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### Why the 16th Century Spanish Conquistadors likely did not Descend into Grand Canyon (USA) near Desert View: A New Perspective

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#### **ABSTRACT**

There is probably no more historically significant or culturally pivotal event in the history of the southwestern USA than the ambitious expedition of Francisco Vázquez de Coronado. Although the exploits of Coronado's army have been examined for hundreds of years, new information has emerged from on-going studies of surviving documents and field work. This paper presents a new hypothesis and supportive evidence which suggest that a dispatch of Coronado's men (led by Don Garcia López de Cárdenas) with the goal of discovering the Colorado River, likely did not descend off the south rim of Grand Canyon near the present day Desert View area in eastern Grand Canyon, as proposed by Bartlett in 1940. Surviving documents indicate that the Cárdenas Expedition travelled 20 days and 130 miles before attempting a descent into the canyon; only three or four days of travel are needed to arrive at the Desert View area from the Hopi Village of Awat'ovi (the starting location of the Cárdenas expedition). In this paper, topographic, anthropologic and historic evidence along with new distance calculations are presented which suggest that the 16th Century Spanish descent into Grand Canyon did not occur near the present day Desert View area, but likely occurred at least 35 to 40 (linear) miles west of this area near the present day South Bass Trail. Ramifications of the proposed hypothesis include: (1) focusing the search for Spanish artefacts and surviving evidence at a new location in western Grand Canyon; and, (2) rectifying the historical record.

**Keywords:** Cárdenas exploration, Grand Canyon, Spanish conquistadors, Colorado river, 16<sup>th</sup> century.

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## 1.0 Introduction

In 1540 Francisco Vázquez de Coronado (Francisco Vázquez de Coronado y Luján) advanced his army into northeastern New Mexico (USA) toward the ancient Zuni Pueblo of Hawikuh and conquered the pueblo (Winship, 1892; Flint & Flint, 2005). In the time that followed, Coronado learned about the existence of the neighboring villages of Tuzan (Hopi). On July 15, 1540 Coronado dispatched Don Pedro de Tovar (Flint & Flint, 2005) from the ancestral Zuni Pueblo of Hawikuh (now under the command of Coronado) to investigate the villages of Tuzan (Hopi). From this dispatch, the Spaniards were able to learn from the Tuzan (Hopi) governor about the existence of the Tison or Firebrand River (now, the Colorado River) west of the Hopi villages. Upon receiving the news from Tovar, Coronado dispatched Don Garcia López de Cárdenas and “twelve companions” to locate the Tison or Firebrand River (Winship, 1892, p. 489). The exact route taken by Cárdenas and his men (led by Hopi Guides) remains unknown. Bartlett (1940) suggested that Cárdenas likely took one of two principal, Native American trails, both of which traverse the northern part of the Coconino Plateau south of Grand Canyon’s south rim. Both main trails were established trade routes used by the Hopi and Havasupai people (Colton, 1964; Spier, 1917; Whiteley, 1988). The Hopi and Havasupai people were close friends and traded valuable goods (including buckskin and red ochre used for Hopi ceremonial purposes). In fact, the Hopi created and possess a “Havasupai” kachina (kachinas are small carved figurines that are an integral part of Hopi religious ceremonies); the Havasupai kachina represents the “spirit” of their reputed friendship (Parsons, 1936).

The main trails along which Cárdenas and his men likely followed (led by Hopi guides) were located south of the canyon edge. These routes did not follow or strictly trace the sinuous and irregular canyon rim, but were habitually traveled, functionally-direct trade routes between the two First Nations. Surviving documents indicate that members of the Cárdenas Expedition travelled 20 days and 130 miles (209 kilometers) before attempting a descent into the canyon; only three or four days of travel were needed to arrive at the present day Desert View area (figure 1) from the Hopi Village of Awat’ovi, where the expedition commenced. Minimal research has been conducted on the Spanish “entrada” into Grand Canyon since the work of Bartlett (1940), Hammond and Rey (1940) and Bolton (1949), and the persistent, unresolved question of why the Spaniards traveled 20 days and 130 miles before attempting to descend into the canyon has never been adequately addressed. In this paper, a modern review of topographic, anthropologic and historic evidence is presented which suggests that Cárdenas and his men likely traveled farther west than previously suggested, before making an attempt to descend off the rim into Grand Canyon with hope of reaching the Colorado River.

