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American Indian Culture and Research Journal

Title

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Permalink

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Journal

American Indian Culture and Research Journal , 8(1)

ISSN

0161-6463

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Publication Date

1984

DOI

10.17953

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Trade Centers: The Concept and a Rancherian Culture Area Example

HENRY F. DOBYNS

Native Americans developed during prehistoric times a continent-wide system of trade between ethnic groups. Foodstuffs and highly valued perishable and imperishable commodities moved sometimes very long distances along major trade routes linking numerous ethnic groups. Europeans could establish trading relationships with Native Americans only because the latter already engaged in international trade on a significant scale and well understood the principles of commodity exchange.

Within the aboriginal trading system certain "trading centers" stood out as major nodes of exchange on long-distance inter-ethnic trade routes. This paper outlines basic characteristics of trading centers, then identifies and briefly describes one that has not been recognized before.

Some sedentary Peoples living in the Great Plains Culture Area never abandoned their riverine oasis settlements and horticultural habits to become transhumant mounted folk. Historically well-known among these cultural conservatives are the Mandan who lived on the middle Missouri River or its tributaries. The Mandan first came to colonial European attention, in fact, as active traders. At the time of the initial French visit during the winter of 1738-39, and certainly later, the Mandan villages (and later single village) constituted what John C. Ewers labeled a "trading center."¹

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The Mandan exchanged a wide variety of commodities with most, if not all, of their tribal neighbors. One of the consequences was diffusion. Almost anything could and did change hands at Mandan trade fairs: weapons, tools of many kinds, jewelry, folk tales, dances and songs. Courting at Mandan fairs led to gene flow between different ethnic groups as young people married exogamously. It also led to genetic drift when one trading group transmitted contagious Old World diseases to another in historic times. One result of long periods of inter-ethnic interaction at a trading center was, therefore, considerable cultural similarity among the participants.² Exchanges at trading centers constituted, in other words, one mechanism creating culture areas.

SURPLUS FOOD PRODUCTION

Many anthropological perspectives on behavior among non-industrial Peoples derive from ethnographic studies of Pacific Islands folk. One of the best modern studies of a New Guinea trading network discovered that one group of participants actually subsists itself from active trading. The Siassi archipelago traders neither grow enough food to feed their population nor manufacture enough goods to purchase basic foodstuffs. They pay for their food out of trading profits.³ They also eke out their food supply by living off their hosts in overseas settlements where they sail by canoe to trade.

In contrast, the North American aboriginal trading center appears consistently to have produced a surplus of one or more basic foodstuffs, perhaps because of the difference between a continental and a marine environment. Traders travelling to a trading center must be fed there.

The Mandan raised a large surplus of maize and beans to export. The first European visitors immediately perceived that the Mandan had an "ample supply" of these horticultural products to exchange with visiting traders.⁴ Yet the Mandan lived at or near the northern limits of maize cultivation, on or near the boundary between different ecological systems. Perhaps the Mandan trading center developed in part precisely because these horticulturalists were able to export garden produce northward to ethnic groups unable to grow foodstuffs. Perhaps the Mandan thrust westward up the Missouri River from the Eastern Wood-

land horticultural area toward the Plateau tribes that entirely lacked cultivated foods for the same reason.

The Huron, famous for their large-scale trading, also lived at the northern limit of successful horticulture immediately north of the Great Lakes. Their trading success stemmed significantly from their ability to exchange surplus garden produce northward to ethnic groups unable to grow foodstuffs.⁵

Without adding examples of other such trading centers, I identify the Northern Panya (mis-labeled "Hal chidhoma") as having operated a trading center on the ecological boundary between the Rancherian and Baja California culture area. The Northern Panya occupied a broad valley on the Lower Colorado River south of the Mojave and north of the Quechan. A large region around their territories lies in the Lower Sonoran vegetational zone of the Sonoran Desert, so environmental differences may not be readily apparent. There is, however, at least one major distributional difference of a major wild-plant food resource. The giant cactus that grows in Arizona does not grow in California. Moreover, cultural behavior made the riverine oasis even more of a boundary than it was naturally. For the riverine Mojave, Northern Panya, Quechan and Cocopah constituted the westernmost frontier of maize-beans-squash and minor crop horticulture. Many anthropologists have puzzled over the question why the California and Baja California Peoples failed to undertake horticultural food production. The important point now is that they did not. Consequently, cultivated produce moved westward in inter-ethnic commerce. Evidently it also moved northeast to the Northeastern Pai.

The Northern Panya grew a large surplus of food crops. A Jesuit missionary who visited them in 1744 wrote that they "have a very large trade in food—watermelons, melons, squash, beans of various colors, corn and other grains which grow at the side of the river and which resemble sand when milled. This is called *ohiaca*. They raise wheat in the moist lowlands."⁶ The Northern Panya exported not only staple foodstuffs but also some toothsome treats such as Old World melons in historic times.

Northern Panya horticulture was the most intensive on the Lower Colorado River frontier. Ethnographic accounts of the Mojaves⁷ and the Quechan⁸ describe them as depending on the spring rise of the Colorado River to inundate and soak alluvial

fields they planted once the flood receded. They were vulnerable to famine in years of drought on the upstream watershed. The Northern Panya must also have taken advantage of seasonal flooding, but in 1744 they reportedly "impound river water and lead it to their cultivated fields for irrigation."⁹ Digging and especially maintaining operational irrigation ditches on the seasonally flooding Colorado River required a great deal of human labor and a considerable understanding of hydraulic principles.

