

statute miles; and the latter distance, to 84 leagues of the former, or to 105 of the latter value. As the distances between these ~~points~~ <sup>points</sup> were considerably longer by road than in an air line, it is obvious that Castañeda's "110" and Jaramillo's "112 leagues" for the first, and Jaramillo's "perhaps about 80 leagues" for the second, ~~as well as~~ <sup>mean</sup> their respective totals of 210 and 192 leagues for Mexico to Culiacan, fall short of the truth, if they ~~are~~ <sup>mean</sup> leagues of 20 (which were, ~~besides~~ <sup>mean</sup> marine leagues), and still more so, if they ~~are~~ <sup>mean</sup> those of 25 to the degree. ~~and we can hardly suppose that Castañeda, who had~~ <sup>mean</sup> lived in Culiacan since its founding, and Jaramillo, who was a better geographer, did not know substantially the true road lengths that separated these two towns and the capital from one another. It is obvious therefore, that the "112" ~~and~~ <sup>and</sup> "110" ~~and~~ <sup>and</sup> the 80 which these authors give for Mexico to Compostela <sup>Jaramillo's "80" for</sup> Compostela to Culiacan, were the longer <sup>or common</sup> leagues of ~~points~~ <sup>points</sup> 17½ to the degree.

~~In such leagues, the rectilinear distance from Mexico to <sup>Compostela</sup> is a little more than 98, and that from Compostela to Culiacan is nearly 73½; hence, by Jaramillo's figures, the road distance exceeds the air line by about (112 - 98 =) 14 leagues, between the former two points, and by about (80 - 73½ =) 6½ leagues between the latter two.~~  
~~A change of itinerary measure~~ <sup>terrestrial leagues, or by</sup> is what we should expect to find, when we reflect that, at Culiacan, Coronado's forces left the worked, well-beaten, and easily traveled highways, and thence northward would therefore be likely to reckon their marches by the much shorter "leagues or hours of travel in countries little frequented and difficult," instead of by the common nearly 4-mile league which they had used in coming thither from the capital of New Spain.

In ~~the~~ common leagues, of 17½ to the degree, the rectilinear distance from Mexico to Compostela is a little more than 98, and that from Compostela to Culiacan is nearly 73½; hence, by Jaramillo's figures, the road distance exceeds the air line by about (112 - 98 =) 14 leagues, between the former two points, and by about (80 - 73½ =) 6½ leagues between the latter two.

Castañeda's "110 leagues" for Mexico to Compostela, differs from Jaramillo's "112", only as a distance stated in round numbers. Castañeda nowhere directly states the distance from Compostela to Culiacan; but he gives "210 leagues" as the distance of Culiacan from Mexico, and by subtracting from this his distance for Mexico to Compostela, we have 100 leagues as his implied estimate of Compostela to Culiacan; which is noticeably different from Jaramillo's estimate — 80 leagues — of the same. As the actual air-line distance between these two towns is about 73½ common leagues, and the road distance is

probably enough more to bring the figures up to about 80. Jaramillo's estimate is apparently correct. Nor can we explain <sup>The discordance of</sup> ~~Castañeda's~~ <sup>here</sup> ~~in this regard~~ <sup>error here</sup> supposing that he used the leagues of 25 to the degree; for so, the road distance would be 277 miles, and the air line still less,— probably but little more than 250,— whereas, the air line is in fact about 290 miles. We therefore (whatever be the explanation of Castañeda's discrepancy) ~~must~~ adopt Jaramillo's estimates of 80 (common) leagues for the distance from Compostela to Culiacan, and (by adding to this his figures for Mexico to Compostela) 192 for Mexico to Culiacan.\*

It is unnecessary to have, as a basis for time-reckoning, the same league-value for distances south as for those north of Culiacan; for the time required to cover a route-part stated in leagues, depended, not on league-lengths, but on the number of leagues traveled in a day; and over the Mexico-Culiacan highway, parties could average, per day, as many of the longer leagues as, beyond the northern frontier, they could of the shorter ones.

For convenience of reference in computing the approximate number of days expended in various journeys of the Coronado expedition, and certain consequent approximate dates, a Table of <sup>Road</sup> Distances has been prepared, which is placed at the end of the chapter here introduced.

\*Castañeda's "210" for the <sup>FOOT</sup> distance from Mexico to Culiacan, is somewhere near the truth in marine leagues only; which it can hardly have been his intention to use for land travel. Indeed, ~~as~~ as we have seen, he reckoned more than half of it (his "110 leagues" between Mexico and Compostela) in common leagues. What he reckoned the 100-leagues remainder in, is a conundrum; for it does not agree with the actual road distance from Compostela to Culiacan, as judged from recent maps, in Spanish leagues of any kind.