## 2.0 Approach

A multi-pronged research approach, including a detailed review of existing literature and quantitative distance calculations, was used to reexamine the ruling hypothesis which states that the first descent into Grand Canyon by the Cárdenas Expedition occurred near the present day Desert View area (figure 1). Surviving Spanish documents were analyzed from a geomorphic perspective and the author’s detailed knowledge of the Grand Canyon geology in the Desert View area (e.g., Kenny, 2014). Analysis of the documents revealed subtle, overlooked or disregarded topographic clues inconsistent with a descent off the rim of Grand Canyon near the present day Desert View area. Further, the recorded documents clearly indicate that members of the Cárdenas Expedition travelled 20 days and 130 miles (209 kilometers) before attempting a descent into the canyon; travel to the Desert View area (from the Hopi village where the Spanish Conquistadors began their expedition) would have been conspicuously less than 130 miles (209 kilometers). To address this distance discrepancy, quantitative mileage estimates were made based on the pioneering work of Flint & Flint (2005). Flint & Flint (2005) determined that modern straight-line map measure is remarkably close to distances recorded in the surviving Spanish documents. Mileage estimates for this study were determined using the linear tool function in Google Maps®. The derived mileage estimates were used to establish the location along the south rim of Grand Canyon that best fit the travel distances recorded in the Spanish documents.

**Figure 1: Regional map of the four corners area of the southwestern USA showing the location of the South Bass Trailhead, Desert View, the Colorado River, and the ancient village of Awat'ovi.**



This quantitative data along with a fresh look at historical writings reinforce the hypothesis that the Desert View area was not the site of the first descent into Grand Canyon by the Spanish Conquistadors.

### 3.0 Results

Soldiers of the Cárdenas Expedition likely did not descend off the south rim of Grand Canyon (in an attempt to reach the Colorado River) in the vicinity of the present day Desert View area because: (1) modern straight-line map measurements of ~127 miles (204 kilometers) from the Hopi village (where the Spanish Conquistadors began the expedition), place the descent location 35 to 40 miles (56-64 kilometers) west of Desert View; (2) no logical, topographically constrained stopping point, that would have halted, thwarted or impeded rim-to-river access existed along the well-established Hopi trails in the Desert View area. Spanish documents clearly describe a situation where the Spaniards were only able to travel about one-third of the way down off the south rim before encountering a vertical cliff; and, (3) Hopi trails in the Desert View area led to some of the Hopi's most sacred religious sites. It is highly unlikely that the Hopi would risk taking the Spaniards on a trail that might compromise one of their most sacred religious sites.

### 4.0 Discussion

#### 4.01 Topographic and anthropologic considerations

As stated by Hughes (1978) and many others, the precise location where Cárdenas and his men first viewed Grand Canyon is unknown. Indeed, there is little evidence presently available to determine the location where the Spaniards may have first seen Grand Canyon. However, translation of Spanish documents by Winship (1892), provide a few cryptic clues about where the Spaniards tried to descend into the canyon. The descent into Grand Canyon occurred at a place along the south rim which was, "elevated and full of low twisted pines ... and lying open toward the north" (Winship, 1892, p. 489; James, 1912, p. 196). Although minimal, historians have used this information along with the location of ancient Hopi travel routes, to suggest that Cárdenas' men likely descended into Grand Canyon near Desert View (figure 1; Bartlett, 1940; James, 1974). From Document 29 of the 1596 Relación del Suceso ("report of the outcome"), we learn that Cárdenas and his men spent several days "looking for a passage" off the rim before an attempt was made to go down at the least difficult place" (Winship, 1892, p. 489). Three members of Cárdenas' party (Captain Melgosa, Juan Galeros, and an unnamed companion) attempted a descent off the south rim and into the canyon, but "returned ... not having succeeded in reaching the bottom" stating "that they had been down about a third of the way" and could see the river from where they stopped (Winship, 1892, p. 489). As recorded in Document 29 of the 1596 Relación del

Suceso, the explorers were stopped about a third of the way down by a cliff “so vertical ... that they could hardly see the river” and that the three searched the area with “utmost diligence” for a way down but it was “vertical and rocky” and “none was found” (Flint & Flint, 2005, p. 499). This minor but important detail indicates that Cárdenas’ men were unable to descend deeper into the canyon because of topographic constraints (i.e., a near-vertical cliff), which is typical of travel below the rim in Grand Canyon – but somewhat atypical in the Desert View area. The currently accepted hypothesis suggests that Cárdenas’ men descended off the south rim near Desert View where numerous topographic features are now named for the early explorers (e.g., Cárdenas Butte; figure 2).

