but the explanation has not met with favour among scholars, and the name of Chedorlaomer has not been found on any monument, in spite of various attempts to prove its occurrence.

OBSERVATIONS ON THE DEAD SEA LEVEL.

By Dr. E. W. GURNEY MASTERMAN.

Second Report, 1902–1903.

IN the *Quarterly Statement* for April, 1902, I gave a short account of the results of the observations on the level of the surface of the Dead Sea from October, 1900, till February, 1902; since then some of my periodical reports have been published, but as these cannot give a clear idea of the season's changes, I here give a brief summary of the results up to the end of 1903. This forms a particularly suitable time at which to do so, because after this year (1903) the observations are to be taken only bi-annually.

During the last year and a half the method of taking the measurements has been much the same as that previously described; but in order to check the results, an additional series of observations has been commenced from a large rock standing in the middle of the pool into which flows most of the water of *'Ain Feshkhah* (see *Quarterly Statement*, 1902, p. 165). Although for several reasons the results there are not so accurate as those taken at the actual sea-shore, yet as checks to the other observations they are useful. Under instructions from the Committee of the Palestine Exploration Fund, I have also during my recent visits made observations on the weather, the state of the surface of the sea, temperature, atmospheric pressure, &c.; the results of these I here report.

1. *The Change of Level at the "Observation Rock."*—During the past seasons, including those previously reported on, the rise and fall in the Dead Sea level was as follows:—

(1) From October 9th, 1900, to March 1st, 1901, a *rise* occurred of 14·5 inches. The level began to fall during March.

(2) From March, 1901, to December 13th, 1901, there was a *fall* of 20 inches. The rise commenced in January.

(3) From this to March 21st the water *rose* 6 inches only, reaching as its highest point for 1902 the 14-feet line which had been the lowest in 1900. It is possible that it may have risen a little higher during April, as on April 26th the level was found just the same as it had been a month previously.

(4) From this time (April 26th) the water *fell* 1½ inches till May 30th, and then rapidly during the summer, so that by October 24th it had fallen a total of 26 inches. This, the lowest measurement for the 1902

TABLE I.—*Showing the Results of Measurements taken at two points at 'Ain Feshkhah*, 1902–1903.

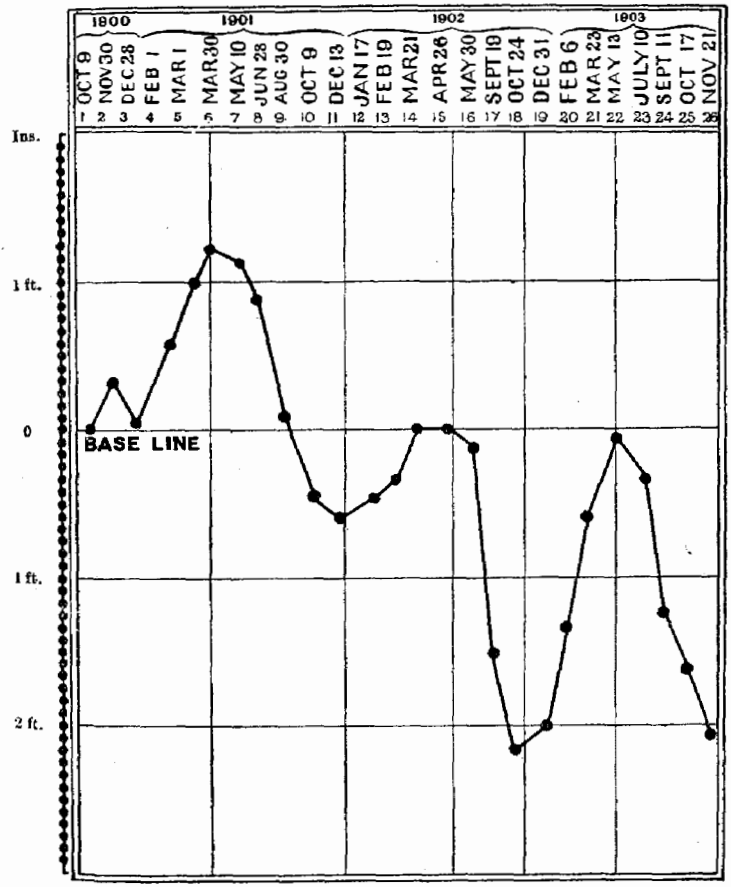
No. of visits.	Date.	Hour.	Length of interval since preceding visit.	Rainfall during interval in Jerusalem.	Measurements of Dead Sea level.				Remarks.
					"Observation" Rock.		"Pool."		
					Rise.	Fall.	Rise.	Fall.	
	1902.		Days.	Inches.	Inches.	Inches.	Inches.	Inches.	
13	February 19..	10.15 a.m.	33	4·575	1·5	—	—*	—	See *Quarterly Statement*, 1902, p. 166.
14	March 21 ..	9.0 a.m.	29	2·68	3·5	—	2·5	—	See *Q.S.*, 1902, pp. 297, 298.
15	April 26 ..	6.30 a.m.	35	1·69	—	—	0·5	—	See *Q.S.*, 1902, p. 299.
16	May 30 ..	7.30 a.m.	33	0·08	—	1·5	—	0·75	See *Q.S.*, 1902, p. 406.
17	September 19	6.30 a.m.	112	—	—	16·5	—	12·25	
18	October 24 ..	10.0 a.m.	34	0·65	—	8·0	—	4·0	
19	December 31	10.0 a.m.	67	12·21	2·0	—	—	2·0	Long interval due to cholera at Jericho.
	1903.								
20	February 6 ..	11.30 a.m.	37	7·08	8·0	—	7·0	—	
21	March 23 ..	3.15 p.m.	45	5·73	9·0	—	9·0	—	
22	May 13 ..	6.0 a.m.	50	0·74	6·5	—	5·5	—	Visit made by Mr. Hornstein.
23	July 10 ..	7.0 a.m.	58	—	—	4·0	—	5·0	Visit made by Mr. Hornstein.
24	September 11	6.30 p.m.	63	—	—	10·5	—	8·0	
25	October 17 ..	8.0 a.m.	36	0·115	—	4·5	—	5·5	
26	November 21	9.45 a.m.	35	0·470	—	5·0	—	5·0	

