THE FISHERIES OF GALILEE.

By Dr. E. W. G. Masterman.

Probably no place in Northern Palestine, off the sea-coast, receives so large and so regular a supply of fish as the mountain-town of Safed. In the cool weather it comes from the whole northern shore of the Lake of Galilee and from the little lake el Huleh; but in the summer, chiefly from el Bataiḥah, the great marshy delta of the Jordan at the north-eastern corner of the Lake of Galilee. From here, processions of mules loaded with boxes of fish make the five hours' journey to Safed at least once, and often twice, in the twenty-four hours—except during the Sabbath. It is indeed, as the last proviso implies, particularly for the Jews that the fish is brought. So great is the demand that fish is often cheaper and more plentiful in Safed than at Tiberias, although it is Tiberias men that do all the fishing.

The Government tax on all fish taken from the Lake and from the adjoining Jordan, is one-fifth. Like all the taxes this is "farmed out," and the Ashshār (tax collector) pays, it is said, 1,000 Turkish pounds every three years for his right of taking one-fifth of all the fish caught. In addition to this, the owner of el Bataiḥah, 'Abd er Rahman, a Pasha in Damascus, has private rights, and a Safed Jew pays him 200 napoleons annually for the exclusive control of all the fishing there. He engages the fishermen and pays them a percentage on all the fish sold. The Huleh and 'Ain Mellahah fishing rights are under the jiftlik—the management of the Sultan's private property. There are no government taxes, and the fishing rights are let annually to a Christian for 260 napoleons. He engages his own fishermen—from the Bedawin in the neighbourhood—and pays all expenses.

1 The previous three years the rent was only 180 napoleons.
2 Two piastres for each rošl of the best fish, and one piastre per rošl for the inferior kinds.
3 I must acknowledge with thanks the kind way in which this man and the tenant of the Bataiḥah fishing have supplied me with information used in this paper.
Fishing off Tiberias is only followed to a considerable extent during the winter and early spring months. It is not nearly so important as that along the northern shore from Mejdel to el Batai̇kah. The bay at et Tabaghah is, during the early months of spring, a wonderful place for fish; they swarm there, attracted by the copious hot springs which, loaded with vegetable débris, here pour their waters into the Lake. For about three months—mid-January to mid-April—the fisherman make this their head-quarters, erecting a few tents or reed huts on the shore, close to the mills. While the water a few yards out teems with larger fish, the shallows close in shore swarm with small fish-fry.

The fishing off el Batai̇kah is by far the most valuable on the whole Lake. Here, close to the mouth of the Jordan, as well as in the waters of that river, fish may be taken all the year round—though varying in kind according to the season. The fishermen, whose homes are in Tiberias, make temporary reed-mat shelters for themselves while on shore, beside which they spread out their nets along the beach to dry (cf. Ezekiel xxiv, 5, 14, xlvi, 10). It is interesting to notice that this, the richest fishing-ground, is close to the ruin et Tell, which is generally acknowledged to be the site of the village of Bethsaida, the “place of fishing,” which, according to Josephus, was afterwards officially re-named Julius. There is no need whatever to suppose that this place was necessarily, because of its name, on the shore itself. This intensely malarious plain could never have been a suitable place for a Roman city. Every modern analogy would lead us to suppose that the fishermen would live in the healthier site, raised above the marshes, and go to their work even as to-day the Tiberias fishermen do. From Bethsaida—at et Tell—it would, with a good road or path, be less than half an hour’s walk to the sea, and half that to the bank of the Jordan. This Bethsaida must have been not only the home of the fishermen, but the centre of the fishing industry for the whole district.

At el Huleh and the ‘Ain el Mellahi̇ah stream (which flows into this Lake) fishing is carried on by very primitive methods. The Bedawin fishermen occupy a mat hut, made of papyrus, on the western shore, close to the Jewish settlement of Izbaid. During the day they catch fish by means of the “cast-net,” as will be described; but at night they employ boats and use the mibattén.

