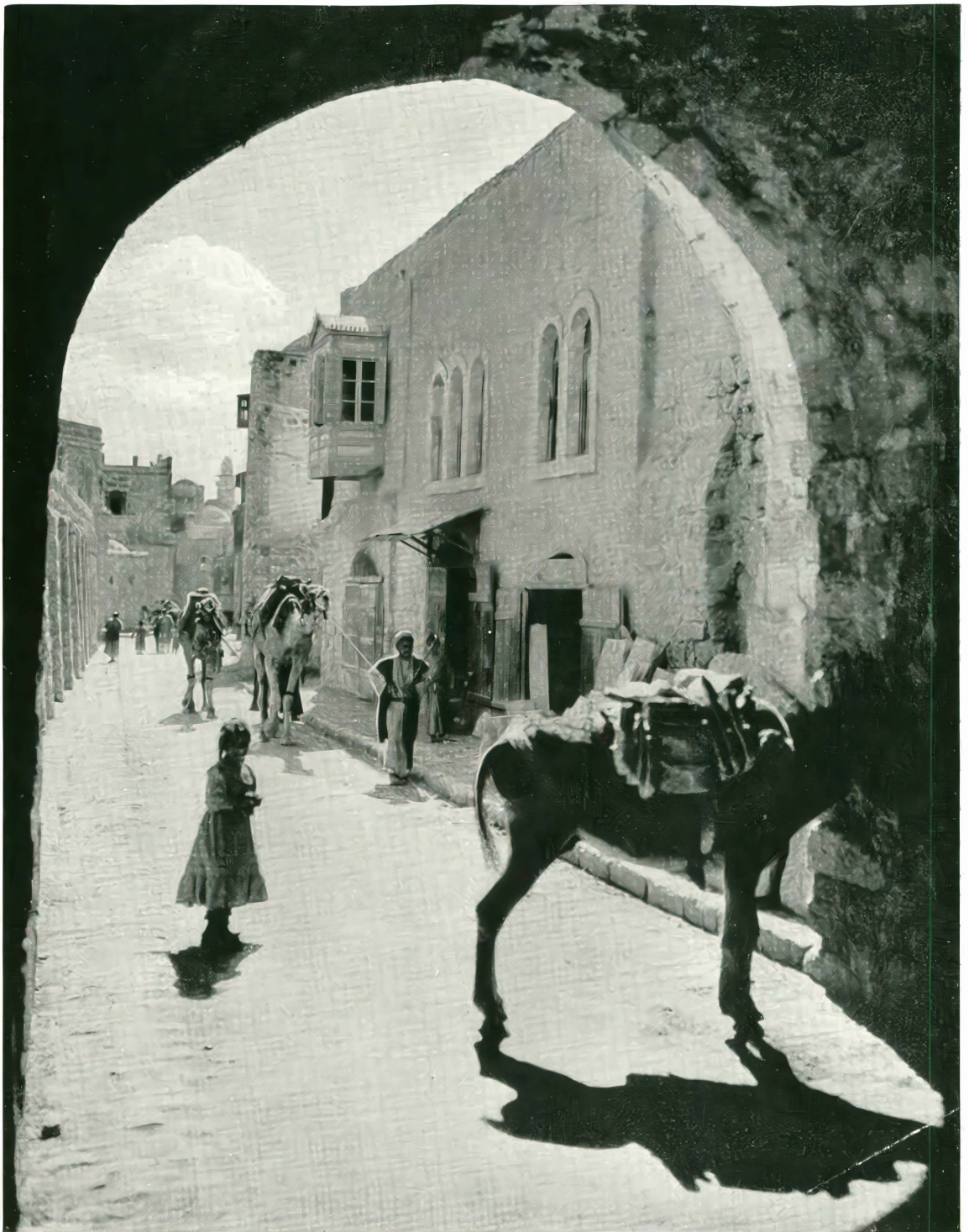
One strange revelation while watching the fascinating insects was to find that, contrary to expectations, locusts are not strictly vegetarians, being especially fond of the taste of flesh of their own kind.