* First observation taken this visit.

season, was 19·5 inches lower than the lowest for 1901, and 26 inches lower than that of 1900.

(5) On December 31st the *rise* was found to have commenced (2 inches), and during the first four months of this year (1903) the level rose no

TABLE II.



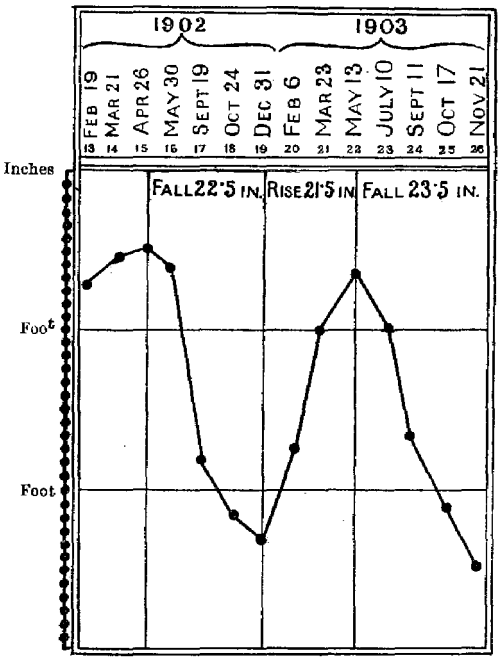
The marked point on the "Observation Rock" was originally (October, 1900) 14 ft. above the sea-level; the distance in November, 1903, was 16 ft. 1½ ins.

less than 25·5 inches, reaching a level practically equal to the maximum of last year in spite of the unusual fall. It is noticeable that the rise continued into the middle of May—a time when in the two previous years the fall had commenced. (*See* Tables I and II.)

(6) The *fall*, which probably commenced in May, amounted to 4 inches on July 10th, to 14½ inches by September 11th, to 19 inches by October 17th, and to 24 inches by November 21st. The lowest level reached is thus slightly above the lowest of 1902.

