

Ergot nectar.

During the past summer I received a kind of grass from several of the northern states, which was sent me under the name of manna-grass. It proved to be *Glyceria fuitans*. It was stated that the bees were gathering large quantities of very delicious honey from this grass. I could readily believe the report, as the grass was covered with small crystals, as if it might have been wet, and dipped into granulated sugar. This sugar was very sweet and pleasant; and I have no doubt, that, like the nectar from *Aphides*, it would be wholesome winter food for bees, and no injury in honey for the market. The bees expressed the same opinion, as I learn that they would not leave this grass even for clover or linden bloom.

Upon examination, I found that the grass was covered with ergot grains, and that the nectar was a secretion from this poisonous fungus.

We see, then, that even the poisonous ergot, which I believe some of our best veterinary scholars think caused the so-called 'foot and mouth disease' among the cattle of Kansas last winter, has its wholesome uses. Why the ergot secretes this pleasant sweet, is hard to answer. The nectar, doubtless, serves the fungus in some way.

A. J. COOK.

Agricultural college, Michigan,
Nov. 25.

THE 'OLD STONE MILL' AT NEWPORT.

FINDING myself in Newport lately, I took occasion to make some measurements upon that old circular building about whose origin (whether English or Norse) there has been so much dispute. I have not the slightest title to an opinion upon that subject, in which I have only a metrological concern. The building is circular, and rests upon eight cylindrical pillars. It is of such a size that any one would say, before measuring it, that the pillars would be circumscribed by a circle of four yards radius, and inscribed by one of three yards radius. The building could not have been erected without a drawing to scale, so that a unit of length must have been employed, and that unit (whether Norsemen or English were the builders) would undoubtedly be a foot. The Icelandic foot was, I take it, the same as Denmark and the Scandinavian countries used up to the adoption of the metric system; that is to say, it coincided with the Prussian foot of 12.36 inches English.

I found the diameters of the structure, measured at the pillars, as follows:—

From outside to outside of the shafts.	Between the inward sides.
24 feet 8 inches.	18 feet 6 inches.
24 " 8 "	18 " 5 "
24 " 9 "	18 " 4 "
24 " 7 "	18 " 5 "
Mean . . . 24 feet 8 inches.	Mean . . . 18 feet 5 inches.

I think there can be little question that these lengths were meant to be 24 and 18 of the feet

used. But supposing that I ought to have gone, say, farther out for the outer diameter (for instance, as far as the bases of the pillars extend), then I ought to have cut off the internal measure by the same amount; so that the mean of the two measures that I have taken is almost certainly 21 of the original feet. This mean is 21 feet 6½ inches, which, divided by 21, gives 12.31 inches as the length of the foot used. Besides the two lengths just mentioned, I found no other of sufficient magnitude, which I could conveniently measure, except the heights of the pillars. These appear to be intended to be 8 feet from the top of the base to the upper side of the cap-stones. The latter are 6 inches thick, as well as I could judge, leaving 7½ feet for the height between the base and capital. This could readily be measured with a tape-line, and was measured¹ on the insides of the pillars at two places on each pillar,—one at the right, and the other at the left. The following are the results:—

North arch. { 7 ft. 7 in. 7 " 5 "	East arch. { 7 ft. 8 in. 7 " 8½ "	South arch. { 8 ft. 2 in. 8 " 2 "	West arch. { 7 ft. 7½ in. 7 " 8 "
North-east arch. { 7 ft. 7½ in. 7 " 8½ "	South-east arch. { 7 ft. 9 in. 7 " 8 "	South-west arch. { 8 ft. 0½ in. 8 " 0 "	North-west arch. { 7 ft. 6 in. 7 " 6½ "
East arch.	South arch.	West arch.	North arch.

The mean of these is 7 feet 8½ inches; but the two south-west pillars are so different from the others, that I think it is more satisfactory to adopt the middling heights. Excluding, then, the two highest and two shortest pillars, the others measure

7 feet 8 inches.
7 " 8½ "
7 " 8½ "
7 " 7½ "
Mean . . . 7 feet 8½ inches.

We have, then,

	Outer diameter.	Inner diameter.	Height.
Presumed intentional measure,	24 ft. 0 in.	18 ft. 0 in.	7 ft. 6 in.
Same in English feet, if foot used was 12.31 English inches,	24 " 7.4 "	18 " 5.6 "	7 " 8.3 "
Same, if foot used was the Scandinavian foot of 12.36 English inches,	24 " 8.6 "	18 " 6.5 "	7 " 8.7 "
Observed	24 " 8 "	18 " 5 "	7 " 8.1 " (7 " 8.9 ")

I made some other measures, which, though I think them of no value for determining the value of the foot, I proceed to give.

¹ The tape-line is believed to require about half an inch negative correction for all the measures. This has not been applied, as I have been unable to obtain the tape to verify the correction. In any case, such a correction is negligible in measuring so rough a structure.