While on the usual march, vegetable food being still abundant, it would often be seen that a larger locust would, without provocation or warning, walk up to a smaller one and with one bite nip off one of the long back legs. The victim seemed not to care, unless it happened to



THE RIVER JORDAN, WHERE THE CHILDREN OF ISRAEL ARE SUPPOSED TO HAVE
CROSSED INTO THE PROMISED LAND

“One remarkable feature is the variety of soils and climatic conditions under which these eggs were laid. In the Jordan Valley, earth’s lowest spot, 1,300 feet below the Mediterranean, we find them deposited on the very banks of this historic river, notably at ‘the Ford,’ where it is supposed the Children of Israel passed over into Canaan (Josh. 3); also farther down toward the Dead Sea, in soil heavily impregnated with alkali, where are the ‘slime pits’ into which probably, during their retreat, the kings of Sodom and Gomorrah fell when in full flight from Chedorlaomer and his allies” (Gen. 14) (see text, page 516).



A TYPICAL JERUSALEM STREET SCENE

"At breakfast one morning Allie brought on a most gorgeously tinted omelet, when little Spafford, fixing his astonished eyes on it and hearing that the chickens feeding on locusts were responsible for the change in color, broke out with 'Mama, if we hatched those eggs, would locusts come out with the chicks?'" (see text, page 522).

be a signal, as usually was the case, for dozens more to pounce on it, consuming the entire insect in a few moments. Sometimes a mightier one happened by and carried off the entire prey to devour by itself.

Similarly scarcely had a locust been hurt or crushed before its fellows would be found fighting over it like dogs with a bone. At times injured locusts would be found eating away at their own bruised bodies, and not uncommon was it to find a locust minus its annuli and entrails, running about seemingly unmindful of its deficiencies.

Nor was the craving for flesh restricted to locusts themselves, for they entered into beehives, and are reported to have spoiled them by eating both bees and honey. They likewise were seen eating ants.

Still more remarkable was a story told by a doctor friend who personally treated the case in question. It ran thus: A peasant woman on the plain of Sharon, during the locust pest, employed herself in trying to drive the creeping locusts out of her orchard. She took a tiny baby with her, and laying it in the shade of a tree, proceeded to her work. Returning shortly after, she found the child literally covered with the insects and its eyes already consumed out of the sockets. The writer's little boy also was bitten on the throat by one sufficiently to draw the blood.

LOCUSTS AS HUMAN FOOD

Since in Palestine and Syria locust visitations are very rare, the eating of them is practically unknown by the Arabs, while in Arabia, where the locusts make their appearances frequently, locust flesh is even found among the articles of trade.

The natives dismember the insects, pulling off legs and wings, but not the head, and while still alive roast them in a pan over a hot fire; and after being thoroughly dried in the sun, they can be stored away in sacks. The taste is said by them to be akin to that of fish.

In the Levitical law locusts are mentioned among the clean and edible animals, as follows: "These ye may eat, of all creeping things that fly, that go on all fours, such as have legs above their feet

to leap therewith (*i. e.*, jointed hind legs). . . . These of them ye may eat: the swarming locust after its kind," etc. (Lev. 11: 21, 22).

It will be recalled that John the Baptist is pictured as in the desert subsisting upon "locusts and wild honey" (Matt. 3: 1-4).

LOCUSTS IN ARABIC HISTORY AND FOLK-LORE

In "Hiyat el Hiwan" (Life of the Animals), by Sheik Kamal el Din el Damari, written in the year 773 of the Hegira (560 years ago), we find many a novel anecdote about the locusts, their medical properties, sayings of Mohammed and his caliphs concerning them, with primitive description of the locust itself. The following are selected quotations from this old writer, translated to preserve, as far as possible, the original author's style:

"*Jarad* (locust, from *ujrud*, meaning to scrape clean).