Table of Distances. (In Spanish terrestrial leagues of 29 miles.)

<u>Cibola</u> (Granada-Hawikuh) to <u>Tiguex</u> ;	60 leagues
on Rio Grande near present Bernalillo, N.M.	
on Rio Grande near present Bernalillo, N.M.	60 leagues
<u>Chiclitic Calli</u> to <u>Cibola</u> ; i.e., to	
The former Zuni town of Hawikuh;	80 "
Coronado's "Granada," near Ojo Caliente.	
<u>Suya</u> to <u>Chichiltic Calli</u> , near	66 "
Solomonville, Arizona	
<u>Senora</u> (town) to <u>Suya</u> (town).	
Site of Suya identical or nearly so	
with that of <del>the town of</del> <del>the town of</del>	40 "
<del>Metaticechi</del> , <del>on</del> on	
source of Sonora river, above Bacuachi.	
<u>Ures-Corazones</u>	
<del>Ures-Corazones</del> to <u>Senora</u> (town),	
near Balsas of Sonora, <del>the river of</del>	
<del>the river of</del> <del>the river of</del>	14 "
<del>Ures-Corazones</del> to <u>Chichiltic Calli</u>	
<del>Ures-Corazones</del> to <u>Chichiltic Calli</u>	14 "
<del>Ures-Corazones</del> to <u>Tiguex</u>	150 "
<u>City of Mexico</u> to <u>Culiacan</u> .	
( <del>the</del> <del>city of</del> <del>Mexico</del> to <del>the</del> <del>city of</del> <del>Culiacan</del> )	192 (192)
<del>Ures-Corazones</del> to <u>Tiguex</u>	60 leagues
<u>Total: City of Mexico to Tiguex</u>	602

(Completed to August 11, 1910.)

On pp. 470, 471 *Postre de Sibola* is given as Cibola to Tiguex 5 days, and Tiguex to Tiguex 3 days, 8 days 40 long. But as the probably to Tiguex is probably to Tiguex, it is probably to Tiguex. According to the *Relacion Postre de Sibola*, it is 60 leagues from Cibola to Tiguex (p. 569), 3 days. According to the *Relacion Postre de Sibola*, it is 60 leagues from Cibola to Tiguex (40 leagues Cibola to Tiguex, 20 leagues Tiguex to Tiguex). But according to the *Relacion del Suceso*, it is 50 leagues [30 + 20] from Cibola to where Glorioso in 1540 reached the Rio Grande; and ~~reaching~~ to Jarandillo (p. 587), it is seen to make it about 50 leagues from the "first village of Cibola" to "the river of Tiguex," as he makes it 1 + 9 = 10 days' journey, which, at the customary reckoning of 5 leagues per day, is 50 leagues. As a mean of these extreme figures, we shall call the distance 50 leagues.

A 3d

1.1.3.  $\mu_0 = 1.0 \text{ nA}$  (1.0 nA)

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X  
2  
Footnote

The Pacific Slope, along which lay Coronado's route northward from Culiacan, is traversed by many rivers, the names of some of which, as then known, and as given by Castañeda, were Petlatlan, ~~and the rivers, cities, and settlements between San Luis Potosí and~~ Sinoloa, Boyomo, Teocomo, Yaquimi (Río Yaqui), and Corazones. There were also a number of smaller ones, of which he particularly mentions an "arroyo de los cedros," or Cedar Creek; and as this is presumably identical with ~~the present Río Cedros, a source of Mayo River,~~ ~~the Mayo River, the source of the Mayo, in Coronado's time~~ and as Coronado marched by way of this "arroyo," we may safely infer that his route <sup>to the Río Yaqui</sup> lay considerably farther to the right or east than Friar Marcos' ~~coastwise path of~~ <sup>for Ures-Corazones</sup> the previous year, and that it passed through the now important mining town and district capital of Alamos; both town and <sup>that</sup> ~~the Río Cedros~~ being today on a ~~small~~ branch of the Southern Pacific Railroad of Mexico. Just where he and crossed reached the Yaqui River, is not quite so clear. According to the Herbert map of SONORA, the main <sup>some</sup> ~~crosses~~ at <sup>for</sup> Buela Vista, but a more direct route follows up the Cedros ~~and~~ <sup>left</sup> ~~the Yaqui~~ ~~at Cumuripa~~ to the latter's source <sup>left-hand branch</sup> of the ~~the~~ trail for Ures, crossing the Yaqui at Cumuripa, and the right-hand trail passing from the head of ~~#~~ Río Cedros to that of Río Chico, and down the latter, reaching the Yaqui near La Dura or at Onabas, and leading northward to Sonora Valley by way of Batuco. The fact that his advance army, in the region south of the Yaqui, marched "along a very bad way, where it was impossible to pass without making a new road or repairing the one that was there," and lost many of the animals that had been taken along as provision, "the roughness of the rocks" being such that "the lambs and wethers lost their hoofs" and were finally left at the Yaqui River, to be brought along more slowly by a party detailed for that purpose, <sup>way by the upper</sup> would seem to favor the ~~the~~ Cedros and Cumuripa as Coronado's northward route; as the fact that he came back through Batuco, would seem to indicate Onabas, Río Chico, and Río Cedros.

