

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 Balsas, 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 ^{of their usual} ~~of their usual~~ 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 cañon 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 5000 feet. Jaramillo does not say that they followed up this Rio de la Barranca, but they must have done so for

some what over a day's march; ~~and~~ it is here that we find one of the 2 days ^{which, in Jaramillo's account, are missing from the 15} that it took Coronado to cross the despoblado between Chichilticalli and Sibola.

~~the~~ Camp of the 30th was probably made, ^{11 or} about 12 miles up North Fork, in the barranca, at an elevation of between 5500 and 5600 feet.

This camp site has about the same north-northeasterly bearing from the 110th meridian crossing of Salt River as does the mouth of the North Fork. A view of the barranca, taken in 1874, probably within a very few miles of Coronado's camp of June 30th, 1540, — a third of a millennium before, — is here reproduced from

the Preliminary Botanical Report of Doctor Rothrock, in ^{Report of 1875,} the Wheeler ~~Atlas~~.

"From here," ^(Rio de la Barranca) again continues Jaramillo, "we went to another river, which we called Cold river (el rio Frio), 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~~ ^{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 ~~where~~ ~~Coronado's~~ ~~probable~~ ~~camp~~ ~~of~~ ~~July~~ ~~1st,~~ ~~at~~ ~~an~~ ~~elevation~~ ~~of~~ ~~about~~ ~~7294~~ ~~feet.~~ ^{or Cooley's Ranch,} Coronado's probable camp of July 1st, ~~at~~ ~~an~~ ~~elevation~~ ~~of~~ ~~about~~ ~~7294~~ ~~feet.~~

*This is as given on the Wheeler Atlas, Sheet 76; Doctor Rothrock's observation made it 7195. All altitudes given ~~and~~ here for points on this road from the Gila northward, unless otherwise stated, are as entered on the Wheeler Atlas sheets, Nos. 76 and 83. They are ~~of~~ barometric determinations, and hence only approximately correct.

whose finely grassed meadows, flanked with "heavy pine timber, interspersed here and there with beautiful groves of thrifty oaks," * has in

*K.W. Henshaw, Appendix LL of the ~~Annual~~ ^{Annual} Report of the Chief of Engineers for 1873, page 149. (Wheeler ~~Survey~~ ^{Survey} Report.)

Footnote

Footnote

Illustration



OAK GROVE, WHITE MOUNTAIN RANGE, ARIZONA. (187)
"Quercus undulata." Near Willow Springs; later Cook's Ranch.

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supp) farther

recent decades been a principal source of hay supply for winter use at Fort Apache. From the said camp in the Barranca, it was ^{only about three and a half leagues, but a}

Footnote *Rothrock, ibid, page 122. ~~From the said camp at Willow Spring, whose~~ ^{toilsome climb of some 1700 or 1800 feet, to the} ~~camp at Willow Spring, whose~~ stream — cold, 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, ~~well known to~~ ^{recent} travelers between Fort Apache and Zuñi as the "Summit Spring;" "which was," as he relates, "another day's march, ^(July 31) and at the same time an ascent of nearly ~~600~~ 600 feet, to the White Mountain, or Mogollon, divide, that separates the tributaries of the Gila-Salado from those of the Colorado."

Footnote *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." Pinus ponderosa attains 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 Mendoza, "some Indian allies and a Spaniard called Spinoso, besides two negroes, died from eating some herbs because the food had given out." It is an interesting though melancholy fact, that Chevelon's ~~fork~~ ^{which heads in this same Mogollon range} ~~which heads in this same Mogollon range~~ ^{farther} northwest, takes its name from a French trapper ~~who~~ "who died upon its banks from eating some poisonous root."

The French name for the plant is also mentioned in the report of the expedition to the Colorado River, page 155.

Footnote *Report of an Expedition Down the Zuni and Colorado Rivers, (in 1851) by Captain L. Sitgreaves, (Senate Executive Document 89, 32d Congress, 2d Session, Washington, 1853,) page 7.

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~~ 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 leaflets.

~~"From here, (the Summit Spring,) says Jaramillo, "we went to another river, which we called the Red river (Bermejo), two days' journey in the same direction, but less toward the northeast." A river of the same name is mentioned by Castañeda, and is generally supposed to be the Zuñi River. Bandette's name is the Rio Bermejo of Jaramillo as identical with the Rio Colorado (Colorado Chiquito), and in this he is~~

Footnote The Gilded Man, page 155.

