constructing the rafts and crossing Salt River. It was customary for early Spanish travelers to cross a river, if possible, on the same day on which it was reached, lest by next morning it should be at a higher stage and more difficult of passage, as on this occasion Salt River was almost sure to be, "as it was rising."

"From here," continues Jaramillo, meaning from the Rio de las Salinas, or Salt River, "we went to another river, which we called de la Barranca. It is two short days from one to the other, and the direction almost northeast." It was, in fact, more than one, but considerably less than two jornadas, in a north-northeasterly direction from the 110th meridian crossing of Salt River, past where Fort Apache is now situated, to the White Mountain River's North Fork, a stream that flows at first west, and then a little west of south to Fort Apache, in a great canyon like the barrancas of western Mexico.

The stream was of course reached at its junction with the East Fork, and below the barranca itself, and near present Fort Apache, whose altitude is about 5600 feet. Jaramillo does not say that they followed up this Rio de la Barranca, but they must have done so for somewhat over a day's march; and it is here that we find one of the 2 days' marches Jaramillo's account, 2 days - a third of a millennium before, have here reproduced from the Preliminary Botanical Report of Doctor Rothrock, in the Wheeler Atlas.

"From here," again continues Jaramillo, "we went to another river, which we called Cold river (el río Frío), on account of its waters being so, in one day's journey." From the Barranca camp we have specified, the road continues up the North Fork to near the latter's great bend. In leaving this Fork, it ascends a short west-side branch of it, swinging to the left, and, as part of a detour around a small mountain, runs west of north for a few miles to Willow Spring, (altitude 7294 ft.) or Cooley's Ranch.

*This is as given on the Wheeler Atlas, Sheet 76; Doctor Rothrock's observation made it 7195. All altitudes given here for points on this road from the Gila northward are as entered on the Wheeler Atlas sheets Nos. 75 and 83. They are barometric determinations, and hence only approximately correct, whose finely grassed meadows, flanked with "heavy pine timber, interspersed here and there with beautiful groves of thirfty oaks."

**This is in H. W. Rand's, Appendix, If. of the Annual Report of the Chief of Engineers for 1908, page 149.
recent decades been a principal source of hay supply for winter use at Fort Apache. From the said camp in the Barranca, it was a camp at Willow Spring, whose stream cooled, as compared with the waters of lower altitudes and more southerly exposures hitherto passed, was Jaramillo's "rio Frio."

"From here," Jaramillo resumes, "we went by a pine mountain, where we found, almost at the top of it, a cool spring and streamlet, which was well known to travelers between Fort Apache and Zuñi as the Curong Spring," which was, as he relates, "another day's march, and at the same time an ascent of nearly 600 feet, to the White Mountain, or Mogollon, divide, that separates the tributaries of the Gila-Salado from those of the Colorado.

"It is a safe assertion," says Doctor Rothrock, "that there is on the Sierra Blanca of Arizona enough of good pine timber for the whole Territory for many years. Pinyon ponderosa attain a height of 70 feet, and some of the firs reach a greater height."

"In the neighborhood of this stream," says Jaramillo, "a Spaniard, who was called Espinosa, died besides two other persons, on account of poisonous plants which they ate, owing to the great need in which they were." Or, as Coronado relates it in his Letter to Mendosa, "some Indian allies and a Spaniard called Espinosa, besides two negroes, died from eating some herbs because the food had given out." It is an interesting though melancholy fact, that Chevelon-Badger Fork, which heads in this same Mogollon range, northwest, takes its name from a French trapper who died upon its banks from eating some poisonous root.


The plant may have been the very poisonous water Hemlock (Cicuta maculata L.), which occurs in marshy places throughout the United States, and is also known under the names, "Wild Parsley," "Spotted Cowbane," "Musquash Root," and "Beaver-Poison." It is a perennial, 2 to 6 feet high, with stout, hollow, purple-streaked stem, twice or thrice pinnately compound leaves (the lower ones on leaf-stalks 1 to 2 feet long), and oblong-lanceolate leaves.