"When locusts come out of their eggs they are called *debbi*; when their wings appear they are called *gowga*, and when the color begins to appear in them, and the males become yellow and the females black, they are termed *jarad*. They are of different kinds—some large, some small, some red, some yellow, some white. When they want to lay eggs they choose hard places and rocks where cultivation is impossible. It strikes the place with its tail and the place opens, and in there it lays its eggs and here they are hatched and reared. The locust has six legs—two arms in the chest, two supports in the middle, and two legs on the body—and the edges of its legs are two saws. And they are of the animals that are led by a leader, and collect themselves like soldiers, and follow those which go first, whether up or down; and their spittle is pure poison for the plants; whatsoever it falls on it destroys.*

MADE OF THE SAME CLAY AS ADAM

"It was also said of Omar Ibn el Khat-tab† (may Allah be pleased with him!),

* Much of the above is quoted by Sheik Kamal el Din from the Koran.

† Omar, the second caliph, who in 637 conquered Syria and Palestine and received the keys of Jerusalem.

when he was caliph (that he said), 'I heard the Sent of Allah (on whom be the blessings of God and peace!) (referring to Mohammed) say that God (to whom be ascribed all honor and glory!) created one thousand nations (multitudes or hosts), six hundred of these on sea and four hundred on land, and the first to be destroyed of these nations are the locusts, and if the locusts are destroyed the (other) nations shall follow.

"The above was translated (explained) by Mehmed Ibn Eσσα el Abdi (to mean) that the locust was the first to be destroyed because it was created from the clay that was left over from the piece Adam was made of."

According to Tibrani, author of one of the works known as the "*Hadith*," or oral sayings of Mohammed, the latter is credited with saying, concerning the locusts: "There is written on it 'I am Allah; there is no other God but me, the Lord of the locusts. I provide for it when I wish and send it to some as a blessing, and to others as a woe when I choose.'"

WRITTEN CHARMS TO KEEP LOCUSTS AWAY

"To keep locusts away from a field the following is used: Take a hollow reed and place in it the following inscription, and bury it in the field or vineyard, and the locusts will not harm the place by Allah's permission: 'Praise be to God, the Lord of all creatures, the Most Merciful. Blessing be on our Lord Mohammed, and upon the prophets who are associates with our Lord Mohammed, and say peace. Destroy their little ones, and kill their big ones, and corrupt their eggs, and take away their mouths from our sources of living and from our goods! Thou art the one who answers prayer. I have put my trust in God, my Lord and your Lord. There is not an animal but he looks after it. Keep me in the right path. Oh thou above all the merciful ones art the Most Merciful, grant our prayer.'

"This recipe is good and tried. One of the *ulama* (learned men), whose name at present escapes me, told me that 'if locusts infest a country, and you want to get rid of them by the help of the Al-

mighty God, take four of those locusts and write on each of the four wings of each (locust) four texts from the Holy Book of the Most High God; then take the locusts and let the first go, saying: 'Depart from here; Allah shall suffice you; he is the all-knowing listener;' and then the second, saying: 'Put a hindrance between them and what they desire;' then the third, saying: 'Depart, may Allah cause your hearts to depart;' then the fourth, saying '(go) to where you are destined, or, if it so be, to your comrades.'"

The author of "*El Maarif*" (an Arabic Encyclopedia) gives a simpler method of fighting them, and this is found as follows: "If you see locusts advancing towards a village, hide and let none appear, and if they see no one they will pass on, and if anything is burned and it smells the burning, it will not come to that village. And they have said other things beside these."

LOCUSTS IN ARABIAN PROVERBS

"A Bedouin saying is, 'A date is better than a locust.'"

"The enemy came like wide-spread locusts."

"More barren than the locusts" (can make them).

"More noisy than the winged locusts."

"You can't catch him like Ayar's locust." (Ayar was roasting a locust and put it to his mouth before it got totally burned, and it got loose and flew away.)

"To take away freckles, anoint them with the eggs of locusts."