2. *The Observations at the 'Ain Feshkhah Pool.*—The method of taking the measurements at the pool is simple and direct. Near the middle of the pool is an isolated rock which may be reached by swimming,

TABLE III.—*Measurements taken at the Rock in the 'Ain Feshkhah Pool.*



The original mark (February 19th, 1902), was 1 foot 8½ inches above the level of the water; the lowest measurement obtained was 3 feet 6 inches, on November 21st, 1903.

or, when the water is low, by wading. In February, 1902, I cut, by means of a chisel, a mark on this rock at the level of a very definite line of discoloration round the rock made by the water when at its highest a previous season. From this point to the level of the water is readily measured, and as the surface of the pool is never disturbed by waves the measurements are very exact. The results are very similar to those given above, but are vitiated by the fact that when the Dead Sea sank considerably the waters of the pool were partly retained by a kind of bar

at the entrance. In consequence the fall during 1902 was only 22·5 inches, and the rise 21·5 inches. When the pool is fairly deep the changes of level in the pool from month to month are almost exactly the same as those at the sea-shore. (*See* Table III.)

3. *Relation of the Changes of Level to the Rainfall.*—The considerable fall in the Dead Sea level has followed two very dry seasons, the results of whose scanty rainfall have been evident all over the land by the drying up of pools and springs. The somewhat heavier rainfall of 1901–1902 was not sufficient to restore the balance and make up for the general drought. On the other hand, the considerable rise (2 feet 1½ inches) occurring this spring has followed a considerable increase of rainfall. The relation of the rises to the rainfall of the previous seasons is shown thus :—

		Rainfall in Inches.
(1)	*Rise*, December, 1900, to March 30th, 14·5 inches....	15·945
(2)	„ December 13th, 1901, to April 26th, 1902, 6·5 inches	20·040
(3)	„ December 31st (inclusive), 1902, to May, 1903, 25·5 inches	26·41

The replenishment of the springs was very evident in this part of the Dead Sea valley. It was marked in the Wâdy Kelt. Following the heavy rainfalls some eight or ten years ago a fairly wide stream of water continued to run down the Wâdy Kelt past Jericho for some weeks after the dry season commenced. There was none, except immediately after rain, in the spring of 1901 and 1902, but during this year it ran in considerable volume at any rate to the end of March. At the *'Ain Feshkhah* oasis, not only did the much-reduced springs begin to run with renewed vigour after the season's rainfall, but in May a new spring was found flowing with great copiousness, giving rise to a stream of water over a foot deep and over 20 feet wide. This new fountain burst up in the small thicket of reeds known as *Haish el-Mukdâm* (see *Quarterly Statement*, 1902, p. 164). Here I have never seen any running water; indeed, the ground has been almost uniformly dry. The new spring was running copiously in July, and even in November was some inches deep and 15 feet across. It may be only a coincidence, but the appearance of this spring must have been just about the time of the earthquake (*Quarterly Statement*, 1903, p. 190). It was not running on March 23rd when I was at the place, the earthquake occurred March 30th, and Mr. Hornstein found the water flowing as described on visiting the district on May 13th. Several fantastic reports without any foundation have been circulated regarding the effect of the earthquake in the Jordan Valley, but this new fountain appears to be one definite physical change.

4. *Temperature, Wind, and Weather.*—In Table No. IV the results of observations on these heads are shown. As regards the temperature I have only to point out that as we always endeavoured to make our visits at the coolest possible time of the day, the figures do not give much idea

TABLE IV.

Date.	Temperature of 'Ain and time taken.	Wind.	State of atmosphere.	State of surface of sea.	Barometer in Jerusalem.
February 19	—	N.E. (morning), S.E. (afternoon).	Misty (morning) ..	"White line" distant when first seen; blown ashore later in day.	—
March 21 ..	70° (8 a.m.)	N.W., then S.E., with showers in afternoon.	Haze to S.E. (morning).	Two "white lines" in early morning, broken up and drawn ashore by 8.30 a.m.	27·516
April 26 ..	77° (6.30 a.m.)	N.W., later in morning S.E.	Haze to E. and S.E.	"White line" faint and irregular, driven ashore by 8 a.m.	—
May 30 ..	78° (7.30 a.m.)	W., very light; later in morning S.E.	Clear	"White line" broken up, faint and distant; drawn ashore by 9.30.	—
September 19	83° (7 a.m.)	N.E. (I left the Ghor too early to mark any change.)	.. ..	"White line" at first ill defined, later became more compacted.	27·482
October 24..	92° (11 a.m.)	Soft S. wind (9.30)	Remarkably clear..	*No* "white line" visible, but north shore strewn with foam.	27·424
December 31	75° (11 a.m.)	E. (before sunrise), then N.E., N., and N.W.	Clear	"White line" much broken up at north end of Dead Sea, but clear in distance; disappeared when wind became north.	—

