

The Spanish League and Inca Sites:
A Reassessment of the 1566 Itinerary
of Juan de Matienzo through N.W. Argentina

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One source of ethnohistoric information that has long been recognized for its relevance to the Argentine northwest is the itinerary of the Spanish oidor Juan de Matienzo, initially written in 1566 (Jiménez de la Espada 1965: 70-74). This important document describes a route, with stopping points and league distances, from Charcas (La Plata), Bolivia, through highland N.W. Argentina, to Santiago del Estero east of the Andes, and on to the port of Buenos Aires. The document and portions of it have been published several times (see Krapovickas 1978: 80 for a review of these), and its incorporation in Matienzo's 1567 Gobierno del Perú includes slight variations in some wording and details (Lohmann Villena 1967: 278-289).

One of the enticing features of the 1566 document (which was a letter to the king of Spain) is that it was written close to the time of initial Spanish penetration into N.W. Argentina. Diego de Almagro had first entered the region early in 1536 as part of the conquest of Chile, having started southward from Cuzco in 1535 (Lizondo Borda 1942: 83-85; 1943: 29; Reyes Gajardo 1957: 29; Strube E. 1958; Pocock 1967: 22). The first major incursion, however, was to occur late in 1543, when Diego de Rojas proceeded southeastward out of the highlands and into Tucumán (Lizondo Borda 1942: 85-91; Levillier 1927: 102-106; Reyes Gajardo 1957: 29). Subsequent governors attempted to establish a Spanish settlement in the region, including Barco I (1550) near present Monteros, Tucumán; moved to become Barco II (1551) at or near present San Carlos in the Calchaquí Valley; then Barco III (1552) near present Santiago del Estero; and finally Córdoba del Calchaquí (1559) at present San Carlos (see Levillier 1927: 168, 181-183; Reyes Gajardo

1938: 18-20, 25; Pocock 1967: 191). Notably, Córdoba del Calchaquí was the only Spanish settlement to be mentioned by Juan de Matienzo in the 27 stopping points of his itinerary from Charcas to the Andes of Tucumán.

Matienzo's highland itinerary from Bolivia through N.W. Argentina can thus be viewed as a primary source of several kinds of information: (1) it is primarily a list of specific Indian settlements and Inca tambos along a specific pre-Spanish road or trailway; Matienzo's brief description of each stopping point clearly distinguishes between Indian villages ("pueblos") and Inca "tambos." When coupled with archaeological data, one can attempt to verify the location of sites, as well as to attempt reconstruction of 16th century Indian "tribal" distributions (e.g., Krapovickas 1978, Gonzales 1981). By extension, with the frequent reference to tambos, we can assume we are also dealing with a route intimately linked to previous Inca domination, with its state controlled flow of goods and people (cf., Zapater Equioiz 1981). If verified archaeologically, the route could therefore reflect some aspects of the cultural geography of Inca presence in the region; (2) since Matienzo gives league distances between stopping points, a basis is provided for determining the degree of correspondence between Spanish leagues and current kilometers, and as well a basis for assessing the utility of league figures for predicting the location of specific sites mentioned in the itinerary. These potential applications of Matienzo's account have long been recognized (e.g., Boman 1908: 705; Lizondo Borda 1943: 75-87), but a lack of systematic survey and of relatively accurate intersite distances for known points have precluded such potential from being realized until the present. The purpose of this paper is to explore and reexamine several facets of Matienzo's itinerary along these lines.

Matienzo's League

Part of the problem of utilizing the league distances given by Matienzo

is that the league is known to have varied from country to country (Levillier 1927: 24), and to have had different lengths for different purposes. For example, the geographer Chardon describes a "legua legal" (statute league) equivalent to 4.19 km., and a "legua común" (common league) equal to 5.57km., the latter generally used for calculating travel distances (Chardon 1980: 295). While the current usage of the league in South America is equal to 5 km. (Levillier 1927: 24), there are several 16th century documents from Peru and Tucumán which suggest the league had been standardized at $17\frac{1}{2}$ leagues to one geographic degree (see Levillier 1927: 22-24, note 28; Lizondo Borda 1943: 75, note 1). Thus, by modern calculations, if one geographic degree equals ca. 111 km. (69 miles), then one league would equal 6.34 km. (cf. Levillier 1927: 24, note 28).