**Figure 2: Cardenas Butte (foreground) in eastern Grand Canyon National Park. View is north from the upper section of the modern Tanner Trail. Cardenas Butte is approximately 1.3 (linear) miles northwest of Desert View (photograph by the author).**



However, on none of the trails in the Desert View area (modified from ancient, well-established Native American trails), is there a logical, topographically-constrained stopping point about a *third* of the way down that would obstruct further travel by the Spaniards (Kenny, 2010; Kenny, 2013). Geologic faults and subsequent weathering and erosion along the main fault (the “Butte Fault”), fault splays, and structural grabens (fault-bounded depressions) have made rim-to-river travel physically possible in the Desert View area (Lucchitta, 2001). Weathered and eroded geologic faults are the primary avenues for rim-to-river trails throughout most of Grand Canyon. The Native American (and modern day) trails mostly follow these eroded fault zones. The Spanish Conquistadors were entirely unfamiliar with the area and did not possess the geologic or “historical use” knowledge necessary to understand the means by which most trails gain access to the river from the canyon edge. In contrast, the Hopi had “historical use” knowledge of the canyon and naturally established many of rim-to-river access routes along the geologic fault zones. All trails and routes along the south rim of Grand Canyon were (and remain) important to the Hopi (J. Day, personal communication, October 9, 2011; G. Tso, personal communication, June 17, 2012). In fact, Hopi trails have been described as, “umbilical cords that spiritually link [the Hopi people] with outlying shrines and sacred features” that embody sacred and spiritual qualities (Ferguson, et al., 2004, p. 2). The trails in the Desert View area were one of several pilgrimage routes to the Öngtupqa (Colorado) River. These trails were used by the Hopi to gain access to one of the most sacred religious sites of the Hopi [the Sípàapuni (or Sipapu) which is the religious “hole of emergence” from the underworld through the Grand Canyon (Waters, 1963; Courlander, 1987; Lyons, 2003). The “Sipapu” is located in a tributary of the Colorado River just north of Desert View]. It seems highly unlikely that the Hopi would have taken people whom they considered *invaders* down a trail that could compromise the location of one of their most sacred sites. Even today, the Hopi do not take any *pahanas* (non-Hopi, or white people) – with only extremely rare exceptions, to any of their sacred sites or ceremonies. Indeed, it has been said, “of all the traits that stamp Puebloan Culture, secrecy is the hallmark” (Roberts, 2005, p. 152). These topographic

and anthropologic details cast serious doubt on the currently accepted view that Cárdenas and his men - led by Hopi guides, descended off the south rim of Grand Canyon near the present day Desert View area.

#### 4.02 Historical considerations

George Wharton James (1912) traveled extensively along the south rim of Grand Canyon during the late 19<sup>th</sup> and early 20<sup>th</sup> Century, knew the location of the main Hopi/Havasupai trade routes, and wrote

**Figure 3:** These “Tutuveni” (petroglyphs) in Grand Canyon National Park (carved between 1150-1300 AD) are located along one of several Native American trails near the modern South Bass trail. Photograph courtesy of Michael F. Anderson.