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 Zuffi 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 Juliscon. 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 Zuffi River, departs ~~more~~ 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 ~~observing~~ ^{observing} 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 ~~written~~ said "more," instead of "less," toward the northeast.

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

Footnote | *The Gilded Man, page 155.
Winship." But in view of the agreement between Castañeda and Jara-

Footnote | Bu. Eth. Ann. XIV, p. 482.
millo as to the distance of ^{first} Rio Vermejo ^{second} from Cibola-Hawikuh ~~distance~~
("3 leagues" and "two days' journey," in reality about a day and a
~~half~~ ^{half} of travel, as the chronicles show) and in view of the statements ^{writers} by both of these ^{sc} that it was at
Rio Vermejo that Coronado's force met the first Indians from Cibola.*

Footnote | *See op. cit., pp. 482 and 588.
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 Zuffi River.* It is not strange that it was

Footnote | *Coronado's March, page 42.
"muddy and reddish," as Castañeda describes it, since it ~~is~~ ^{is} a red
country, and was reached in the summer season, ~~when it~~ when
apt to be swollen occasionally by freshets from the Zuffi Mountains.

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an omission by

The possibility that an error by Jaramillo or ^{an omission by} 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 18 leagues involved ^{which would have} ~~required~~ ^{to cover in 2 days} almost double ~~the~~ marches ~~and~~ 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} ~~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 ~~we~~ ~~are~~ ~~compelled~~ ~~to~~ ~~do~~ ~~so~~.

The distance from Summit Spring to where the road reached 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~~ ~~jornadas~~ ^{were likely to be} 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 ^{for aggressive part} 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, ~~he~~ ^{not quite} accounts for ~~13~~ ^{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 grande, 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 those days, as already observed, should be allowed for partial ascent of the Rio de la Barranca. This leaves one day still to be account-

According to Wheeler Atlas Sheet 76.

That is as far as they reached it all for some of them died in the wilderness.

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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 Zuffi-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 ~~strangely~~ (by Jaramillo)~~ strangely ignored Little Colorado River.

But if all of the above considerations leave still some room for doubt, ~~the~~ the matter seems to be set at rest by the Traslado de las Nuevas, for that document tells us that "Espinoso,"—who, we have seen, met ~~his~~ his death in the neighborhood of ~~Summit Spring~~ Summit Spring,— "died.....four days from here;" i.e., 4 days before Coronado's force reached the first, or most southwesterly, Cibolan pueblo, Hawikuh, in which ~~the Spaniards~~ after the Spaniards ~~settled~~ ^{settled} themselves well settled in the pueblo, ^{was written} the original letter or report, of which the Traslado is a copy. To the fact that that letter was written by one who stood high in the confidence of Coronado and the viceroy, and who ~~was~~ ~~wrote~~ wrote with authority, we have elsewhere called attention. Jaramillo tells us that Espinoso died, not at the stream of the Summit Spring, but "in the neighborhood" of it. The Traslado de las Nuevas says that Coronado ~~reached~~ reached Cibola on July 7th, and, according to Castañeda, "that final day's march was one of only 2 leagues; the

Footnote Bu. Eth. Ann. XIV, page 483.

arrival must therefore have been in the forenoon. Four days prior to July 7th, is July 3d, ^(1570.) which was therefore the date of Espinoso's death—the first recorded death in Arizona. On the morning of the 3d, Coronado's company was leaving Summit Spring; and Espinoso ^{apparently} 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 days' march from Summit Spring. And it follows farther, that the point where the road reached the Zuffi-Vermejo River and where Cibolan Indians were first met, was 3 days' march from Summit Spring, since we know from Castañeda's Relacion that that point of arrival at the Zuffi-Vermejo, was one 6-league day's march and a little ^(2^d) (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 Zuffi 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, ^{used sometimes as} a camping place,) was a march of 7 or 8 leagues, ^{*involving}

Footnote ^{*About 8, by Wheeler's Atlas Sheet 78; but 7 on other maps that I have been able to consult.}

Thither converge trails from Fort Apache, Zuni, Saint John ~~river~~ (where ~~an old~~ route from the Rio Grande, via Burnt Fork and Garrizo Valley, crosses the Little Colorado), Conejo 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 ~~lava~~ 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. PINEONS were sparsely scattered over the country. As a grazing center, this is a desirable location."*

According to the atlas sheet just cited the elevation of Cave Spring is 6031 feet.