1 Really ez zubaid.
As I recently spent some hours in the better of the two rickety, smelly, and very leaky boats which the tenant of the fishing rights supplies to his men, it may be of interest to mention a few points that struck me about this little-visited Lake. The water is everywhere loaded with sediment. Over the whole area the tops of long water weeds lie close to the surface—even in the spring, when the level is at its highest. Doubtless this has become more marked within the last two or three years, as the level has been considerably lowered by dredging and deepening the Jordan bed near its outlet. This work, undertaken by agents of the Sultan, has resulted in the reclaiming of many acres of previously permanent marsh-land to the north of the great papyrus swamp. It would be quite possible, as has often been pointed out, by further deepening the Jordan channel, to completely drain el Ḥuleh. It has now, I believe, in spring, a maximum depth of nine or ten feet. Our special object in navigating the Lake was to visit the great papyrus swamp to the north, of which "Rob Roy" MacGregor gives such an interesting description.\footnote{Rob Roy on the Jordan, ch. xvii.} The babīr or papyrus reeds form a continuous irregular wall along the northern shore. The great mass is here floating, its network of roots being submerged some inches under the water. Upon this raft a considerable amount of soil is deposited, from which springs a tangled mass of undergrowth, amongst which we noticed some beautiful tall ferns. Splashing about at the edge of this sudd we saw a number of cat-fish, which at this time of year (May) make their way into or under the mass for breeding. We found no reeds as high as those described by "Rob Roy," viz., fifteen feet; we spent some time in gathering the tallest we could find, and carefully measured them: the longest were between nine and ten feet, and the average of fully-grown specimens was only about seven feet. This was in the neighbourhood of the influx of the Jordan; it is of course possible that deeper into the swamp they may grow higher, but our impression is that those near the fresh current of the Jordan are the highest. We also could see nothing of the method of growth figured semidiagrammatically in "Rob Roy's" book (p. 301), even though we had the book before us. Indeed, it is evident that the conditions have altered in many respects. The channel of the Jordan very rapidly narrows, and less than 100 yards up became too narrow for
us to row the boat. Our boatmen were anxious to take the opportunity of being there to fire the reeds, a proceeding they do from time to time to prevent the growth from spreading; but as there had been a heavy thunder shower a few hours before, their repeated efforts all failed to start an extensive conflagration. Recently I have learned that some “Englishman” has obtained a firman from the Sultan to carry off as much papyrus as he wishes, and it is locally reported that he has already removed twenty tons, and is coming back for more. Perhaps he is going to manufacture “genuine antique” paper from the “original material”: The Hadh Bedawin are constantly cutting these reeds for the manufacture of the mats, upon the sale of which to the villagers many of them make a livelihood; all the Bedawin of this plain build their houses of this material. The most characteristic inhabitant of the Hadh, that we observed, was the pelican. A fine specimen with a great stretch of outspread white wing hovered over us, looking, but for his bagged beak, like an albatross; while at some distance to the west we saw three others swimming on the water like swans—for which indeed we at first took them.

From the Lake of Galilee fish is carried fresh to Safed, Nazareth, and other places in Galilee, and is dried and salted for the Damascus and Jerusalem markets. From el Huleh and ‘Ain el Mellâjah fish is sent to Safed, to Merj ‘Ayûn (five or six hours away), and to Damascus. In the case of the latter special precautions have to be taken; the fish (mushût and barbût) is caught towards the evening, is sorted out on reed mats, and packed and dispatched the same night. Salted fish is also sent from here to Zähleb and other places in the Lebanese. During the summer months fish cannot be sent, in a fresh state, far from the Lakes; most of it goes to Safed, and in this season almost all of it consists of carps and barbels.

The average price of the best fish in Safed is from ten to fourteen piastres a rofl, or about fourpence a pound. Cat-fish, which is always cheaper, may be as low as a third of this when there is a glut in the market.

Almost all the fish are caught by means of nets, of which there are three kinds: the “cast net” or shabakeh, the “draw net” or jarf, and the m’batên. The old-fashioned method of poisoning fish is still at times resorted to by amateurs. At Tiberias crumbs of
bread mixed with cochineal (which appears to be a fish poison) are thrown on the water, and I am told that even 'arakh (spirits of wine) is also sometimes used. The Arabs at 'A'in el Mellâhah sometimes capture the fish in that pool by means of poison, and they also, when the weather is getting colder, and the fish by instinct make for the deeper waters, stretch nets across the stream and make big hauls. Yet another method employed at times at Tiberias is that of using a weighted string of sharp, unbaited hooks which are rapidly drawn through the water, and, if skill is used, often come up with several impaled victims. This may have been the method referred to in Matt. xvi, 27. It is, however, the regular fishing with nets which alone is of commercial importance.