about his Grand Canyon travels and the historical exploration of Grand Canyon. In his writings, James (1912) pondered why the Spaniards traveled 50 leagues (~130 miles or 209 kilometers) from the Hopi villages when they could have been led to the south rim to view the inaccessible Colorado River in just “three or four days” (James 1912, p. 198). James (1912) contemplated why the Spaniards traveled for 20 days before attempting to descend off the south rim, as recorded in the surviving Spanish documents (Winship, 1892). Indeed, the long distance traveled was totally unnecessary to bring the Spaniards to perilous cliffs along the south rim that tower above the distant river. James (1912) conjectured that the Hopi “gave Cárdenas as much wandering about as they could” in order to discourage the Spaniards “from making further explorations” (James 1912, p. 198). James (1912) further hypothesized that the Hopi treatment of Cárdenas was “a deliberate ruse to get rid of him” and that they likely led the Spaniards to a “terribly bleak and barren spot where even today one can scarcely prevail upon a Hopi or Navaho [sic] to guide him” (James 1912, p. 198). Based on James’ extensive knowledge of the trails and south rim, he also speculated that the “terribly bleak and barren spot” was a “habitually traveled” Native American trail known today as the South Bass Trail (figure 1; James 1912, p. 198). Not only was the South Bass Trail area used as a route for secular trade between the Hopi and Havasupai, but the presence of ancient ruins, granaries and tutuveni (i.e., petroglyphs) dating back to at least A.D. 1300 (figure 3) point to a long and prominent use history by ancient puebloans. James (1912) surmised that the Hopi trekked the three Spaniards down one of the Hopi/Havasupai trails toward a place called “Huetha-wa-li” (White Rock Mountain; James 1912, p. 198). Huetha-wa-li is an erosional remnant a few miles down the present day South Bass Trail (figure 4). It towers several hundred feet above the Esplanade erosion surface and is located about a third of the way down to the Colorado River (commencing from the edge of the south rim). A route down to the Colorado River does exist in this area today, but it is difficult to locate and does not follow an obvious, well-weathered and eroded fault zone like other prominent rim-to-river routes. Although George Wharton James (1912) does not provide specific written evidence in support of his hypothesis that Cárdenas and his men may have descended off the south rim near the present day South Bass Trail, his intimate knowledge of Grand Canyon’s

**Figure 4: View of Mount “Huetha-wa-li” (White Rock Mountain) from the modern South Bass trail. The Hopi/Havasupai had several established trails in this area, one of which, may have been used by Cárdenas and his men to descend off the south rim and down into Grand Canyon. The erosional remnant towers several hundred feet above the Esplanade erosion surface and is located about a third of the way down to the Colorado River from the south rim (photograph by the author).**



south rim, the Native Americans, and Native American trails may have played a role in the development of his hypothesis. George Wharton James also did not address both the importance and the location of Hopi sacred religious sites as a conceivable reason why the Hopi led the Spaniards to such a distant Grand Canyon location. Unfortunately, the historical perspective of [George Wharton James \(1912\)](#) seemingly has been lost from the discussion related to the question of where Cárdenas' men first attempted to descend off the south rim to reach the Colorado River.

#### 4.02 Distance considerations

[Flint & Flint \(2005\)](#) have done extensive research on the Coronado Expedition and are widely published Coronado historians. Decades of intensive research by [Flint & Flint \(2005\)](#) have revealed that measured and recorded, 16<sup>th</sup> Century distances from Coronado's journals were remarkably accurate when compared to “modern, straight-line map mileage” ([Flint & Flint, 2005, p. 495](#)). Specifically, 16<sup>th</sup> Century distances in Document 29 of the 1596 Relación del Suceso were recorded using “*legua legal*” measure, where 1 league  $\approx$  2.6 miles ([Flint & Flint, 2005, p. 494](#)). Although the author of Document 29 of the 1596 Relación del Suceso is not known, what is known is that the document was not penned by Pedro de Casteñada de Nájera who transcribed most of Coronado's journal many years after Coronado's journey resulting in notable errors. Research by [Flint & Flint \(2005\)](#) indicate that Document 29 of the 1596 Relación del Suceso was written by someone who was directly involved in processing Coronado's communications, such as Coronado's secretary, Hernando Bermejo. Notably, the author of Document 29 of the 1596 Relación del Suceso, more than with any other document from Coronado's Expedition, paid considerable attention to recording accurate distances and latitude measurement. Document 29 of the 1596 Relación del Suceso directly states that Cárdenas and his men “traveled 50 leagues [ $\sim$ 130 miles] ... towards the west” from the Hopi Village of Awat'ovi, led by “native guides” ([Flint & Flint, 2005, p. 499](#)). A distance of  $\sim$ 130 miles (209 kilometers) of travel puts the descent location far west of the present day Desert View area suggested by [Bartlett \(1940\)](#). The Desert View area would be approximately 88 linear miles ( $\sim$ 142 kilometers) from the Hopi Village of Awat'ovi; fifty leagues ( $\sim$ 130 miles or 209 kilometers) of travel would place Cárdenas and his men near the trailhead of the modern South Bass Trail [which, as noted by [James \(1912\)](#) was also an established Hopi/Havasupai trade route and a likely descent location for the Spaniards].