The problem is exacerbated, however, in that the league is also known to have varied in actual distance depending on the degree of ruggedness of the terrain being traversed, since the league was also defined as the distance one could walk in one hour (Diccionario de Autoridades (1726-37) 1963 II: 380). The league was thus as much a reflection of time as of distance (cf. Raimondi 1874 I: 68, quoted in Rostworowski 1981: 386). This could well result in apparent inconsistencies in kilometer per league correspondences when different intersite correlations are compared.

In an early attempt to trace Matienzo's itinerary from the Bolivia/Argentine border southward to the lower Calchaquí Valley in Salta Province, Boman (1908: 705) estimated a distance of 500 km. for the 12 day/journeys from Calahoyo to Angastaco, which Matienzo says involved 66 leagues. This gave an average kilometer per league correspondence reasonably close to Boman's assumption that a colonial league was approximately 8 km.

Lizondo Borda, in a later attempt to reconstruct Matienzo's route through Argentina (1943: 73-87), assumed the accuracy of a 6.4 km. league,

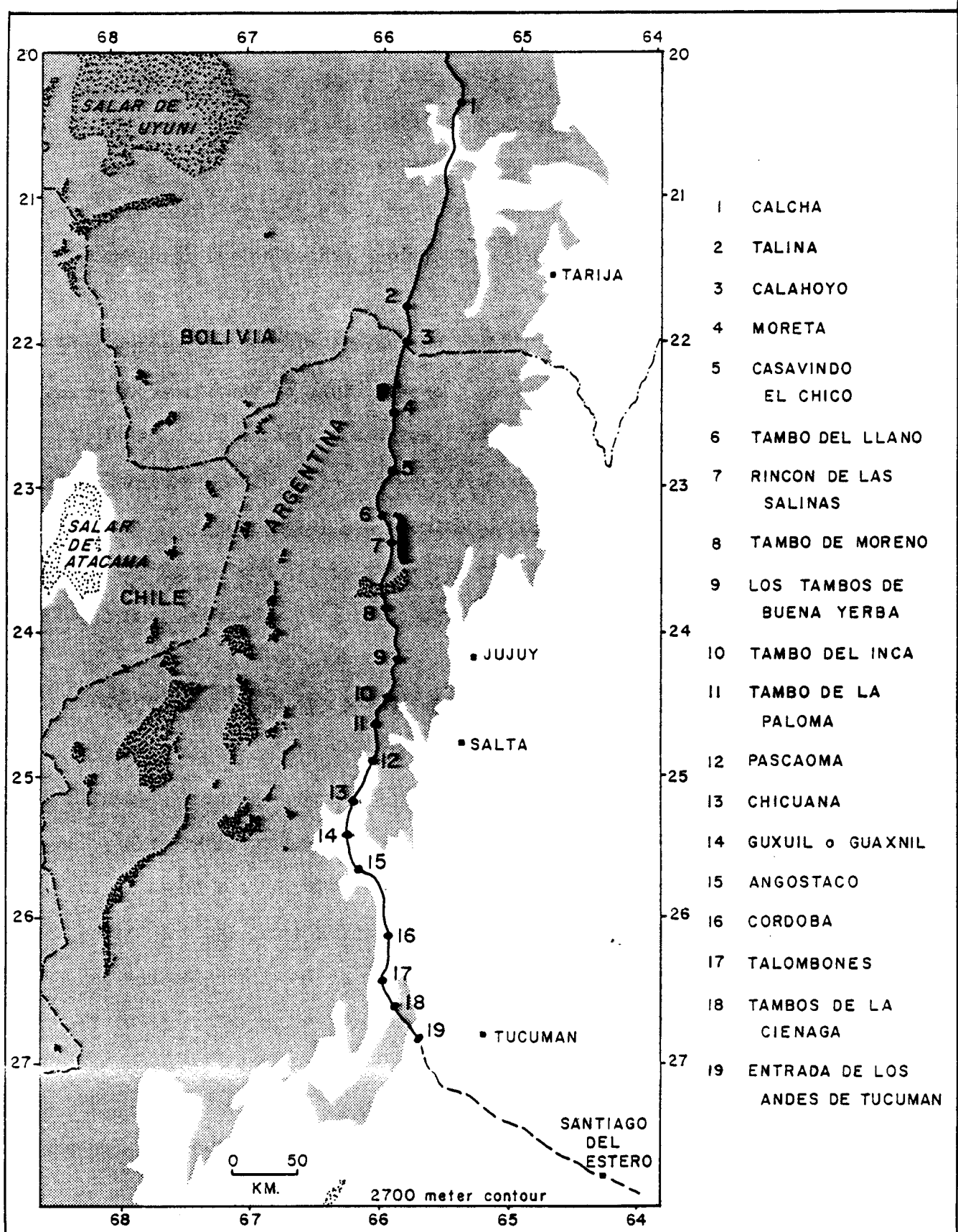
but did not employ such a calculation in trying to plot or identify specific points on the itinerary, even though he did utilize modern maps of the region as an aid in deducing probable route segments.