"From Curong Spring," says Jaramillo, "we went to another mixer, which we called the Red river (Bermajo), two days' journey in the same direction, but less toward the northeast." 17. "Bermajo" is the same name mentioned by Castaneda, and is generally connected to the Zuñi river. Mendanha says in the Río Bermajo of Jaramillo as identical with the Little Colorado (Colorado Chiquito), and in this he is The Gilded Man, page 103.
As far north as the summit of the Gila-Colorado divide, Jaramillo gives a fairly detailed itinerary; but from that lofty point, as if impatient to reach his goal, he brings Coronado clear across from Summit Spring to the Zuñi River, without mention of any intermediate places or camps; and this in an incredibly short time.

"From here," (the Summit Spring), says he, "we went to another river, which we called the Red river (Bermejo), two days' journey in the same direction, but less toward the northeast."

By "less toward the northeast," he seems to have meant, with less eastward departure from north, the general direction of the march from Juliacan. The direction from Willow Spring to Summit Spring is not stated by him, but is considerably east of northeast; and it is true that the average direction—from the latter to where the road reaches Zuñi River, departs mm less from the north than does the Willow-Summit air line, but so few degrees that it seems almost strange that Jaramillo should have noticed it. For the first few leagues beyond Summit Spring, this change of direction is somewhat more pronounced than its average for the whole distance; which perhaps explains his neglection of it. However, the very swing that brings the course nearer to north, from east-northeast, obviously brings it also nearer to northeast; so that, Jaramillo should really have added said "more," instead of "less," toward the northeast.

A Rio Bermejo, or Vermejo, is also mentioned by Castañeda, and is generally conceded to be Zuñi River. Bandelier regards the Rio Bermejo of Jaramillo as identical with the Little Colorado (Colorado Chiquito), and in this he is followed by

Footnote

"The Gilded Man, page 186.

Footnote


Footnote

there is no logical escape from the conclusion of Hodge, that "the Rio Vermejo of Jaramillo and of Castañeda were one and the same stream," and that that stream was Zuñi River. It is not strange that it was

Footnote

"Coronado's March, page 42.

"muddy and reddish," as Castañeda describes it, since it is a red country, and was reached in the summer season, when apt to be swollen occasionally by freshets from the Zuñi Mountains.
The possibility that an error by Jaramillo or his copyists, or a confusion due to misunderstanding by a scribe to whom he may have dictated, exists in the statement that Coronado’s march from Summit Spring to the Zuñi-Vermejo was made in 2 days, is suggested both by the 16 leagues involved—requiring almost double days’ marches—and by Jaramillo’s failure to mention Coronado’s "Rio del Lino," or to notice in any way the Little Colorado River.

The question of such error merits careful attention; for, in view of the high importance of Jaramillo’s narrative, as compared with others, for the detailed study of Coronado’s route, and in view of its general accuracy, we are reluctant to attribute error to it except where compelled to do so.

The distance from Summit Spring to where the road reaches Zuñi River, is about 18 leagues.* Although the march from Summit Spring was for a considerable distance down grade, and although the men were spurred on by a danger of starvation that had just been emphasized by the death of some of their number before they had gotten far from that unfortunate camp, so that some of the remaining journeys of more than usual length, it seems hardly possible that Coronado’s company could have almost doubled the conventional day’s march of 5 leagues on each of two successive days; especially when we consider the weakened condition of the Spanish footmen, negroes, and Indians, and remember that the horses, which had left Chichilticalli when but half recuperated from hard service, reached Cibola-Hawikuh in so exhausted a condition as to be almost useless in the fight that had to be made to gain possession of the pueblo.

