Leagues is the nearest that it seems to me it can be thither. The North Sea ought to be much farther away.* Your Lordship may thus see

"In a subsequent letter (that of October 21, 1541, to the king,) Coronado wrote of Tigua, a province on the Rio Grande, about 60 leagues from Cibola-Hawikuh, as being 400 leagues from the North Sea and more than 200 from the South Sea." (Bu. Ech. Ann. XIV, 583.)

how very wide the country is. They have many animals—bears, tigers, lions, porcupines, and some sheep as big as a horse, with very large horns and little tails. I have seen some of their horns the size of which was something to marvel at. There are also wild goats,* whose

heads I have seen, and the paws of the bears and the skins of the wild boars. For game they have deer, leopards, and very large [cows], and

*This word is here substituted for "deer," which has doubtless crept into Ramosio's version of Coronado's letter, as Winship suggests, by a slip of the pen. Coronado was evidently naming the animal life of the Southwest, north of Sonora; and not that of Florida only. As regards the animals of the cat family, there were of course neither lions nor tigers. But the panther, which we often call the "mountain lion," is called "tigre" in Spanish-American countries, and is widely distributed in both North and South America. The ocelot was formerly not rare in the Southwest, and ranged northeast to Arkansas. The jaguar is known to Spanish-speaking Americans as "el tigre." As in middle of the 16th century. It was common in the Rio Grande Valley below El Paso; also on and east of the Santa Fe or Rio Grande, a little to the north of the Rio Grande, a little to the north of the Cibola. The ocelot, Montezuma wrote in 1722 (in the Nuevo Testamento) "In other countries, the lion, among the quadrupeds or game of the forest, is called king; but this appellation does not properly apply to what in Sonora goes by the name of leon, in the Opata by the name of naidocoat; for this animal, although as large as a yearling, is so contemptible and destitute of courage, that on being closely pursued by the people, it not only does not get how to defend itself, but weeps and whines. True, it does damage, and kills some animals, for it is not lacking in strength to do so. But it has neither the mane nor the color nor the claws of a real lion. Some people call it, leonard, but with no better reason than those who call it, "panther." As he only another mention of the ocelot, the common cat of Sonora, the animal which he first heard some people call leopard, is probably the ocelot, or tigre, the jaguar. He wrote: "A more ferocious animal is the tiger, and all over the province of Sonora, which in 1722 extended north to the Gila. He does much damage to the people, and is not as they say, "a tiger," but as they say, "tigre." The "tigres" of Coronado's letter were probably jaguars; and his "leopards," ocelets.

From "Particularly of the Zuni country, Castañeda mentions, of the cat family only "leones" and "gatos"—mountain lions and lynxes—which are and doubtless were the two commonest sorts of cats in that country; and of rodents he mentions "murtitas," which in Old World parlance would be otters, “weasel” here, but in New Mexico is the name applied to the much more common beavers.

animal which Your Lordship favored me with, which belonged to Juan Melaz. They inhabit some plains eight days' journey toward the north.* They have some of their skins here very well dressed, and
"It is probable that "north" is here an error for east, and that the "eight days' journey" was such a distance as might have been made in 8 days by a Cibola hunting party unincumbered with baggage; and that, therefore, the distance from Hawikuh to the buffalo range, which as yet Coronado knew of only from Indian information, was about 40 leagues. Possibly, therefore, after his departure from Tiguex (Tigua) via Cicuye (Pecos) it was 2 months to the cows;—i.e., from Tiguex to Cicuye, and 4 from the latter to the buffalo plains lower down the Pecos Valley. In his itinerary of 1543, under date of September 15, Lieutenant Whipple wrote: "We have again met buffalo signs. On inquiring how far west they have been seen, a Tegua Indian stated that many years ago his father killed two at Santo Domingo. A Mexican from San Juan de Caballeros added, that in 1535 he saw buffalo on the Rio del Norte." (Proc. U.S. Surv. Reps., Vol. III, p. 36.) This would seem to indicate that buffalo had at times ranged west to the Rio Grande; but these would seem to have been only stragglers, that at intervals wandered over the Pecos-Rio Grande divide and down the Rio Galisteo; and there seems to be nothing of contemporary record to show that buffalo were trapped on the Rio Grande valley in Coronado's day. Beavers and Wild Horses were found by Jacob Fowler on the Rio Grande between Taos and Wagonwheel Gap in 1622; but no buffalo. (See Journal of Jacob Fowler, entries of February to April inclusive.)

they prepare and paint them where they kill the cows, according to what they tell me.

"These Indians say that the kingdom of Totonteac, which the father provincial praised so much, saying that it was something marvelous, and of such a very great size, and that cloth was made there, is a hot lake, on the edge of which there are five or six houses. There used to be some others, but these have been destroyed by war."