February 6 ..	72° (noon.)	Gentle S. wind in morning, S.W. with showers in afternoon.	Very clear.. ..	*No* "white line"; a little irregular foam, low waves.	—
March 23 ..	75° (3.30 p.m.)	S.E. early in afternoon, then E., N.E., and later W.	Brilliantly clear ..	*No* "white line"; a little irregular foam, small waves.	27·466
May 13 ..	79° (7 a.m.)	N.E. and E., later S. and S.W.	Very clear.. ..	Small waves in morning; at first two "white lines," broken up when wind became south.	27·576
July 10 ..	82° (6 25 a.m.)	Slight E. breeze; at 11 a.m. strong S.W., at 5 p.m. N.	Very clear.. ..	*No* "white line"; about 10 a slight diagonal line from north-east and south-east.	27·470
September 11	—	S.W. wind; very slight early, but increasing to a breeze.	Mountains to east never very clear; some mist over sea to south-east.	*No* "white line"; irregular patches of foam, and later in morning much foam blown on north shore.	27·452
October 17 ..	80° (10 a.m.)	Hot and still; slight puffs of wind felt from E. and W., chiefly former.	Brilliantly clear ..	Surface of water covered with small waves, and part near 'Ain flecked with irregular patches of foam; an irregular and scattered line down lake, more distinct after noon.	27·572
November 21	72° (11 a.m.)	Before dawn a slight S.W. wind, after N.E., increasing during the forenoon.	Very clear; slight mist over water till about 11 a.m.	Small waves; irregular lines of foam on west side of lake and near middle; a rather more distinct line after noon.	27·710

of the average temperature ; and, secondly, as the atmosphere is usually loaded with moisture the heat is more trying than an equivalent temperature in, say, Jerusalem.

Observations on the temperature of the *'Ain Feshkhah* springs showed that it ranges very slightly between 79° and 80·5° F. The temperature of the water is not affected by that of the atmosphere, but by the force with which it rises. When the springs became very scanty a temperature as low as 75° F. has been registered. This, too, is the average temperature of the water in the Pool. The spring known as *'Ain el-Mabneyeh* usually had an apparent temperature about half a degree (F.) above the *'Ain en-Nahr*, due to the water rising in full volume into a pool over 2 feet deep, and it being possible to push the thermometer quite underground, but now this spring is again buried in reeds.

With regard to the wind, I have found the daily variations in the Jordan valley very great. Those who live there report that a north-east wind is usual in the early morning, which changes to south-east about 9 or 10 o'clock, is westerly in afternoon, and veers to the north again about 5 p.m. The boatmen who go to the Kerak end of the lake rely on this evening breeze to start. The observations I report seem to confirm this account, and a west and north-west breeze is the rule in the afternoons and evenings in Jerusalem. On all our visits the sea has been fairly calm, and I am not satisfied that the wind makes any measurable difference in the levels. The long banks of pebbles at various levels along the north shore of the Dead Sea do not represent, as has been stated, levels reached in storms, but the maximum levels of the previous seasons.

The so-called "white line" has been the subject of remark from many travellers ; I have referred to it in previous reports. It is a long line of compacted foam running roughly from north to south down the lake. It has been remarked that from the western mountains it may be seen running the whole length of the line. My observations show that (at the north end of the Dead Sea at any rate) it is usual to find it in the early morning, but that it is almost always destroyed later on by being driven inshore about 8 or 9 o'clock ; the usual cause of its destruction is the south-east wind. On very still days the line may not be visible, though irregular patches of foam may be seen in mid-sea. The line occupies no special point on the sea, but is blown from east to west ; I think it must be compacted by an easterly or slightly north-easterly breeze before dawn.

The state of the atmosphere over the Dead Sea has usually been very clear ; haze, when present, has usually been noticed just after sunrise and, probably from other accounts, before sunset. I have seen it stated that though the mountains of Moab look so clear when looked at from a height, they are veiled in haze when viewed from the western shore of the Dead Sea. This has not been my experience.

5. *Barometric Observations.*—My experience with the aneroid barometer sent out to me has not been fortunate and though I report

successful observations made on several occasions, on other visits the barometer went quite out of order, due to its not being adapted to work at such low levels. On one occasion I took it all through the land, through Tiberias and Hermon to Damascus and back by the east of the Jordan. The instrument acted admirably until I reached the Jordan bridge, when it went entirely wrong. For this reason my results are very incomplete. In Table IV I give the reading of the Palestine Exploration Fund mercury barometer in my house on the day when the Jerusalem observation with the aneroid was taken—at 9 a.m.