Another consideration is the following: While Jaramillo—who had been of Coronado’s expedition, but wrote from memory many years after it—accounts nominally for 13 days’ march between Chichilticalli and Cibola, the last one of that 13 was in reality less than half a day’s march, since it was of only 2 leagues, the rest of that day being given to fighting and feasting at Cibola. Thus, actually, his accounts for 12 1/2 days. It has already been shown, by a comparison of writings contemporary with the expedition, that 14 1/2 of the 15 days said by Fray Marcos de Niza, Melchior Diaz, and others, to be requisite for crossing the despeblado grana, were actually used by Coronado in crossing it. Jaramillo, therefore, falls just two days short of accounting for the necessary number of days’ march. One of these days, as already observed, should be allowed for partial ascent of the Rio de la Barranca. This leaves one day still to be account-
ed for. There seems to be no part of the Jaramillo itinerary where this day can be added, except in the interval between Summit Spring and the Zufi-Vermejo River; and there it seems to be needed, to make the time of marching agree more reasonably with the distance, and to afford opportunity for the notice of the (by Jaramillo) strangely ignored Little Colorado River.

But if all of the above considerations leave still some room for doubt, in the matter seems to be set at rest by the Traslado de las Nuevas, for that document tells us that "Espinosa," who, we have seen, met his death in the neighborhood of Summit Spring, "died......four days from here;" i.e., 4 days before Coronado's force reached the first, or most southwesterly, Cibolan pueblo, Hawikú, in which the original letter or report, of which the Traslado is a copy, was written. To the fact that that letter was written by one who stood high in the confidence of Coronado and the viceroy, and who wrote with authority, we have elsewhere called attention. Jaramillo tells us that Espinosa died, not at the stream of the Summit Spring, but "in the neighborhood" of it. The Traslado de las Nuevas says that Coronado reached Cibola on July 7th, and, according to Castañeda, that final day's march was one of only 2 leagues; the arrival must therefore have been in the forenoon. Four days prior to July 7th, in July 3d, which was therefore the date of Espinosa's death, on the morning of the 3d, Coronado's company was leaving Summit Spring; and Espinosa died after leaving it, but in the forenoon, before they had gotten out of the neighborhood of its stream. It follows that Summit Spring—which was the camp of Friday night to Saturday morning, July 2d to 3d—was a little more than 4 days back from Cibola; or, stating it in converse fashion, that Cibola was a little more than 4 day's march from Summit Spring. And it follows farther, that the point where the road reached the Zufi-Vermejo River and where Cibolan Indians were first met, was 3 days' march from Summit Spring, since we know from Castañeda's Relación that that point of arrival at the Zufi-Vermejo, was one 6-league day's march and a little (2 leagues) over, from Cibola. So we are forced to conclude that the "two days", mentioned in Jaramillo's narrative for the march from the Summit Spring to Rio Vermejo, is an error for three days.

Of the three jornadas in which the interval between Summit Spring and Zufi River was covered, the first was probably the largest, and the two others successively shorter; night camps of July 3d and 4th.
being made respectively at Cave Spring and at Little Colorado River, which are the two most important way-stations. To Cave Spring (via Mineral Creek, which is a camping place,) was a march of 7 or 8 leagues, 

"About 8, by Wheeler's Atlas Sheet 70; but 7 on other maps that I have been able to consult. Neither converge trails from Fort Apache, Zuñi, Saint John (where an old Route from the Río Grande, via Burnt Fork and Carrizo Valley crosses the Little Colorado), Concho Creek, Snowflake, and Springerville. Doctor Rothrock describes the place, as he saw it in 1874, as follows: "The water comes flowing out of the base of the rock basaltic lava, as is the case with the best springs of the country. As usual, the meadow through which the stream ran had its crop of sedges and rushes, and, in the course of ages, had become quite fertile from the successive crops of vegetation that decayed there. The adjacent hills were well covered with bunch and grama grasses, notwithstanding the roots had often to penetrate into the crevices of the lava for nutriment. Pithons were sparsely scattered over the country. As a grazing center, this is a desirable location."

"Wheeler Survey Report for 1875, p. 121.