The "cast net" is a small circular net with small bars of lead attached all round its margin: to the centre is usually fixed a small cord. It is apparently the ἀμφιβαλοντ τον of Matt. iv, 18, and Mark i, 16. Three sizes are used, differing in wideness of spread and in fineness of mesh. The smallest size, used for sardinien, is known as el mukheiyer; the second, the most commonly used, is called esh shabakeh (a name usually applied by the public to all "cast nets") or 'Ashranêyeh Kafàfekh; while the largest, used only in mid-winter for the largest musht, is called 'Ashranêyeh Saroseyeh, or simply es saroseyeh. It may be of interest to give the dimensions of samples of the two latter which I have recently measured. The shabakeh measured in length, from the centre cord attachment to the lead weights, 11 feet 6 inches. When spread out fully the circumference was 39 feet 3 inches. There were seventeen meshes to the lineal inch. The saroseyeh measured: length, 11 feet 6 inches; circumference, 61 feet 4 inches; mesh, ten to a lineal foot. The method of using the "cast net" is as follows:—The fisherman carefully arranges the net on his right arm, the weights hang free but the net is wound up. As the fine mesh gets readily in a tangle he critically examines the weights to see that none are out of place. He then advances into the water up to his waist, having gathered his scanty garments well out of the way; he cautiously looks around till he sees some indication of fish—a few fins showing, a troubled surface, or a fish jumping—and then with a bold swing of his arm he deftly lets his net fly through the air so that it spreads out flat and descends into and through the water with its weighted edges in a complete level circle. As it does so, it
necessarily shuts in all the fish in the area over which it falls. The fisherman knows the lie of the net by means of the cord in his hand. He then walks over the net, feeling with his feet the nature of its contents, and flattening it down in his progress so that the fish become well entangled in its meshes. He now draws it up again by means of the centre cord, and as he carefully twists it up over his arm he disentangles the captives one by one. He may in this way capture several dozen fish in one throw, indeed (specially when the net is used in conjunction with the jarf, as described below), so great may be the mass of fish that the net cannot be raised but must be dragged on shore. It is seldom that the skilled man casts with no result whatever. It is delightful, as I have repeatedly done, both along the north shore of the Lake of Galilee and at el Haleh, to watch the skill and precision with which the net is flung.

The jarf or "drag net" is as much as 400 metres long. In mesh it is as fine as the shabakeh. It is used at the Lake chiefly during daylight, but along the Bay of Acre many of these nets are employed after sunset with lanterns and torches to illuminate the scene. The net is paid out of a boat in an immense semicircle, the two ends being near the shore. The upper side floats by means of corks, the lower is kept down by small lead weights. As soon as the net is in position the men on the shore commence the process of hauling it in. Four men, if possible, take charge of each extremity; they have long ropes fixed to the lower and upper corners so that they drag in the bottom at the same time as the top. In order that a steady and uninterrupted pull may be kept up they merely fix the ropes to their belts, and each man nearest the landward end of the ropes, as soon as there is room, leaves off his hold there and runs forward to seize the ropes at the net-end as they come in shore. The fishermen consider it a matter of importance that when once the net has commenced to come in, there should be no pause in its progress. As the centre parts begin to come into shallow water some of the fishermen assist its progress by jumping or diving into the water and lifting the weighted lower side over the large stones. This is particularly necessary at Tiberias, where there are many large stones all over the bottom. Finally the net reaches the shore, having "gathered of every kind" (Matt. xiii, 48). Clearly the net (σανηνη) here described was the draw net.
The *m’batten* (really *مبتَنَت*, meaning “lined,” used for the lining of clothes) is a compound net about 200 metres long, made of three nets of equal length and breadth all fixed to one suspending rope. The two outermost nets have a wide, that in the centre a fine, mesh. Like the *jarf*, one long side is floated near the surface by means of corks, while the other is weighed down with lead. In order to distinguish its situation in the dusk or dark a floating empty petroleum tin is fixed to the two ends. A fish coming in contact with the net passes easily through the nearest outer net, but the middle one he, in his struggles, pushes in front of him, *through the meshes of the third net* in such a way that when he tries to retreat he finds himself hopelessly entangled in a kind of bag of netting—covering his broad end.