Nichols Letter of May 15/14.

as the route of his return. But earlier and later Spanish travel crossed at Buena Vista, and this fact favors Buena Vista as the crossing-place of Coronado also, and perhaps outweighs the Castañeda's "Yaquimi", Coronado's similarly pronounced "Lachimi", and Jaramillo's "Yaquemi," as applied to Yaqui River, are names denotive of the native people who inhabited the river valley. Yaquimi, or simply Yaquim, <sup>is</sup> a plural form of Yaqui, and analogous with the names of other native groups and their villages, such as Cocorim, Bacam, Torim, Bicam, Potam, Racam, ~~and~~ and Belam, which <sup>appear</sup> on D' Anville's map, <sup>upper course</sup> down in the same valley.\*

We will now turn our attention to the route — and especially to certain places of special interest upon it — north of the Yaqui and Matape rivers.

In view of the confusion that has existed in the minds of some writers concerning the several localities into ~~whose~~ names of which the word "Corazones" enters in one way or another, we will first briefly consider the history of these. This, we shall see, is connected more with the annals of the rear army than with those of the advance.

Of the localities to which the name "Corazones" is applied in the narratives of the expedition, there are four. One — aboriginal in occupancy ~~but not in name~~ — is that which Cabeza de Vaca had named "la Villa de los Corazones", because on his arrival there from Texas in 1536 the inhabitants had presented his little party with more than six hundred cured deer-hearts; it is <sup>referred to</sup> ~~summarized~~ by Oviedo\* as "this

*Footnote* \*Historia. Here translated from the Spanish, quoted by Bandelier (S. W. Hist. Contr., 42) and Winship (B. A. E., XIV, 484).

pueblo, or, more properly speaking, associated pueblos," and described by the same as consisting of "three pueblos which were contiguous and small, in which there were not to exceed twenty houses;" and in the narratives of Jaramillo, Coronado, and Castañeda, as presented by Winship, it is ~~summarized~~ variously called "este Pueblo de los Corazones," "the Town of Hearts," "Valley of Hearts," and sometimes simply "Hearts" or "Corazones." The remaining three are Spanish. Each of the latter seems to have borne the name, San Hieronimo de los Corazones, Saint Jerome of the Hearts; but <sup>he</sup> was also commonly shortened to "San Hieronimo" or to "Corazones", which has been no small source of confusion.

In his essay of 1869, Simpson remarks, "With regard to the position of the town of Corazones, it is difficult, on account of the vagueness of the narratives of Jaramillo and Coronado, to fix it. Jaramillo speaks of it as having been situated about five days' journey northwardly from the Yaquami River, and conveys the idea that it was near or on the Rio Sonora." With this <sup>opinion</sup> ~~summarized~~, later writers generally agree. But he goes on to cite several statements of Castañeda and one of Coronado (the latter misunderstood through Hakluyt's translation, as already shown), and concludes "that the town of Corazones on <sup>the</sup> Sonora River was Sonora," which particular Corazones, on his map, he locates, under the name "Sonora", on Sonora river below the junction of the Rio San Miguel, or in other words, about in the position of Hermosillo, the present capital of the State of Sonora; and ~~summarized~~ concludes "that San Hieronimo de los Corazones was .... on a river which is now called San Ignacio."\* Thus Simpson recogniz-

*Footnote* \*Smithsonian Report for 1869, pp. 324, 325. }  
ed but two geographic positions for the name "Corazones" on Coronado's route.