The information which Fray Marcos had received from the Opatas of Sonora and from the Indians of San Pedro River Valley concerning Totonteac, as given in the Hakluyt Society's version of the friar's Relacion, was that in Totonteac the "great store" of cloth like the "Here added, taken from the Bandelier reprint (1905) of that version, in A. S. Barnes and Company's valuable "The Trail Makers" full and literal translation, from the friar's Relation of the information he received at Arisle.

"the friar's gray woolen gown, and made from the fur of 'certaine little beasts,'" and "that the people of that Countrey wore the same;" and that the province of Totonteac had "houses like those of Cenla, and better and more in number, and that it is a great Province, and hath no governour." And of what he was told by an old native of Cibola long resident among the Sobrepuris, the friar had related, "Likewise, he said, that the Kingdome called Totonteac lyeth toward the West, which he saith is a very mightie Province, replenished with infinite store of people and riches. And that in the sayde Kingdome they weare woolen cloth, like that which I weare, and other fine sorts of woolen cloth made of the fleeces of those baestes which they described before unto me; and that they are a very civile people."

The Spanish reads, "as cosa muy grande y de tieme cuyo", which is otherwise rendered by Bandelier, "it is a big thing without any end to it." (Nootka Hist. Cont., p. 192.)
And in the winter of 1539-40 Captain Melchior Díaz had been told by the Sobrepuris that Totonteac was "seven short days from the province of Cibola, and of the same sort of houses and people, and they say that cotton grows there." But says Díaz, "I doubt this, because they tell me that it is a cold country. They say that there are twelve villages, every one of which is larger than the largest of Cibola."*

As quoted by Mendoza in his Letter of April 17, 1540, to the King, and translated in Bu. Eth. Ann. XI by Winship, from the Spanish text in Pacheco y Cardenas, Documentos de Indias.

Totonteac was, according to Díaz, "seven short days," and according to Fray Marcos, "west," from Cibola. But of Indian travel in that dry region Castañeda says, "they travel in one day over what it takes us two days to accomplish." A full day's journey in those parts would therefore have been about 10 leagues; but "seven short days" for those Indians would probably not have exceeded about 8 leagues each, or about 56 leagues—151 miles—for the entire distance. As the actual distance from Hawiku or Granada (Coronado's headquarters) to Awañobí (the first of the Hopi villages in the sixteenth and seventeenth centuries), via the well known south trail, is not far from a hundred and fifty miles,* the information which Díaz obtained indicates that Totonteac was in the Hopi or Mogollon country.

Hodge, Coronado's March to Quivira, page 47.

A closer approximation to the distance between Cibola and Tussayan—Totonteac than the estimates given by Coronado's is the statement, "there are twelve villages, every one of which is larger than the largest of Cibola," seems clearly to have been the mark that number referred to the province of Totonteac, must have included five pueblos outside of Tussayan, and situated either Coronado's or Cardenas' route across the Colorado Valley. For Tovar found in Tussayan but "seven pueblos;"* 612, siete pueblos, (pp. 423 and 454), and "pueblos que se uieron" (p. 454); Castañeda, Bu. Eth. Ann. XIV.

Gardens found the zone west of it uninhabited.
country (tierra despoblada) through which he marched for twenty days while there were three, now called Joaquín, on the Little Colorado River; and perhaps ontop with basin; before reaching the greater Colorado, and Coronado saw no pueblo on the 15-days wilderness road between Chichitallicat and Chibola, although he probably passed within a day's journey of one ere he quitted the Salt River Basin.

Considered in the light of history, tradition, and archaeology—elsewhere discussed—it is not at all improbable that there were in Totonteco in those years five inhabited pueblos besides those of Tason; and that these may have included some south of the Mogollon in, as well as some in the valley of the Little Colorado.

From these considerations it would appear that "Totonteco was the name used by the Pima linguistic family south for a wide scope of far western pueblo country whose eastern, dominant tribes consisted of seven Hopi pueblos, which collectively were called "Tonto," The Zuari or Tusayan. It undoubtedly included the little Colorado Valley and may have included also the country from the northern Rio to the northern limit of pueblos then known by Pima tribes to be occupied by Patki and other emigrants from the Gila and Salt rivers. It is little wonder, therefore, that the San Diego River Indians, told Fray Marcos that it was "no mendicano, a big thing, without any end to it."

Whipple many years ago suggested that the name, Totonteco, may have survived in the name "Fonse"(as in Tonto Creek, Tonto Basin, etc.), and in this construction may be noted also the still more closely similar name, Tontear, used by Francisco the guide, in naming some western Arizona tribes to Lieutenant Exxon in 1833; but both of these names, foolish, and (Tontear, to speak or act foolishly) are Spanish words, with

The northern extension of broadly so-called Pueblo culture in the Rio Colorado Basin had been—but probably in 1540 was no longer—much farther north than the four towns of Jutah, Waiol, and Ophoe; namely on Brush Creek, Utah, just south of the eastern part of the Uintah Mountain Range. The valley dwellings in the region that included that stream and the Uintah Basin were largely at least of the small, rectangular, mud-plastered wicker-wall type, like the ancient rectangular small houses of the Gila and Salt rivers; while the larger cliff-dwellings in canyons of the plateau country between the Uintah and Price rivers were of stone. For observations on some of the northern migrations of the Patki and other ancient Gila pueblos in Arizona, see Early Far West Paper No. 3.