The *m’batten* can be laid in any depth of water as it does not touch the bottom, but, as a matter of experience, the fishermen find that the biggest hauls are made usually not far from the shore. The net is paid out in a long line parallel to the shore, the fishermen then row their boats slowly along its whole length and back again—particularly on the landward side—in order to frighten the fishes. If there is a large catch, the net, weighed down with its contents, sinks in the middle. When this happens it is immediately hauled on board the two boats. If there is no such result, the net may be left out from the middle of the night till daybreak. Before paying out the nets, the fishermen are often able, even in the darkest nights, to locate a shoal of fish by the sound of the fishes opening and shutting their mouths at the surface.

Off Tiberias yet another method has been adopted in recent years. It was found that the *mush†*, who are a very wily fish and the most difficult to catch, frequently managed to jump over the floating edge of the draw-net after they had been surrounded, so a new device was contrived. Two boats, as usual, act in concert, their movements being directed by a man stationed on a point of the shore high above the water, who, from this vantage ground, is able to detect the presence of a shoal of *mush†*. Proceeding to the spot indicated, the fishermen of one boat quickly drop the long *jarf* in a circle round the shoal, while those in the second boat pay out an *m’batten*—without its lead weights—all round the circle, keeping it stretched out flat on the level of the water by means of

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1 In these manoeuvres two boats always work together, cf. Luke v, 7.
wooden rods, and loosely fixing it at points to the floating edge of the jarf. The musht, finding the circle closing in round them, jump the edge and land on, and are entangled in, this floating net. The jarf may now be dragged to land. As the bottom of the lake is full of great stones, some of the fishermen dive in and assist the progress of the weighted side over these obstructions. When the circle is very full of fish the shabakeh is used again and again to partially clear the jarf by securing the enclosed musht; under such circumstances this net is often brought up an almost solid mass of fish.

The Tiberias fishermen are quite a class by themselves; fine, stalwart men, mostly Moslems, with a few Christians. The business is hereditary in certain families. The nets are usually made and mended by the women of their households. Irregular fishing with the cast net is carried on by Bedawin living near the Lake of Galilee, and particularly near the Hüleh.

Although it does not do to argue too conclusively from modern customs to the ancient ones, there are one or two which throw some light on the narrative in John xxi. There is, first of all, the unknown Stranger (v. 4) on the shore who tells the disciples where to cast the net. If then, as now, fishermen were accustomed to have their movements directed from the shore—at times, at any rate—it will explain the fishermen’s ready response to the directions. Then, it will be noticed that it is at dawn that the nets, if left out all night, are usually hauled in. The condition of Simon (v. 7) is readily understood if the fishermen were accustomed to dive into the water to assist the progress of their nets along the bottom; and so, too, his plunging in with his “fisher’s coat” to meet his Master, appears, also, all the more natural and in keeping with the surroundings. The fishes described (v. 11) as “great” would probably be members of the carp (Cyprinidae) family, which often exceed two feet in length. These, to-day, are particularly taken in the “drag-net” (v. 8).

With regard to the varieties of fish it is unnecessary here to give a list of all the forty-three kinds found in the inland waters of Palestine. Many of them are quite small and others extremely rare. I shall here almost exclusively refer to the important food fishes of the two Lakes of Galilee and the adjoining streams.

Zoologically these fishes belong to three families—the Chromidae, allied to the wrass; the Siluridae, or cat fishes; and the Cyprinidae, or
carps. A small blenny (*Blennius varus*) is also found in the Lake, but it is too small to be of commercial importance.

The *Chromidae* are the most characteristic fish of Palestine. In appearance they are somewhat like their allies—the wrass. They are broad from back to belly, but somewhat narrow from side to side. They have a long dorsal fin running the greater part of their length, the front part of which is supported by fifteen or sixteen strong sharp spines, while a broader part behind encloses about a dozen softer and more flexible spines, lying close together. The eight known species are distinguished largely by differences in the numbers of these spines. It is on account of the comb-like back that the fishermen have named this fish *mushit* (*בַּשָּׁם*), a comb. These prickly spines are, no doubt, formidable weapons of defence, and may possibly (though this has never been proved) be poisonous to smaller fish, as is the case with the weaver fish, but they, more than anything else, are the cause of their entanglement in the fine meshes of the fishermen's net. It is the male members of this family of fish which have the remarkable habit of carrying the spawn and the young fry in their mouths until they develop to quite a considerable size. As the young develop the cheek pouches become enormously distended, and the unfortunate parent is unable to close its mouth. How it can feed—unless it feeds on its own fry—is a mystery. This phenomenon is very commonly observed with the *kelb* (*Hemichromis sacra*)—indeed, this is the only variety in which I have actually seen it—but it has been described in other species, and is probably, as the fishermen emphatically state, common to all the family. During, or very soon after, the breeding season most of the *mushit* disappear entirely from their usual haunts—it seems probable that they take to the depths of the lake. *Mushit* of various kinds are very plentiful during the winter and early spring months, particularly immediately after storms, but are very scarce after about May.