With more complete archaeological data and improved geographical maps for N.W. Argentina, it now appears appropriate to attempt a more systematic analysis of that portion of Matienzo's itinerary. Modern photogrammetric maps not only depict topography and place names with great detail and accuracy, but also show the location of both major and minor roads and trails throughout the region. Using a series of Argentine maps varying in scale from 1: 100,000 to 1: 1,000,000 (see list of maps at the end of this paper), a cartographer's rolling-wheel map-measure instrument was employed to calculate the kilometer distance between known points of Matienzo's itinerary, following existing trails and roads. Like Boman and Lizondo Borda previously, I have attempted to estimate the location of all stopping points on the itinerary between Calahoyo and the Andes of Tucuman, but I have also made distance calculations between each point. Where not confirmed by the continued use of original place names, my estimates of specific locations are based where possible on (1) known archaeological sites which may coincide with Matienzo's descriptions, (2) the known distribution of locations with adequate water and pasturage to serve as provisioning posts, and (3) an assumption that Matienzo's route reflects a sequence of points which form as direct and linear a progression as topography and existing trails provided. By taking such a large section of Matienzo's itinerary, a reasonable basis is provided for comparing kilometer/league correspondences between stopping points.

Initial results of this attempt are given in the appendix to this paper, which gives comments on each stopping point, as well as kilometer per league calculations. In addition, the reconstructed route is plotted on the map of figure 1.

Figure 1

A RECONSTRUCTION OF MATIENZO'S 1566 ROUTE FROM CALCHA TO TUCUMAN



The section of Matienzo's itinerary considered here comprised a total of 122 leagues, and an estimated 832 kilometers as reconstructed. This gives an average of 6.8 kilometers per league, which is within 7% of the "precise" 6.34 kilometers per league calculated above on the basis of 16th century documentation.¹ Perhaps more importantly, however, is that the 18 calculations for the distances between points yielded a range of 6.0 to 7.5 kilometers per league. While such variation might easily seem attributable to the relative imprecision of the way in which leagues were originally measured, or of the inadequacy of archaeological data for confirming several of Matienzo's itinerary points, another pattern can be seen to emerge from the data. The higher values for the kilometers per league between points correspond to those sections of the itinerary which are flattest in terrain, such as portions of the puna or along gently sloped river valleys (e.g., Calahoyo to Casavindo el Chico; Rincón de las Salinas to Tambo del Moreno; Chicuana to Angastaco; and Tolombones to Tambos de la Ciénaga). Conversely, the lower kilometer per league values correspond to those sections which involve traversing the more mountainous or circuitous roads (e.g., Tambo de Moreno to Los Tambos de Buena Yerba; and Inca tambo at the foot of the pass to enter the Calchaquí Valley, to Pascaoma). In other words, it appears that Matienzo's league distances may well have been based on one-hour's walking time. Since the terrain of the itinerary varied considerably, we should expect kilometer per league values to vary as well. As reconstructed here, Matienzo's route is logical and compatible with present archaeo-environmental data, and the league distances can be seen as reasonably accurate, at least for the way in which the league seems to have been operationalized in this area of the Andes in the 16th century.²