6. The region traversed between Jerusalem or Jericho and *'Ain Feshkhah* is practically uninhabited. I have been the latter route many times without encountering a human being coming and going. Except in February and early March the whole route is parched and dry until the oasis itself is reached. In these early spring months the Jericho plain is usually covered with small flowers, chiefly yellow compositæ and a small purple wild stock, and a number of the low shrubs have succulent leaves which can nourish camels and sheep. In the spring of 1902 some Bedouin from the hills brought their flocks into the region known as *'Arḍ Ḥajr el-Aṣbah*, but this summer I saw none either in the plain or the mountains above—they were all encamped in the higher ground. In March, 1902, a very large flock of sheep belonging to the *Ta'amereh* Bedouin was being washed in the *'Ain Feshkhah* pool when I was there.

The Sultan's herd of cattle from Jericho, which were at the *'Ain Feshkhah* oasis during 1902, are not there this year. Some people from *Abû Dis* come at times to cut the young rushes and dry them for mats and baskets; I have seen long lines of these grasses drying, but have only once come across the people themselves.

The most interesting workers in this region are the salt smugglers, whom I have several times encountered. They belong to the *Sowahery* tribe of Bedouin. Salt is a Government monopoly in the land, and when during the summer months guards are kept at the lagoons on the north shore to prevent smuggling, the Bedouin go to *'Ain Jidy* for salt; during the wet season the guards are removed, and smuggling is carried on with little attempt at secrecy.

On February 6th this year I encountered a considerable party of smugglers. The first I saw of them was a straggler—a girl with two donkeys, who, taking me in the distance for a soldier, rushed on ahead up the mountain, and when out of sight doubled, with her beasts, into a deep wâdy. Further on, to the Jerusalem side of *Neby Mûsa*, I caught up the main party, consisting of six camels and 17 donkeys, all loaded with salt, and guarded by a considerable force of Bedouin. My muleteer being one of their tribe, I was allowed to pass them unmolested. A little later I came upon an advanced scout hiding behind a heap of stones by the roadside looking out for any signs of soldiers. This store of salt was the result of five days' hard work by the sea-shore. The salt is brought up by hand from the bottom of the shallow pools along the north shore, the Bedouin having to stand in the water and plunge

head and arms into the saturated brine to seize the crystallised masses from the bottom. They were now removing the results of all this labour to their encampment with a view of running it into Jerusalem, and elsewhere, in small quantities at night. I was informed that each sack contained 10 *roṭls* of salt, which would sell at less than a bishlik (6*d.*) a *roṭl*; there were 19 sacks on the donkeys and 12 on the camels, a total of 31 sacks. The total value of the smuggled goods to the Bedouin thus equalled at most 1,230 piastres, or a little over 11 napoleons. Considering that a single heavy shower *en route* would, by dissolving it, destroy a great part, and that if caught by the soldiers—in sufficient numbers, that is, to deal with them—these people are liable to lose not only their smuggled goods, but also all their camels and donkeys, this does not seem a large sum for which to undergo such labour and risk.

7. A word may be added in conclusion with regard to the animal and vegetable life of this corner of the Dead Sea. The most interesting and characteristic animal of the district is the coney. Both in the *Wâdy Kumrân* and in the rocks between *'Ain Feshkhah* and *Râs Feshkhah* there are abundant evidences of their habitations, and on some occasions we have seen them. They are very shy animals, and are never seen except at night or dawn. Then the gazelle is commonly and the ibex occasionally encountered. The names *'Ain Ghuzâl* and *'Ain Ghuzlân*, names of springs in the district, and also the Bedouin name of the mountain just above the *Ḥajar el-Asbaḥ*—the "Mountains of the Ibex"—mark the haunts of these beautiful animals. At sunset the ubiquitous jackal may be encountered on every side. The Bedouin state that wild boar exist in the marshes, and I have seen their footprints. Sand and rock partridges were found abundantly on every visit, and Tristram's grakle, grouse, quail, large owls, storks, flamingoes, hawks, wild duck, rock and wood pigeons, and many smaller birds have been noticed on various occasions. Indeed, this corner of the Dead Sea shore teems with bird life. Reference has been made previously to the fish in the *'Ain Feshkhah* pool and to the more interesting fact of our finding small fish a mile further south actively swimming in the actual waters of the Dead Sea where it is kept diluted by the springs along the shore (see *Quarterly Statement*, 1902, pp. 166 and 406). I have found numerous larvæ of *Anopheles* mosquitoes in one of the brackish pools on the shore.