With regard to the varieties, zoologists describe eight species. The fishermen do not make such fine distinctions. The common commercial kinds are *mushit abiad*, *mushit lubbud*, and *kelb*, or *kuleibeh*. *Mushit abiad*, or white *mushit* is that known as *Chromis niloticus*, a fish found all over the Jordan system and also in the Nile. Although a very light colour, the males, during the breeding season, are considerably darker, with marked spots of a lighter colour; it is a very handsome fish and the chief favourite for the table. Well grown specimens are eight to nine inches long. In addition to colour and size, this *mushit* is distinguished by a slightly convex forehead and a slightly concave tail.

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1 There is a most extraordinary misprint in the *P.E.F. Memoirs, "Flora and Fauna,"* p. 166, where it says of these fish fry that they "do not quit the sheltering cavity till they are about four inches long!" This is, of course, ridiculous. They leave the shelter of their fathers' mouths when about the size of a lentil, and apparently never return.
**Musht lubbud** is that known scientifically as *Chromis tiberalis*. *Lubbud* is apparently derived from لبيب, meaning “to stick together,” “to be compact” (hence *tebadeh*, meaning “felt”), and may refer to the extraordinary compact nature of the shoals. Thus Tristram says1: “I have seen them in shoals of over an acre in extent, so closely packed that it seemed impossible for them to move, and with their dorsal fins above the water, giving at a distance the appearance of a tremendous shower pattering on one spot of the surface of the glassy lake.” But others explain it as referring to the habit of this fish to cling to the ground and hide under stones—a meaning equally permissible to the Arabic root. This is the most plentiful of all the *Chromidae*. Of average size perhaps a little smaller than the first mentioned, it is distinguished from it by a more convex forehead, a darker colour, and a slightly convex tail.

The *keleb* ("dog")—a name also applied to the “shark”) or *kuleibebe* ("little dog") is the *Hemichromis sacra*. It is a smaller fish than the two former, from which it is easily distinguished by its narrower shape (from back to belly), its concave forehead and ugly mouth. It is less prized as food than these others, and is caught also slightly later in the season. It is in best condition, however, in the winter, when it fattens on the *sardinnen*, among which it plays havoc. It breeds among the flags and bulrushes, and so the males, doing their parental duties, often fall victims to the net.

Some of the smaller *Chromidae* are called *udadi*, but I find a good deal of disagreement among the fishermen as to what species should be so called. The Memoirs are, however, I believe, correct in saying it is the Arabic name for the small *musht*, *Chromis flavii Josephi*, which is distinguished by yellow spots on the anal fin. It is not a table fish. A Bedawy fisherman also told me that he designated one kind as *marmar* (marble), but he could not show me a specimen. I have seen a small *musht* in the pools of *Ain el Madawereh* and *Ain et Tineh* with a “marbled” back, which may be the kind referred to, but I have not had the chance of handling it. *Kurt* is a name also applied to a small *musht*, “white like silver.”

The “cat-fish” of Galilee—*Clarias macracanthus*—is known to the fishermen as *barbat*2 (plural, *barabêt*). This is the fish referred to by Josephus (*B.J.*, III, x, §8) under the name *Coracinus*, as found in the fountain “Caphernaum.” It has a great head, ornamented with a row of long and prominent barbels, and when it grows to its full size—four or five feet—is a most formidable-looking beast, and does great destruction among the smaller fish. Such large individuals are rare; specimens caught for eating are usually between two and three feet. They are sold