Matienzo's route into the Calchaquí Valley

One aspect of Matienzo's route, as reconstructed here, deserves special discussion. It has been assumed by virtually all researchers that the entrance to the Calchaquí Valley was at or near the Cuesta del Acay (ca. 5000 meters elevation) at the extreme northern end of the valley (Boman 1908: 698-706; Levillier 1927: 105; Lizondo Borda 1943: 80; Strube E. 1958: 273; 1963: 46,87). Until now, this assumption has seemed warranted, particularly because in historic times the Acay pass has been the primary route communicating the valley with the puna and other areas of the Andes (cf., Bowman 1924: 202; Santillán de Andres 1982: 108). However, that interpretation of the itinerary has posed serious difficulties in terms of trying to identify appropriate sites, with reasonable spacing, which would be compatible with Matienzo's description of the several stopping points on either side of the pass into the valley. Boman (1908: 704) recognized this difficulty, but seeing no alternative, proposed a rather circuitous route from El Moreno (interpreted by him as "Tambo de Moreno" southeast of Salinas Grandes on the puna), westward and southward to San Antonio de los Cobres, and hence into the Calchaquí Valley. Lizondo Borda (1943: 78-80) disagreed with a portion of Boman's reconstruction, and proposed that the route had continued southward from El Moreno to the point where the Arroyo Punta Ciénaga enters the Quebrada del Toro (that point being interpreted by Lizondo Borda as "Tambos de Buena Yerba"), then turning westward through or near Incahuasi, and eventually past the Cuesta del Acay and into the Calchaquí Valley.

It is my belief that Lizondo Borda was correct in interpreting Punta Ciénaga, with its extensive natural pasturage, as the "Tambos de Buena Yerba." Indeed, subsequent archaeological work has confirmed an Inca tambo at that precise location (Raffino 1969, 198]: 234). However, it

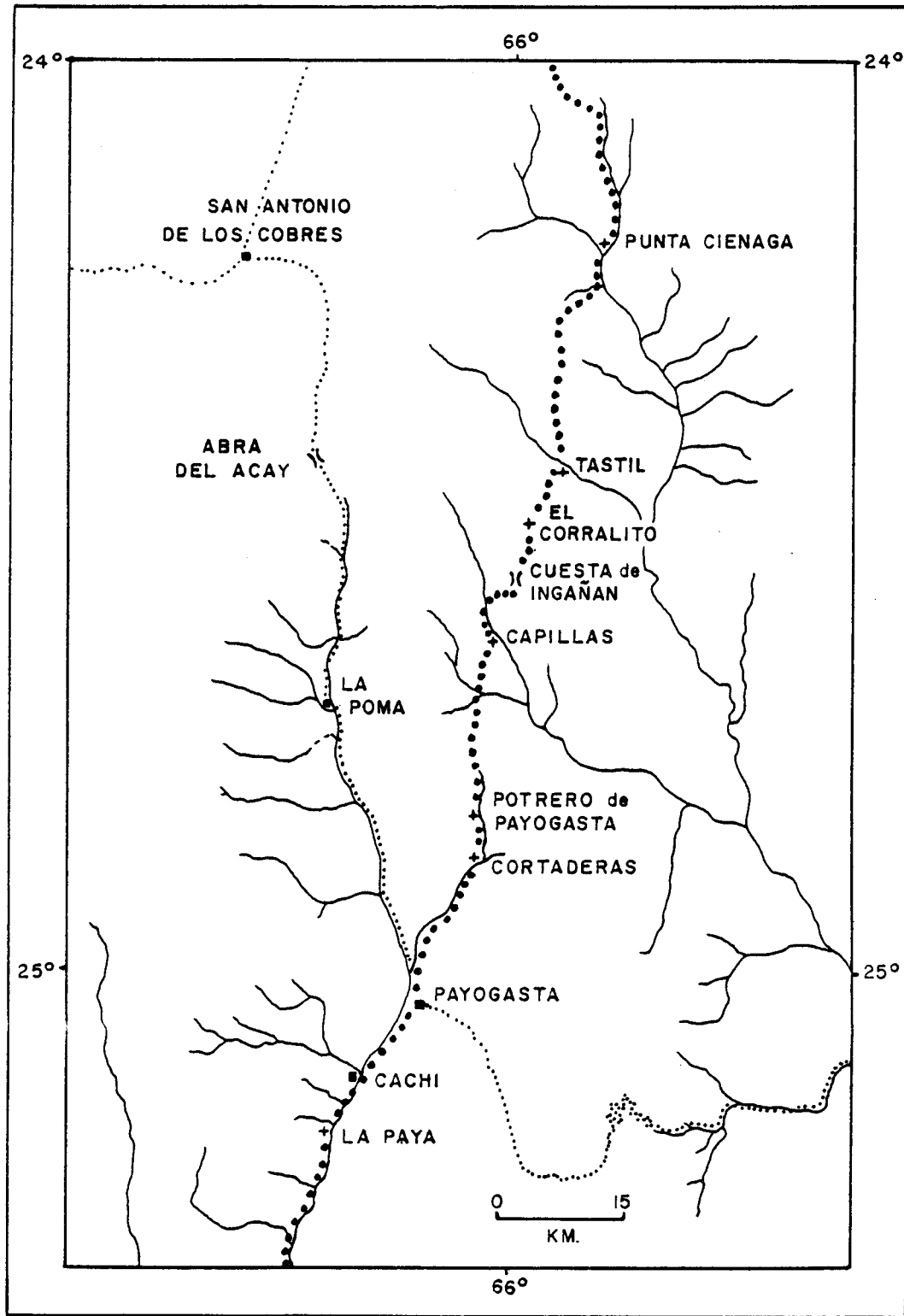
is my further belief that the route southward into Punta Ciénaga had come from Moreno Chico rather than from El Moreno, which in turn had been approached from the north by a road actually traversing Salinas Grandes from Rinconadillas (Matienzo's "Rincón de las Salinas") rather than turning between the Salinas and the Laguna de Guayatayoc. Such an interpretation as offered here precludes hypothesizing rather irregular deviations from what is easily a more direct north-south route.