The reeds and most of the succulent shrubs of the oasis are in most vigorous growth in midsummer. At the end of October they begin to come into flower; they are in full bloom at the end of December, and by early February are yellow and dry. The curious result of this is that the oasis is brightly green and fresh when all the land for miles around is parched and dry, and from the distance looks dull and dry when there is vegetation on the plain and hills around. On nearer view, however, at this time (February-March) the abundant bright flowers (similar to those in the Jericho plain) covering the ground and the waving plumes of the flowering reeds more than compensate for some loss of verdure.

Report of Fourth Visit to 'Ain Feshkhah.

Although the third visit this year was so late in the season, yet I thought a fourth visit before the summer interval would be interesting, as on the third occasion the level was apparently still rising. As I was unable to leave Jerusalem, Mr. Hornstein kindly went for us. The visit was paid on July 10th. The following are his observations :—

Weather.—No clouds all day long—a few about sunset. No motion in the air in early morning; slight breeze from east about 7.30 a.m., changing to a strong breeze from south-west at 11 a.m., which dropped in afternoon, and was replaced at 5 p.m. by one from the north; a rosy glow before sunrise.

Surface of the Sea.—Smooth, and no white line at all visible in early morning; about 10 a.m. irregular lines of foam running diagonally from north-west to south-east were visible, blown up by south-west wind; in the afternoon the foam was blown up inshore along the north shore.

Height of Water.—At Observation Rock, 14 feet 4½ inches—a *fall* of 4 inches since last measurement. At pool, 1 foot 11½ inches—a *fall* of 5 inches.

Thermometer.—Air, 82° at 6.25 a.m.; water of 'Ain, 80°, 6.30 a.m.

Barometric Observations.—Jerusalem, July 9th, 4 p.m., 27·7; *Khân el-Aḥmar*, July 9th, 8 p.m., 29·4; *'Ain Feshkhah*, July 10th, 6 a.m., 31·4; north end of Dead Sea, July 10th, 2 p.m., 31·5.

General Observations.—The springs all flowing pretty strong, especially the new spring from the *Haish el-Mukdâm*, which still flows across the path in a volume over a foot deep and about 22 feet wide.

Quantities of rushes lying cut, spread out to dry, for mat making; this is the work of people from *Abû Dîs*. Sand partridges, rock and wood pigeons, wild duck, grakles, and several coneys seen. Mouth of Jordan visited and found as usual, the rumour about a waterfall there being entirely false.

Report of Fifth Visit to 'Ain Feshkhah.

This visit was made at night, accompanied by Mr. Hornstein, from the summer-holiday camp of his boys' school in the *Wâdy Kelt*. This is the third year in succession I have made this camp my starting point, thus avoiding a night in the *Ghôr*.

Visit made September 11th. The *'Ain* reached at 6.30 a.m.

The weather was fine; clouds (cumulus) scattered over sky all the morning. Coming along the Jericho Plain, under shelter of the western hills, before dawn we encountered a slight intermittent wind from the west or south-west, especially at the mouths of the *Wâdies*. After daybreak the south-west wind increased to a steady breeze, which, though we felt little of it, was manifested by columns of dust raised in the centre of the plain south of Jericho. The sea in the early morning very smooth, and when we left was still little affected by the wind.

No white line visible, a few irregular lines of foam where currents from the springs flowed out into the sea. A line also formed when the south-west wind came round *Râs Feshkhah*—where the smooth water of the bay joined the slightly disturbed water outside. A few irregular lines, too, further out in sea. As we left we saw in the distance that the whole length of the north shore was lined by washed-up foam.

The atmosphere was less clear than usual. At sunrise the mountains of Moab were capped by thick dark clouds and quite obscure (as viewed from the *'Ain*); later on the clouds lifted and stood in piled white masses over the mountains, but the outlines of the *Wâdies*, &c., remained somewhat indistinct. A good deal of haze over sea to south-east. We left the *'Ain* before 9 a.m. Later in the day the wind became north-west.