From Cave Spring, about 5½ leagues brought Coronado and his followers to the Little Colorado River, designated Río Colorado Chiquito.* If we reckon backward from July 7th and Hawikuh, by means of the account which, in his Letter to Mendoza, Coronado gives of the last few days of his march to Cibola, we can not doubt that Coronado reached and crossed on July 4th the stream which he called "El Río del Lino," ("the River of Flax"), because there was "a considerable amount of flax near the banks" of it. The coincidence of dates shows that his Río del Lino is the same as the Little Colorado, and justifies the use of the name, "Flax River," for that stream, on nineteenth century maps. The river was doubtless crossed, as it is today, at the place known in recent decades as Colorado Bridge, whose elevation, according to Wheeler Atlas Sheet 76, is 5633 feet.
As the old military road from Fort Apache to Fort Wingate, via Zuni, reaches Zuni River, 17 Coronadoan leagues from the point of old Hawikuh, we have here a confirmation of our positions, that this military road follows approximately the old trail over which Coronado marched to Cibola in 1540.

At Saint John, a few miles above Coronado's crossing, Lt. Rogers Birnie, in 1878, found the Little Colorado "a stream some 12 feet wide and 3 inches deep."


After leaving "El Rio del Lino," Coronado's letter relates, "No Indians were seen during the first day's march," July 5th, "after which four Indians came out with signs of peace," (and met the advance guard, which, under Cardenas, had reached the uppermost segment of Zuni River.)

saying that they had been sent to that desert place to say that we were welcome, and that on the next day the tribe would provide the whole force with food."

This meeting of the first natives of Cibola, as the narratives of both Jaramillo and Castañeda show, was on the Zuni-Vermajo River, a point whose distance from Cibola is stated in linear units by Castañeda, as "about 8 leagues."

"The army master," says Coronado's Letter to Mendosa, "gave them a cross, telling them to say to the people in their city that they need not fear, and that they should have their people stay in their houses, because I was coming in the name of His Majesty to defend and help them."

After this was done, [and evidently on the same occasion,] Ferrando Alvarado came back to tell me that some Indians had met him peacefully, and that two of them were with the army-master waiting for me. I want to them forthwith and gave them
some paternosters and some little cloaks, telling them to return to their city and say to the people there that they could stay quietly in their houses and that they need not fear. After this, [still on the same date] "I ordered the army-master to go and see if there were any bad passages which the Indians might be able to defend, and to seize and hold any such until the next day," (i.e., over night of July 6th,) "when I would come up." Of the meeting with the Indians here, Ocarilo says only that on the river Bornejo, "we saw an Indian or two, who afterward appeared to belong to the first settlement of Cibola. And he disposes of the remainder of Coronado's march thither by saying only, this: "From here we came in two days' journey to the said village, the first of Cibola." Of the first Zuñi River camp, Castañeda says, "The first Indians from that country [Cibola] were seen here—two of them, who ran away to give the news." There seem therefore to have been four Indians met in the first place, of whom two ran back to Cibola and two remained.

Of this river of the Zuñis, which they reached at "about 5 leagues from Cibola," by one day's march (of about 5 leagues on the 5th) from El Rio del Lino, and which was "called Red river, because its waters were muddy and reddish," Castañeda relates, "In this river they found mullets like those of Spain." It is probable that these "mullets" were those of the fish of the Sucker family (Catoctomus), some of the species of which—of the genera Catoctomus (Suckers) and Moestoma (Red Horse)—are today often known as "mullets." Together with two species of the genus Jila, which is not of this family, there is found abundantly in the Zuñi River a species of Mountain Sucker, Pantosteus delphinus, which grows to about a foot in length. The adult males of this Pantosteus have the sides "more or less rosy," displaying "a broad crimson band in spring and summer," and it would have been quite natural for Castañeda to classify them with the freshwater mullets of his native land; for the common mullet of the rivers of Spain (Mullus barbatu) is a red fish, known often as "the Red Mullet," and is noted for the brilliance of its coloration.

See Zoology of the Wheeler Survey, pp. 574 and 577 (P. Jarrold and Catoctomus bicobolus, which are synonymous); Evermann and Rutter, Fishes of the Colorado Basin, (Art. 25, U.S. Fish Com. Bull. for 1894, pp. 479 and 481; and Jordan and Evermann, Fishes of North and Middle America, p. 171.