The question then becomes one of the continuation from Punta Ciénaga ("Tambos de Buena Yerba") onward to the approach to the Calchaquí Valley. Here I suggest that the recent archaeological survey of Pío Pablo Díaz (Director of the Museo Arqueológico de Cachi), and John Hyslop (New York) provides the answer. Their survey was of an Inca road which runs from Cortaderas in the Calchaquí Valley northeastward across the Cuesta de Ingañan and on past Tastil in the Quebrada de las Cuevas. The study documented an exceptionally large number of sites of indisputable Inca affiliation along the route (Hyslop and Pablo Díaz 1983), as well as three large apachetas, or stone piles, at the cuesta, or pass. Notably, comparable sites have not been found for the northern section of the Calchaquí Valley above La Poma or just north of the Abra del Acay (cf., Lorenzi and Pablo Díaz 1976), and recent study of archaeological sites in the La Poma vicinity shows that late Prehispanic occupation of the northern end of the valley was minimal (Pollard 1983). It thus seems unlikely that Matienzo's route into the valley was through the Acay pass. The Cuesta de Ingañan route, with its sequence of Inca tambos, and lying in a north-south line from Punta Ciénaga in the Quebrada del Toro, offers a more logical and consistent alternative.³

Of the sites found by Hyslop and Pablo Díaz, the site of El Corralito could well be the tambo "al pie del puerto que se pasa para entrar en el

Figure 2

ROUTE PROPOSED FOR THE ENTRANCE INTO THE CALCHAQUI VALLEY AS DESCRIBED
BY MATIENZO
(heavy dotted line)