Using the linear tool function in Google Maps®, a straight-line distance measurement from the Hopi Village of Awat’ovi to the present day South Bass Trailhead was determined which yielded a distance of approximately 127 miles (204 kilometers). The straight-line map measure is remarkably close to the 130 miles (209 kilometers) recorded as the distance traveled by the Spaniards. It should be noted that the scribe of Document 29 of the 1596 *Relación del Suceso* only reported distances to the nearest five leagues or approximately 13 miles or 21 kilometers (Flint & Flint, 2005, p. 494). As such, the straight-line distance measurement using Google Maps® is within the “known” error range for distances recorded in Document 29 of the 1596 *Relación del Suceso*.

There are also at least two other ancient Native American routes that lead off the edge of the canyon rim that are within a couple of linear miles of the present day South Bass Trailhead. The location of these other trails also lie within the “known” error range for travel distances recorded in Document 29 of the 1596 *Relación del Suceso*. One of these routes passes close to some ancient petroglyphs (figure 3) and is only a few miles southwest of the present day South Bass Trailhead. A lesser known route off the rim (east of the present day South Bass Trail) was recently discovered by the author that is (locally) rich in lithic scatter and accesses a small ruin and mescal roasting pit. Either of these routes could have been the rim location from which the Hopi led the Spaniards. The calculated distance measurements reinforce the topographic, anthropologic and historic supposition and interpretation that Cárdenas and his men may not have descended off the south rim near the present day Desert View area in eastern Grand Canyon.

## 5.0 Conclusions and implications

The currently accepted hypothesis that Cárdenas and his men likely descended off the south rim of Grand Canyon near the present day Desert View area may be inaccurate based on the detailed examination of historic, topographic, anthropologic evidence and distance calculations presented herein. Indeed, a plausible and compelling argument can be made that Cárdenas and his men likely descended off the south rim of Grand Canyon somewhere closer to the present day South Bass Trail – some 35-40 miles (56-64 kilometers) west of the present day Desert View area. Ultimately, no currently available evidence satisfactorily - or conclusively, identifies the location where Cárdenas and his men first descended off the south rim of Grand Canyon in an attempt to reach the Colorado River in the 16<sup>th</sup> Century. In order to definitively identify a Spanish encampment or descent location, physical evidence needs to be recovered. However, if the search for physical field evidence of Cárdenas’ quest and encampment is principally focused in eastern Grand Canyon (near the present day Desert View area), then the possibility exists – if the hypothesis presented herein has merit, that such evidence might never be discovered or procured. It is the author’s explicit intent to generate, stimulate and renew interest in the Cárdenas Expedition and the search for physical evidence of this historic event. Clearly additional research and supporting physical evidence is needed to strengthen either the presently accepted hypothesis (Bartlett 1940) or the hypothesis presented herein.

The newly proposed artefact search area (the vicinity surrounding South Bass Trail) remains a relatively remote district that lies within the existing boundaries of Grand Canyon National Park. As such, area preservation is not a fundamental concern (although, backcountry use of this area has steadily increased). Rather, the results of this study focus on awareness and the very plausible prospect that physical evidence in support of the final destination of the Cárdenas Exploration, may reside much farther west than previously thought; future research endeavors should strongly consider including the western part of Grand Canyon National Park as a feasible study area for field-related surveys.

Even though the early writings of James (1912) did not provide any written, supportive evidence why he postulated that Cárdenas and his men set up camp and likely descended into Grand Canyon near the present day South Bass Trail, he may very well have come to the correct conclusion considering the topographic and anthropologic clues and distance calculations presented herein.

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