Footnote ^{*Wheeler Survey Report for 1875, p. 121.}

From Cave Spring, about 5 1/2 leagues brought Coronado and his followers to the Little Colorado River, ~~crossed~~ ^{at} Rio Colorado Chiquito.* If we reckon backward from July 7th and Hawikuh, by

Footnote ^{*The distance is given by Doctor Rothrock (loc. cit.) as 15 miles.}

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 Rio del Lino, ("the River of Flax",) because there was "a considerable amount of flax near the banks" of it. ~~1874~~ The coincidence of dates shows that his Rio del Lino is the same as the Little Colorado, and justifies the use of the name, "Flax River", for that stream, ^{on some} 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 5638 feet.

Footnote *As the old military road from Fort Apache to Fort Wingate, via Zuni, reaches Zuni River at 8 Coronadoan leagues from the ruins of old Hawikush, we have here a confirmation of our position, 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, Lieut. Rogers Birnie, ^{September,} in 1878, found the Little Colorado "a stream some 12 feet wide and 8 inches deep."*

Footnote *Ann. Rep. Wheeler Survey, (App. Co, Ann. Rep. Chf. Eng'rs,) for 1879, p. 212.

After leaving "El Rio del Lino," Coronado's letter relates, "No Indians were seen during the first day's march," July 5th, "after which ^{the morning of} [that is, on July 6th] ~~where~~ four Indians came out with signs of peace," (and met the advance guard, which, under Cardenas, ~~had reached the unsettled segment of Zuni River,~~ ^{had reached the unsettled segment of Zuni River,} ~~apparently met the advance guard,~~ ~~and~~ "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 ^{at the point of arrival} on the Zuni-Vermejo River, ~~at~~ 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 Mendoza, "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 ^{own} houses, because I was coming in the name of His Majesty to defend and help them. After this was done, [and evidently ~~on~~ on the same ~~the~~ forenoon,] Ferrando Alvarado came back to tell me that some Indians had met him peaceably, and that two of them were with the army-master waiting for me. I went to them forthwith and gave them

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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, Jaramillo ~~says~~ ^{writes} only that on the river Bermejo, "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, ~~XXXX~~ "From here we came in two days' journey to the said village, the first of Cibola." Of the first Zúñi 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.

have shown referred probably to species of the genus *Gila*. But the common mullet of Europe is *barbus* and the same ~~word~~ ^{word} may sometimes have been applied to it also.

Of this river of the Zúñis, which they reached at "about 3 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 ^{as translated by Winship,} relates, "In this river they found ~~the word~~ ^{The word} ~~which Winship here translates~~ ^{which Winship here translates} "mullet," ~~is barbus, which he elsewhere names "barbus"~~ ^{is barbus, which he elsewhere names "barbus"} and which ~~is~~ ^{is} ~~like those of Spain."~~ ^{like those of Spain."} ~~It is probable that these "mullet" were~~ ^{It is probable that these "mullet" were} ~~but the "barbus" seen by Castañeda in "Rio Bermejo" may also have included some~~ ^{but the "barbus" seen by Castañeda in "Rio Bermejo" may also have included some} ~~fishes of the Sucker family (Catostomidae), some of the species~~ ^{fishes of the Sucker family (Catostomidae), some of the species} of which—of the genera *Catostomus* (Suckers) and *Moxostoma* (Red Horse)—are today often known as "mullet." Together with two species of the genus *Gila*, which is not of this family, there is found abundantly in the Zúñi River a species of Mountain Sucker, *Pantosteus delphinus*, which grows to about a foot in length. ~~The~~ ^{These} ~~males~~ ^{males} of this ~~Pantosteus~~ ^{Pantosteus} ~~have~~ ^{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 fresh-water mullets of his native land; for the common mullet of the rivers of Spain (*Mullus barbatus*) is a red fish, known often as "the Red Mullet," and is noted for the brilliancy of its coloration.* ^{Not ordinarily, if he meant mullets, we should expect him to write "mullet".}

Footnote

*See Zoölogy of the Wheeler Survey, pp. 674 and 677 (*P. jarrovi* and *Catostomus discobolus*, which are synonymous); Evermann and Sutter, Fishes of the Colorado Basin, (Art. 23, U.S. Fish Com. Bull. for 1894,) pp. 479 and 481; and Jordan and Evermann, Fishes of North and Middle America, p. 171.

(Continued on p. 47 g)