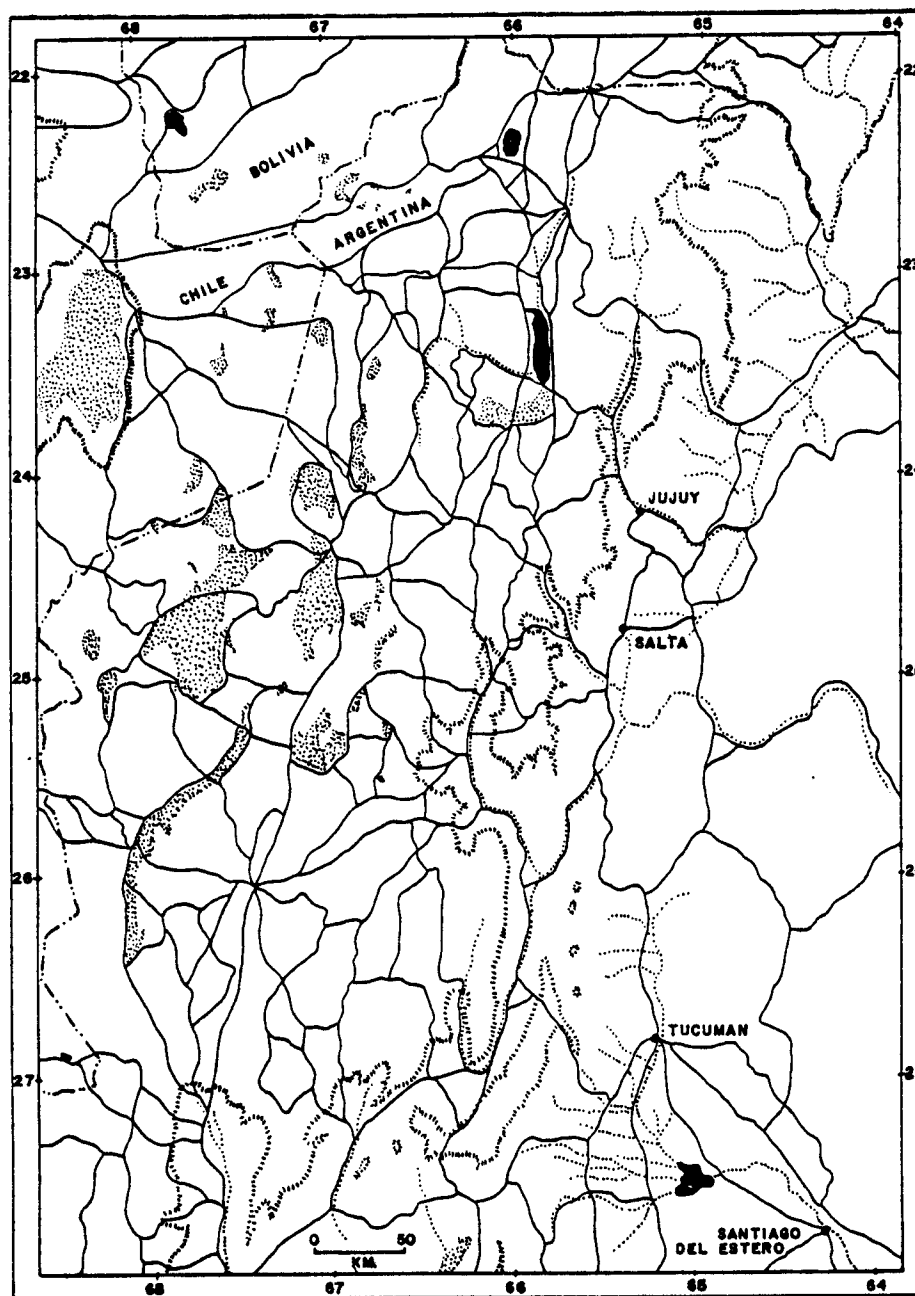
valle de Calchaquí" described by Matienzo. From there to the Cuesta de Ingañan is 9 km., and the next Inca site en route is the one at Capillas, with its ruins of a large platform/plaza and double gabled structure. I suggest that Capillas is Matienzo's site of "Tambo de la Paloma." From there to the next stopping point, "Pascaoma," is a distance of 6 leagues, which fits well with the location of the known Inca site of Cortaderas. At this point one is well within the geographic basin of the Calchaquí Valley (see figure 2).

Conclusions

It is my hope that these observations and analyses give greater meaning and understanding to this classic 16th century document. At the same time, we should keep Matienzo's itinerary in its full context.

Dating to relatively early in the Spanish conquest period, and with its numerous references to Inca tambos, Matienzo's description clearly reflects a route which had been important in the prior Inca conquest and control of N.W. Argentina. From Talina in southern Bolivia to the eastern entrance to the Andes de Tucumán in Argentina, Matienzo's stopping points included 8 tambos, 7 pueblos, 1 tambo/pueblo combination and 3 despoblado (or abandoned) sites. And as an increasing number of studies are demonstrating, Inca presence was manifested throughout the diverse geographic zones of N.W. Argentina, and by a variety of site types which ranged from pure Inca installations to sites with Inca architectural or other artifactual intrusions (cf., Raffino 1978, 1981; Gonzales 1980, 1983; Lorandi 1980, 1982; Madrazo and Ottonello 1966). Accordingly it is to be expected that there were in fact numerous roads and trails, most if not all pre-Inca in origin, which the Inca utilized. By plotting even the major roads and trails found on modern maps (figure 3), one begins to appreciate the potential complexity of the past highland network of

Figure 3
MAJOR ROADS AND TRAILS OF NORTHWEST ARGENTINA



Legend

- present roads and trails
- rivers
- - - - - 2700 meter contour level
- dry salt lakes (salares)
- lakes

N.W. Argentina. This network undoubtedly involved what to the Inca were primary, secondary, or even tertiary routes depending upon the status and function of specific sites within the system, as well as upon changes in those statuses and functions through time. As we move toward larger syntheses of archaeological data, the study of the relationships of sites to actual trails will undoubtedly help reveal the structure of Inca culture in its various facets as a centralized state level society and as an empire with peripheral zones and frontiers (e.g., Santoro Vargas 1983).