"If one sees locusts in their dreams, it means torment, because locusts were one of the plagues that Moses tormented the Egyptians (with)." "If you see creepers, then you will meet bad men." "If locusts fall somewhere and you eat of them, then it means plenty and abundance." "If you see it in kettles and in (cooking) pots, then you will have lots of money." "If you see it rain locusts of gold on you, then it means that God will restore to you what has been lost to you, like he did to Job, on whom be peace."

The following is a description of the locust as found in these old Arabic works and which is still commonly repeated by the natives:

"The locust has the form of ten of the



Photo by American Colony Photographers, Jerusalem

A CIRCUMCISION PROCESSION

Such events are the time for much feasting and joy. The little boy is dressed up and paraded around, riding in front of his father

giants of the animal world, weak as he is—face of a mare, eyes of an elephant, neck of a bull, horns of a hart, chest of a lion, stomach of a scorpion, wings of an eagle, thighs of a camel, legs of an ostrich, and tail of a serpent.”

A SPEAKING LOCUST

Since the present locust invasion has left the country other cures than those here related have been vouched for. According to an elderly sheik, when the locusts appeared here fifty years ago a certain Persian brought bottles of water with him from his country and suspended them in the two large mosques, and right away black birds, like pigeons, called “Samarmar,” collected in endless numbers and miraculously devoured the locusts.

While the winged locusts were still here Aisha brought the news that a native of the Mount of Olives had caught a locust, and as he held it between his fingers it spoke, advising mankind not to fight the locusts; for if they did a worse calamity would befall them; and so frightened was the peasant that he took it to one of the highest officials, where it repeated what it had previously said, and at once orders were sent out to stop the locust fighting.

It is needless to say that no such orders were ever heard of. Aisha repeated the story to us as if she was ashamed to be found fully believing it, but still as if she was afraid not to, while Abu Baddir stood by and boldly placed himself as thoroughly crediting the tale.

THE FRUITFUL PALM TREE

One morning while watching the fascinating process of a locust moulting on the dry twigs of a tree (a once beautiful pomegranate in a corner of the yard), Essa was called to look on, and viewing the process for the first time, he broke out, saying, with many gesticulations: “Subhannk ya Rub” (Thy majesty, Oh Creator!), “Amant b’ism Allah” (I believe on the name of God), etc., etc.

An Occidental present mused on what might happen if these newly winged creatures should remain in the country and lay their eggs. The young larvæ would

then be here just in time to destroy the coming grain crops, which this year so mercifully escaped. We shuddered at the thought, for not yet had any of them migrated, which they did subsequently, thus allaying such fears.

Essa, no longer able to contain his feelings, broke out with “Don’t be foolish! Have you not been told the story of Moses and the black dog? Well, the prophet Moses (on whom be peace) once asked Allah which of all beasts he most despised, and ‘the black dog’ was the reply. Moses, thereupon securing a black dog, removed it into the wilderness where no one passed by and left it chained to a rock. Returning a considerable period later, Moses was surprised to find the dog well and fat, with a pure fountain of water filled with fish, on which it had been subsisting, before it.

“When Moses wondered at the sight, Allah answered: ‘Oh Moses, with all life which I have created I have also created the necessary livelihood, and while I despise the black dog, yet will I not allow it to hunger.’” Thus Essa drew an optimistic moral that even should the locusts return, the “Almighty” would provide.

A story is told of an aged man planting a young date palm and of the king passing by and wonderingly questioning the peasant as to his reasons for doing so, as he never could live to see it fruit. The planter replied: “Our fathers planted for their children and we plant for our children,” which answer so pleased the king that he ordered 100 gold “dinars” to be given him as a reward. Immediately the old man said: “See, oh king! the date palm has already borne fruit.” The king, doubly pleased at this second reply, ordered another gift, to which again the old man replied: “See, oh king! this newly planted date slip has already borne two crops.”

In like manner Essa’s optimism has already borne fruit. A ship loaded with flour, sugar and rice, and a few other edibles has since arrived, sent by kind hearts and hands in America to the needy here, irrespective of creed, color, or religion. Thus the locust evil has been in part mitigated, and undoubtedly the palm tree will still continue to bear fruit.