

of a luxuriant vegetation, so we find with the Arab unbounded liberty and cruel despotism; great instability and inconsistency and great tenacity in preserving their old ways and customs; a clear intellect and reasoning power, with wild fancies and deep sentiment; lasting love and lasting hatred; egotism of the worst kind and true devotion; robbery and liberality; honesty and treachery; childlike simplicity and deep cunning.

But one thing is certain: if the Bedawy remains what he now is, he will be a great hindrance to cultivation and to progress in the East; for where the Bedawin wander no tree grows and no corn can be raised, and their ravages are as fatal to agriculture as those of the locusts. But should it not be possible to reclaim these restless wanderers, drifting to and fro in the desert without higher object, without home, and without the hope of a better life after death? Are not the sons of Ishmael also the sons of Abraham? Do not their traditions constantly remind them of the holy example of Him who by faith obtained the promise? Did not the Apostle Paul first preach the Gospel in Arabia, and were not the Arab tribes of Lai, Taghleb, Tennooh, and Bedr once Christians? It is the Apostle Paul who also, with regard to the Arabs, pronounced the memorable words: "God has concluded all in unbelief, that He might have mercy on all." And we have the sure promises of God that the Arabs also will come to the light which arose on Mount Zion: for "the dromedaries of Midian and all the flocks of Kedar shall be gathered unto the Lord; and even the desert shall be changed, and shall blossom like the rose."

## THE MEASUREMENT OF EGGS.

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It is stated in the Talmud that a log contained six eggs (*see* Zuckermann's "Jüdische Maass-System," who quotes Peah 1, 6, Terumot 43, 3, Erubin 83, A). Colonel Conder, in "The Handbook to the Bible," p. 61, states that the mean capacity of an egg is 4 cubic inches, and hence makes the log 24 cubic inches, but he does not say how he measured the eggs, or whether they were English or Syrian eggs.

In order to check Colonel Conder's measurement I have measured a considerable number of English eggs, and the result is not in accord with his statement. I found that the most accurate way was to measure carefully the volume of the amount of water displaced by an egg. This is more convenient than measuring the volume of the content of the egg, and gives almost exactly the same result. Here, for example, is one experi-

ment of the measurement of eight eggs taken at random. Each egg was measured two or three times. They are arranged in order of size:—

Egg No. 1	..	..	..	4·04	cubic inches.
"   2	..	..	..	3·78	" "
"   3	..	..	..	3·62	" "
"   4	..	..	..	3·49	" "
"   5	..	..	..	3·33	" "
"   6	..	..	..	3·22	" "
"   7	..	..	..	3·07	" "
"   8	..	..	..	2·88	" "
Mean ..	..	..	..	<u>3·43</u>	

I found that an egg measuring above 4 cubic inches is large even for an English egg, and as Syrian eggs are smaller, Colonel Conder's measurement cannot be accepted as correct. It appears therefore very improbable that the log was equal to the total contents of six eggs, and it is more likely that the statement was intended to mean that the log was a vessel which would hold six *unbroken* eggs. An English pint vessel holds conveniently six unbroken English eggs, so that if this was intended the log should be somewhat smaller than an English pint. This is confirmed by the statement in Maimonides that the log was a measure equal to  $4 \times 4 \times 2\frac{7}{10}$  digits—the digit being the longer digit. The longer digit was the twenty-fourth part of the Babylonian cubit of about 21 inches, and therefore equal to  $\cdot 875$  inch. This would give a log of 28·9 inches, which is probably much nearer the truth than 24 inches as given by Colonel Conder. An English pint = 34·66 cubic inches.

Zuckermann gives the log as = the Xestes = 27·694 French cubic inches = 33·548 English cubic inches (*see* p. 10). But this is based on the proposition that the log was exactly equal to the Xestes and that the volume of the latter is accurately known. He gives no proof of either, so that the assertion cannot be regarded as definite. On the whole, it would seem that until it is proved what sized eggs are referred to by Maimonides, and whether they were broken or unbroken, the value of "6 eggs = 1 log" is not of much help in determining the volume of the latter measure.