The Spanish, in seizing this empire, clearly used the prior communication network in pursuing their own conquest goals (e.g., Zapater Equioiz 1981). To that extent, Matienzo's 1566 itinerary is an example of but one route the Spanish explored and utilized in their southward push from the Inca heartland in Peru. As such, it gives us a tantalizing yet limited glimpse of what had been a uniquely Andean power, and of what was to become part of an emerging world system.

Footnotes

1. It is further noted that map-based calculations such as these, particularly on variable-elevation terrain, and at the map scales available, could involve an error of as much as $\pm 10\%$.
2. Interestingly, the attempt by Chardon (1980) to calculate kilometer-league correspondence for a late 1580's Spanish itinerary for northern Yucatán, Mexico, resulted in a greater range variation (3.5 to 7.0 kilometers per league) than that reported here. The geography of Chardon's study area is seemingly more consistently flat than is Matienzo's route through N.W. Argentina, yet Chardon's source refers to both long ("largas") and short ("pequeñas") leagues in its itinerary descriptions. Also, Chardon only calculated straight-line kilometer distances between settlements of the itinerary he analyzed, rather than actual road and trail distances as utilized here.
3. Raffino (1981: 235) generally poses this as one of several possibilities, but makes no corroborating calculations between specific sites.

Appendix

Matienzo's 1566 Route from Calcha to the Andes of Tucumán

<u>Route segment</u>	<u>leagues</u>	<u>km.</u>	<u>km. per league</u>	<u>observations</u>
<u>Calcha</u> ("pueblo de indios Chichas") to <u>Talina</u> ("pueblo de Chichas")	27	180	6.7	There are 5 stopping points from Calcha to Talina; present towns preserve the Calcha and Talina names.
<u>Talina</u> to <u>Calahoyo</u> ("tambo real de Inga despoblado... indios Chichas bien cerca")	5	35	7.0	The name and town of Calahoyo are found on modern maps (IGM 2366-2166); <u>tambo</u> not verified archaeologically.
<u>Calahoyo</u> to <u>Moreta</u> ("pueblo de indios Chichas y tambo del Inga")	7	50	7.1	There is an arroyo, a village which still carry the name Moreta (map SNMG-3c), but they are found to the east of the main north-south road in that locality, along the road to Abra Pampa. The Moreta of Matienzo may thus be a general locality, and I have placed it at the junction of roads at 22 ° 19' south latitude. <u>Tambo</u> not verified archaeologically.
<u>Moreta</u> to <u>Casavindo el Chico</u> ("tambo del Inga")	6.5	49	7.5	I suggest that Casavindo el Chico lies at "Tambillos," very close to the point proposed by Boman (1908, carte archéologique) for this stopping point.
<u>Casavindo el Chico</u> to <u>Tambo del Llano</u> ("despoblado...hay jagueyes de buena agua y mucha...queden en medio Los Tambos Grandes de Casavindo")	5.5	38	6.9	By the description, Tambo del Llano has to lie south of the present archaeological zone of Casavindo, and I agree with Boman (1908) and Lizondo Borda (1943: 77) that this <u>tambo</u> should lie on the Rto Tusaquilla, possibly at the spot called "Agua Chica" (IGM 2366-2166).

<u>Route segment</u>	<u>leagues</u>	<u>km.</u>	<u>km. per league</u>	<u>observations</u>
<u>Tambo del Llano to Rincón de las Salinas</u> ("despoblado")	4	28	7.0	Rincón de las Salinas is highly probably the present town of Rinconadillas, as indicated by Boman (1908: 701) and Lizondo Borda (1943: 78). Inca construction is noted by Raffino (1981: 59).
<u>Rincón de las Salinas to Tambo de Moreno</u> ("es por un llano de salinas, buen camino, está despoblado y cerca indios")	8	60	7.5	As an alternative to the interpretation of Boman (1908: 702), I suggest that Tambo de Moreno lies at the locality of Moreno Chico, which is directly south of Rinconadillas on a trail which crosses the salinas. There are archaeological remains at Moreno Chico according to Boman (1908).
<u>Tambo de Moreno to Los Tambo de Buena Yerba</u> ("que por otro nombre llaman la Ciénaga Grande... despoblado")	6	36	6.0	Proceeding southward from Moreno Chico one reaches the Inca tambo of Punta Ciénaga (Raffino 1969) at the confluence of the Arroyo Tres Cruces and the Arroyo Punta Ciénaga in the headwaters of the Quebrada del Toro. I believe the site of Punta Ciénaga to be Los Tambos de Buena Yerba (cf. Raffino 1981: 234).
<u>Los Tambos de Buena Yerba to the "pie del puerto que se pasa para entrar en el valle de Calchaquí, tambo del Inga"</u>	5	37	7.4	The tambo at the foot of the pass (abra? cuesta?) to enter the Calchaquí Valley could well be the Inca site of El Corralito, which lies to the southwest of Santa Rosa de Tasil (Hyslop and Díaz 1983).