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about the very salt lake which came to Marata (Motagua) its name, and which had on its border another, the hot-water geyser, and about its burning with sulfur, of which he spoke.

The intelligence of a later-known salt lake—the Great Salt Lake of Utah,—which was communicated to Fathers Dominguez and Escalante by the Timpanogos Utes at Utah Lake in 1776, is recorded in these explorers' Diario y Derrotero as follows: "The other lake, with which this [Lake of the Timpanogos—i.e., Utah Lake] communicates, occupies, as they told us, many leagues, and its waters are injurious and extremely salt; because the Timpanoos assure us that he who wets any part of his body with this water immediately feels an itching in the wet part." This is as translated by Bancroft in his History of Utah, page 15; but by Lieut. G. K. Warren, assisted by Senor Moreno of the Spanish legation at Washington (in or before 1857), the word translated by Bancroft "itching," is rendered "burning."*

From this we can see how Coronado—whose information must have reached its Spanish dress through at least two successive and more or less imperfect interpretations of Indian languages—might have understood as "hot lake" a Cibolan term which was intended to convey the meaning of salt lake: the Zuni Salt Lake district being indicated by the rest of his description.

But while we identify Coronado's "hot lake" with a salt lake, it is at the same time and reason for believing that his word, "hot," had actual reference to temperature.

It is of course possible that Coronado may have been informed at this time, of the province that Castañeda calls "Tutahaco," of 8 Piro pueblos, or Piro and Tigua, on the western border of the Salinas Basin east of the Rio Grande. But that province was not seen by the general until more than three months after his letter of the above date to Mendoza was written; and the tutahaco saline was comparatively remote; and it is reasonable to look nearer to Cibola for Coronado's "hot lake." Winship has considered, "hot lake" to be "in all probability the salt lake alluded to" in Mendoza's Letter to the King, as the source of Cibola's salt supply,—the now so-called Zuni Salt Lake, "two days from the province of Cibola"; and although not technically exact as a matter of descriptive physiography, it seems that this identification is correct as to locality, and that Coronado's "Totonac" was a part of Fray Marcos' "kingdom called Marata," in which latter, as we shall see, both the Zuni Salt Lake and the "hot lake" were situated.
Mrs. Stevenson has recently called attention to a curious fact which seems to the present writer virtually to confirm the identity of the "hot lake" and of the "Teoton" of Coronado letters. That lake, as we have seen, occupies the northern moiety of the floor of a partly filled crater-like depression, a mile or so broad, from whose center—i.e., from the southern edge of the lake—rise two volcanic cinder cones, or peaks, monticules. In addition the depth of the crater of one of these monticules, which, in her memoir, The Zuñi Indians, Mrs. Stevenson gives the following account, here very slightly abridged:

"The volcanic peaks which rise 150 or 200 feet above the waters of the lake are quite symmetrical. The interior of the cone of one descends at an angle of 45° to an elliptical basin, 160 by 200 feet in diameter, filled with saline water of a brilliantly green hue and bordered by a footpath of red lava, partly formed by debris from the slopes, but carefully remodeled by the Zuñis into a narrow, even path about 5 feet wide. The outer and inner sides of the peak are so covered with volcanic cinders that it is difficult to ascend or descend. Only those of the Bow priesthood who have taken four scalps may enter the crater. The warrior who has scalped but one enemy goes only part way up the mountain and deposits his offerings; when he has scalped two, he may go still farther up the mountain; after the scalping of three, he may ascend to the top and make his offerings; after the scalping of four enemies, he may descend into the crater and deposit his offerings in the sacred lake. At least such was the rule until the cessation of intertribal war, during which only such men as brought back scalps were entitled to join the Bow priesthood.

"Members of this fraternity who go down to the house of the Gods of War must descend over a certain path which was traveled by these gods when they descended to this crater lake. The elder and younger Bow priests, the living representatives of the Gods of War, when visiting this sacred spot descend by the path referred to and on reaching the water's edge separate and make the circuit of the lake, passing each other on the opposite side.

"A shrine especially set apart for the offerings of the elder and younger brother Bow priests is located on the east side of the lake. It is 3 feet from the water's edge and is square, some 15 inches a-
Illustrations.

Cinta Cine (which is at one cold)

The Salt Lake (Home of the Zuni, Gods of War)

Pl. L. XXXIX

(Cut out for Zuni Memoir

Also Pl. of the Salt Lake.