

In reference to
yours of May 30

June 3, 1947

Dear Mrs. Harwood:

In the matter of Austin's vara it did not occur to me that so much research was involved. I recall beyond doubt Austin wrote a letter from Mexico City that the vara should be 33.34xx inches. There were four decimals. When I came down we will look up the reference to Austin's letter. That his surveyors used 33.4 inch ^{vara} chain is true but ^{that} they were wrong is equally true.

The rule quoted by you is the rule on which our 33 $\frac{1}{3}$ inch vara is based. 36" divided 1.08 = ~~33.4~~" = 33 $\frac{1}{3}$."

1.08/36.00 | 33 $\frac{1}{3}$. This ^{is} not = 33.4 but 33.3 $\bar{3}$ or 33 $\frac{1}{3}$

$$\frac{36}{1.08} = \frac{1}{3}$$
$$\begin{array}{r} 324 \\ 1.08 \overline{) 36.00} \\ \underline{360} \\ 324 \\ \underline{36} \\ 36 \end{array}$$

The surveyors in dividing stopped too soon. Their

leagues (Austin colonies) were exactly 10 $\frac{2}{3}$ their varas too long, that is 334"

{ You will note by the interlineation my mind outruns my hand.

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$$\begin{aligned} \text{Let's see: } 33.4 &= 34 \frac{2}{5} = 34 \frac{6}{15} \\ 33 \frac{1}{3} &= 33 \frac{5}{15} \\ \text{Difference} &= \frac{1}{15} \end{aligned}$$

$\frac{1}{15}$ of 50000 v, side of a sq lea = $333 \frac{1}{3}' = 10^2$

The Austin colony leagues are therefore, on a basis of correct measurements, about 17 acres larger than the Dixon leagues.

Both Spanish and American authorities tell us the vara is a variable, not the same in all countries or jurisdictions or provinces of the same country. The vara used by the priests in Mexico who did practically all the land measuring prior to 1800 was 58 varas, Solomon's pace. This accounts for the excess in Padre Island, 58^2 to $33 \frac{1}{3}^2$, 3364 to 1111 or 3 times $1 \frac{1}{2}$. The area as computed for the grantee would, ^{be} $34 \frac{1}{2}$ of our leagues. This is true of many grants in the Tamaulipan part of Texas and of San Elizario in Chihuahua. My first work for the University involved this grant. The big boys fired me because I informed them

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the U. would lose the suit. The land
Court then loaned them von Rosenberg
who reached the same conclusion.

Spain had three varas, the tejido
for measuring cloth, 27 inches or 2 ft
7 9 inches; the mechanics for use in con-
struction work, the foot being $\frac{3}{5}9$, a
cubit of 20.62 inches, making the pie me-
canico 12,368 inches and the vara 37.1";
the geometrics (geo, the earth, and metrum to
measure) vara was 33.84 ~~ft~~ ^{and the book} 11.28 inches.
I know where there is an old stone
building in New Mexico in the con-
struction of which the cubit of 20.62
inches was used. The Spanish law
requiring the vara to be three geometric
feet in length simply means the foot
used in land measurement. The
decree refers to land altogether.

Let Mr. Shirriffs read this letter,
if you do not mind, and ask him to crit-
icize it freely.

With kindest personal regards,
Yours sincerely
J. H. Nether

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LETTER FROM
MR J. H. WALKER IN
RE THE 'YARA'

DATE JUNE 2 - 1947.

W^m SHIRAZI

Filed in Current Miscellaneous
Information Box