<u>Route segment</u>	<u>leagues</u>	<u>km.</u>	<u>km. per league</u>	<u>observations</u>
"De allí por la mañana se pasa el puerto al Tambo de la Paloma...que no hay otra cosa que no sea muy llana, y ésta lo es también"	4	24	6.0	As reconstructed here, the "puerto" is the Cuesta de Ingañan, with the Tambo de la Paloma thus being the Inca site of Las Capillas surveyed by Hyslop and Díaz (1983).
<u>Tambo de la Paloma to Pascaoma</u> ("pueblo de indios de Calchaquí, ques el que ahora está alzado")	6	36	6.0	To the south of Las Capillas are found two important sites of Inca affiliation: Potrero de Payogasta and Cortaderas. With its strategic placement and construction, Cortaderas is interpreted here as being Pascaoma.
<u>Pascaoma to Chicuana</u> ("pueblo de Calchaquí")	6	39	6.5	Chicuana is undoubtedly the important village site of La Paya (Gonzales 1981).
<u>Chicuana to Guxuñ</u> ("pueblo de indios")	4	30	7.5	Guxuñ has not been located precisely archaeologically. It should lie at or near the present town of Molinos.
<u>Guxuñ to Angostaco</u> ("pueblo de indios")	4	30	7.5	Angostaco is preserved by a present town with the same name
<u>Angostaco to Córdova</u> ("ciudad...que solía ser de españoles, questá ahora despoblada")	6	40	6.7	Córdova is the present town of San Carlos (Reyes Gajardo 1957: 42; 1958: 20).
<u>Cordova to Talombones</u> ("pueblo de indios")	5	35	7.0	Talombones is undoubtedly the archaeological village site at present town of the same name (Aparicio 1948).

<u>Route segment</u>	<u>league</u>	<u>km.</u>	<u>km. per league</u>	<u>observations</u>
<u>Talombones to Tambos de la Ciénaga</u>	4	30	7.5	The <u>tambos</u> of La Ciénaga have not been verified archaeologically, but could well lie near "El Bañado," in the vicinity of the Quilmes site in the Santa María Valley, as suggested by Lizondo Borda (1943: 82).
<u>Tambos de la Ciénaga to Gualaqueni ("Pueblo de Indios") "y adelante, tamera del Inga... de allí a la boca de la quebrada, entrada de los Andes de Tucumán"</u>	9	55	6.1	Two day/journeys. Gualaqueni should lie near the present town of Amaicha del Valle, and "the mouth of the quebrada" should be at Tafi del Valley; the mentioned Inca <u>tambo</u> has not been reported archaeologically.

Maps Utilized

Argentina maps:

SNMG (Secretaría Nacional de Minería y Geología) 1:100,000; 3c (1974), 6d (1955-59), 7d (1974).
 DNGM (Dirección Nacional de Geología y Minería) 1:200,000: 6c (1962), 7c (1960).
 INGM (Instituto Nacional de Geología y Minería) 1:200,000: 1a-b (1965), 2a (1967), 9e (1965), 10e (1967), 11e (1965).
 DNM (Dirección Nacional de Minería) 1:200,000: 2b (1962), 7d (1954).
 DGMGH (Dirección General de Minas, Geología e Hidrología) 1:200,000: 8e (1926).
 IGM (Instituto Geográfico Militar) 1:500,000: 2366-2166 (1967), 2566 (1968), 2766 (1972).
 CAM (Carta Aeronáutica Mundial, by Instituto Geográfico Militar for the Argentine Air Force) 1:1,000,000: 3259 (1971), 3316 (1971).

Chilean maps:

IGM (Instituto Geográfico Militar) 1:500,000: 2100-6500 (1972), 2300-6500 (1972).

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