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2 The verb *barbat* is a colloquial Arabic word for making a splashing.
very cheaply in Safed, because they are forbidden food to the Jews on account of the absence of scales (Lev. xi, 10). They are sometimes as cheap as four piastres (3½d.) for a rotl (= 5 lbs. 10 ozs.), or more than 1½ lbs. for 2d. This is about a third of the price of musht. For the table they are usually cut transversely, and fried with butter or oil. They are excellent eating. From the fact that they are not kosher, i.e., "pure," they are thought to be the "bad" fish of Matt. xiii, 48, which "they cast away." The habits of the cat-fish are in many ways remarkable. They are able to survive a long time on dry land; they commonly reach Safed alive. This is due to their curious arborescent gills, which do not collapse when out of the water, and which, as long as they remain damp, carry on the process of respiration in the air. Shortly before the breeding season these creatures become very lively: I have seen numbers of them tumbling about like small porpoises on the surface of the lake—near its middle—with a crowd of noisy gulls circling over them. Although they undoubtedly creep up the warm streams, and even along the irrigation canals—crossing at times even patches of dry land—the fisherman say they do not (as Tristram states) breed in these places but, in the Lake of Galilee at any rate, in the deeper water. They never see the small fry of the barbát. In the Ḥāṭeh they disappear altogether into the papyrus swamps for four months after May. When seized the cat-fish gives a curious squeak something like a cat.

The Cyprinidae, or carps, are a large family, and twenty-three different species have been described as occurring in Palestine. Of these the most important food-fishes are the Kersīn, the Abu Kisher, the Ḥafāfī, the Ḥafāfī banduk, and the Sardinnen.

The kersīn, known also as Abu buz, is scientifically Barbus longiceps. It is a handsome trout-like fish, often over two feet long. Like all the carps, its upper jaw is provided with small barbules, and the corners of its mouth with larger ones. It is one of the best-eating fish in the district, its special attraction on the table being its absence of the many small bones which make the eating of musht such a mixed pleasure.

Closely allied to this, but considerably more plentiful, is the binny, or Abu kisher (also known as kishereh). The latter names, meaning "scaly," are given on account of this fish's remarkably large scales. The specimens which come to the market are usually somewhat smaller than the kersīn, but it grows, I believe, at times to the same length as the latter. Zoologically it is known as Barbus canis.

The Ḥafāfī (Capoeta damascina) is essentially a river fish. It is found in the Jordan, or near its mouth, as well as in rivers all over the land. It is, as its Latin name implies, common at Damascus, in the Barada river. Specimens which I got there some years ago measured one foot, and this is about the average size. This fish is yellowish in

1 Lit., "father of a mouth."  
2 Lit., "coffee brown."
colour, particularly on the belly, and in flavour is inferior to the two carps previously mentioned.

The *Capoeta syriaca* a closely allied species, common in all the rivers of the Jordan system, is known as *haṣāḥi bandūk* or “bastard” *Haṣāḥi*; the fishermen thinking that the fish is the product of the interbreeding of the true *haṣāḥi* with some other species. Another *bandūk* is *Capoeta socialis*. The three species are not distinguished in trade. Yet a fourth kind is kept by the inhabitants of the village of Deiskun in the village fountain: it also occurs in a neighbouring semi-underground pool. It is known as *Capoeta fratercula*.

The fishermen also describe *bandūdik* (bastards) of the *kersēn* and the *abu kisher*, the former with a head like a *kersēn* and scales like the *haṣāḥi*, and the latter with head like the *abu būz* but scales like *abu kisher*; but I am very doubtful whether these are really distinct species; and among a considerable number I have examined, I have never found one.

Mention must also be made of the *sardīnēn* (*Alburnus sillah*), a small species about 6 inches in length, which is at times caught in great numbers in the Lake, near the shore, although the greater part of the year it is scarcely met with, probably because it keeps to the deep waters. The Arabic name is a modern one, and clearly suggested by their resemblance in size and shape to sardines. They are eaten fresh, fried, and when properly cooked are excellent, but they are not successfully pickled. Attempts have been made in recent years to prepare them like true sardines, but without much success. Nevertheless, it would appear not improbable that they were the sardines which we know were prepared here and were even sent to Rome. Perhaps they were the *ḥarē* of the Talmud, and the two “small fishes” (*σφαῖρας*) of John vi, 19. It is a pretty minnow-like fish, and may easily be caught in countless numbers with a muslin hand-net, but is too small to be of use for food. In the similar warm springs near the Dead Sea, *e.g.* *ʿAin Feshkha, another little fish, the *Cyprinodon dispar*, of the family of the “toothed carps” (*Cyprinodontidae*) occurs in numbers equally great.