State of Level.—A *fall* at Observation Rock of 10½ inches, and at Pool a fall of 8 inches.

Barometric Observations.—September 10th, 3 p.m., Jerusalem, 27·6; 8 p.m., Wâdy Kelt, 30·44. September 11th, 7 p.m., *'Ain Feshkhah*, 31·45.

General Remarks.—Springs flowing freely—much more so than last year. This is marked too in *Wâdy Kelt*, where the stream, which last year terminated not far below the Mills, this year ran down almost to the well-known Convent of Elijah. At *'Ain Feshkhah* the upper spring supplying the Pool was running in good volume—last summer it was dry. The "new" spring rising in *Haish el-Mukdam* (the one which I have remarked broke out after the earthquake this year) was flowing still. The stream from it, where the road crosses, is 22 feet wide, where last year it was quite dry.

Reeds brilliantly green; oasis from distance looks most refreshing and beautiful. Almost all the reeds south of the Pool for a mile towards the *Râs*– practically up to the Observation Rock—burnt down by the men in charge of the cattle. This area being uncovered for the first time, it is noticeable that the so-called *'Ain en-Nahr* is not one big spring, but a general oozing in the reed-covered marsh—all the little springs uniting into a small stream which enters the Pool just to the inner side of the shingle beach.

Saltan's cattle again at the *'Ain* in great numbers. We encountered three *Abû Dîs* men in charge of them; they were collecting reeds for basket work. One of these men had been shooting coneys—a delicacy much appreciated. Sand partridges, storks, hawks, a quail, a large snake, and two field mice—only "beasts" noted. *Abû Dîs* men denied the report of there being any wild boars at the *'Ain*, but they confirm what I have stated, that the rocks towards the *Râs* swarm with coneys.

Report of Sixth Visit to 'Ain Feshkhah.

Visit paid from Jericho October 17th, 1903. *'Ain* reached at 8 a.m.

State of Weather.—Very hot, close, and still. (Jerusalem suffered from a severe sirocco.) On the way felt occasional puffs of wind from west on passing mouths of *Wâdies*, but returning, what motion there was in the air was from north-east-by-east and east.

Atmosphere brilliantly clear. The hills to the west very distinct in all their details quite an hour before the sun rose. As soon as the sun had cleared the eastern hills the whole east range stood out very clear also. No mist over surface of the water—unless, perhaps, in the extreme distance to the south.

Surface of the Lake.—Small wavelets, just enough to make the taking of the measurements a little difficult. That part of the sea which lay opposite to the *'Ain Feshkhah* oasis flecked with irregular lines of foam, but also an irregular and uncompacted line of foam down lake. (The east wind seemed to have driven the foam to the west side of lake, but did not as much as usual blow it into a definite line.) The line much broken at the north end. Later, in afternoon, about 1.30, the white line, as viewed from the hills near the Jericho road, appeared to be more distinct.

State of the Level of Sea.—At "Observation Place" a *fall* of 4½ inches since last visit; at "Pool" a *fall* of 5½ inches since last visit. The pool is now very shallow.

Barometric Observations.—October 16th, 3 p.m., Jerusalem, 27·75; 8 p.m., Jericho, 31·12. October 17th, 4.45 a.m., Jericho, 31·15; 8.15 a.m., *'Ain Feshkhah*, 31·57; 6 p.m., Jerusalem, 27·8.

Thermometer Observations.—October 16th, Jericho, 8 p.m., 82° F.; October 17th, Jericho, 4.45 a.m., 75° F.; *'Ain Feshkhah*, air in shade, 10 a.m., 80° F.; water in middle of 'Ain Feshkhah Pool, 75° F.; water of *'Ain* when it issues (in much diminished volume), 75° F.

General Observations.—Reeds in active growth. The patches which last time had been cleared by fire are now covered over with young green sprouts over a foot high.

A good deal of water across path between *Haish el-Mukdîm* and the general oasis (*see* previous notes). Water of spring (*'Ain en-Nahr*) much diminished, but not nearly so much as last year at this time. All along the shore, between the Pool and the "Observation Rock," the little pools formed about the irregularities caused by the roots of reeds, destroyed by submergence, full of life—small fish and crabs specially noticed.

Sand partridges, a quail, starlings, a great number of Tristram's grakles (in Wâdy Dabr), &c. No one encountered either going or coming back.