In his Southwestern Historical Contributions, of 1890, concerning the Valley of Hearts, or the ~~position~~ position of the Corazones Indians, ~~seen by~~ ~~Cabeza de Vaca's party~~, ~~in~~ Bandelier wrote, "It lay a short distance from the village of Batuco in Sonora," but "nearer to the coast;" and his conclusion was, "we can fairly locate the three hamlets where deer-hearts were offered to the Spaniards at some place in the vicinity of 'Matape'." In the same Contributions, he wrote of the town in which Marcos de Niza ~~had~~ stopped ~~ever~~ for a while in 1539, when northward-bound for Cibola, "I am convinced that the Vacapa of Fray Marcos was 'Matapa' or 'Mataps', an Indian village of central Sonora." He therefore regarded <sup>the aboriginal</sup> Corazones and Vacapa as being in one and the same vicinity. Matape, which figures on many of the older maps of Mexico, is still in existence, though of less importance <sup>in late times</sup> than formerly; it is about 22 miles in a straight line west from Batuco. But in "The Gilded Man," published three years later than the Contributions, he says, "The Valley of Hearts is south of Batuco."

Hodge, in a skillful discussion too long to reproduce here,\*

Footnote

\*See Brower's Memoirs, II, pp. 34 - 37.

presents literary, geographical and other data bearing on the position of the several towns of "Corazones," and places the aboriginal, as well as the first Spanish town of that name, near Ures. That this position is correct, is strongly supported by Castañeda's statement, "There is also the Corazones, which is in our possession, down the valley of Señora."\*

Footnote

\*Winship's Cor. Exped., p. 515.

(Continued on page 20.)

~~had~~ Coronado remained at the Indian Pueblo de los Corazones but a few days: long enough to have some coast Indians brought thither, who told him they had seen a ship pass, which he thought might be either that of Alarcon or that of some Portugese. He seems, in fact, to have stopped there ~~about~~ 3 days, which covered, however, more or less of 4. The inhabitants ~~had~~ told him that their town was "a long five-days' journey from the western sea;" by which they probably meant 5 jornadas considerably longer than those (of <sup>13 or 14</sup> ~~about 15~~ miles) which they knew that the Spaniards ~~were accustomed to~~ <sup>land-</sup> make. Ures is about ~~about~~ 100 miles from the coast by the shortest possible route. To summon Indians thither from the coast and await their coming, as Coronado says he did, to get word of Alarcon's sea expedition, in the 3 or 4 days of his stay, meant rapid work for both summoners and summoned; but if the messengers sent and those who came were some of the Indian runners for which northwestern Mexico is so famous, there is no difficulty whatever, in view of their almost incredible feats of long-distance running, in understanding how the thing was done.\* Moreover, as the Hearts Indians were friendly to the Spani-

*220-1204*

\*In his ~~paper~~ memoir on the Seri Indians, in the 17th Report of the Bureau of American Ethnology, Dr. McGee alludes to "the hardly conceivable fleetness of the Seri," who inhabit the coast region opposite Ures, and gives some impressive examples of it, together with a full-length photograph of a Seri Indian runner (pp. 125 and 149-152, and Plate XXI). That the more easterly mountain Indians, the Tarahumari, were not behind them in fleetness, we learn from Lumholtz' letters in the Bulletin of the American Geographical Society and from his "Unknown Mexico." As for the Opata Indians of central Sonora, Bartlett's Personal Narrative (Vol. I, page 445) cites Velasco's "Noticias del Estado de Sonora" as authority that "in twenty-four hours they have been known to run from forty to fifty leagues." The natives of Ures were, according to Orozco y Berra and the author of the Rudo Ensayo, in part Opatas. (See Hodge, ~~pp.~~ 36.)

ards, it is possible that Coronado and some of his attendants reached the Town of Hearts some hours in advance of his army, and left it some hours later than the army did, in order to arrange communication with the coast Indians and hear through them, if possible, <sup>word</sup> ~~news~~ from or about the fleet of Alarcon; and so he himself may have been in the town nearly or quite 4 days (for he says, "I stayed there four days"), while his advance army stopped there (as ~~one~~ narrative indicated only about 2. Yet as we shall show, ~~one~~ these seemingly conflicting figures can be reconciled in another way. The rear army, under his lieutenant, ~~Captain~~ <sup>Adelante</sup> ~~Arellano~~ <sup>Rey</sup> ~~Arellano~~ Captain Arellano, arrived there a few weeks later.

According to the Relación del Suceso, when Coronado <sup>had</sup> "set out from Culiacan," with his "80 horsemen and 25 foot soldiers, and a small part

*Coronado's March*