Fiber

Although the Northern Panya lived at the uttermost northwest-ern frontier of horticultural Mesoamerica, they fully shared in its aboriginal enchantment with fine fabrics. They appear, furthermore, to have turned profits from their trading not for food, like the Pacific insular Siassi, but to acquire fine garments. When Friar Francisco T. H. Garces visited the Northern Panya in 1776, he noted that: "It must be observed that these Jalchedun Indians are the best dressed, not only in such goods as they themselves possess, but also in such as they trade . . ." The intrepid Franciscan explorer among Native Americans beyond the colonial frontier identified, furthermore, the Northern Panya production basis for their flourishing textile trade with Hopis. By 1776 Hopis and other Pueblo Peoples ran sizeable flocks of sheep and wove woolen textiles, and it was no doubt woolen blankets and sashes as well as coarse homespun that the Northern Panya obtained from the Hopis "in exchange for cotton, of which they raise much."¹⁰

Thirty-two years earlier a Jesuit explorer visited the Northern Panya and reported that "they grow no little cotton, with which they weave good blankets" often not worn in the hot river valley. Moreover, the Panya sold "many other blankets to our Pimas" for horses and European trade goods.¹¹ Trading cotton blankets to Gila River Pimas seems like shipping coal to Newcastle-on-Tyne! For cotton blankets were a major Pima export to Sonora, at least a century later.¹² By 1744 European commodities had replaced whatever Northern Panya had imported from the Pima in pre-colonial times.

The low altitude Sonoran Desert oasis that the Northern Panya cultivated and irrigated is one of the very best environments in the world for growing cotton under irrigation. It is largely devoted to cotton production under modern capitalist exploitation

by mechanized farmers who achieve some of the highest yields per acre in the United States. Although Northern Panya country was not on an obvious ecotone, as already indicated, actually it was at the edge of high-yield cotton production as well as maize gardening and giant cactus fruiting. The Northeastern Pai lacked any gardens large enough to plant other than food crops. Moreover, their large upland territory afforded them abundant buckskins for clothing and to trade at Oraibi for Pueblo textiles to wear or pass to the Northern Panya. So they grew no cotton.

The Hopis did cultivate a highly specialized variety of cotton adapted over a long period of time to the high altitude and scant moisture of Hopi country. The Garces eye-witness record of Panya cotton exports to the Hopis indicates that the Hopis may never have been able to grow sufficient cotton to satisfy their domestic demand for cotton textiles and to supply that of other northern Pueblos whose residents made no effort to grow cotton but imported it from other more southerly pueblos or indirectly from Northern Panya. So, although the Northern Panya did not live precisely at the terminus of cotton production, their trade with the pueblo-living Peoples rested on a firm foundation of their capacity to grow large quantities of fiber to export.

The Hopi demand for cotton impelled traders to journey all the way to the Lower Colorado River after it and other commodities the Panya exchanged as middlemen. In 1744 "The Moquis went into temporary camps to trade with them," reported the exploring Jesuit.¹³ Thus, the Northern Panya trading center resembled others in attracting traders from other ethnic groups.

In contrast the Panya trading centers were distinct from the Mandan, Huron or other known trading centers in that their operation was based on producing an exportable surplus of a fiber as well as basic foodstuffs. Northern Panya conversion of trading profits into elegant personal apparel and jewelry may or may not have been a distinctive trait among inhabitants of trading centers. "They decorate themselves with necklaces of sea shells intermixed with other things, and with round colored shells resembling coral, which they work and pierce." They even inlaid their kickball racing balls with sea shells worked with designs.¹⁴

Fish

Not all trading center operators produced food in the form of surplus garden produce, nor were they all located at the border

between gardeners and non-gardeners. Near the western end of the primary trade route that linked the Mandan to Pacific Coast groups the Chinook-speaking tribes conducted seasonal trading fairs that characterized the trading center operated by the Wishram and Wasco. The former lived on the north bank of the Columbia River at "The Dalles" and the latter occupied its south bank. Both ran the trading center.¹⁵ This Wishram-Wasco trading center functioned on a firm foundation of a very large surplus production of the major subsistence commodity characteristic of the Northwest Coast Culture Area. The Wishram and Wasco caught and processed tremendous tonnages of salmon every year. They allowed members of other ethnic groups trading with them access to the unparalleled salmon fishing at The Dalles.

Salmon swimming upstream to spawn were better in quality near the mouth of the Columbia River than they were at The Dalles. On the other hand, the narrow gorge at The Dalles concentrated fish so they could be caught with relatively little effort. Moreover, fish drying could be accomplished better at The Dalles because of warm, dry winds.¹⁶ Summer was the trading season when the Wasco and Wishram conducted a "brisk and voluminous trade in fish." Trade climaxed in the annual fall trade fair when Wishram and Wasco hosted numerous groups that traveled to The Dalles. Every ethnic group in the Columbia drainage basin seems to have participated either directly or indirectly in the fair.¹⁷ Early in the nineteenth century Lewis and Clark saw over fifteen tons of dried fish near The Dalles.¹⁸ An archaeologist has estimated that as many as 500 tons of dried fish were prepared at The Dalles annually for trade.¹⁹ Labor intensification entered into Wishram-Wasco trade dominance. They pounded dried fish, whereas Pacific coastal groups reportedly did not. Yet, the coastal Peoples were "very fond" of the pounded product and purchased it "at high prices" from the Wishram.²⁰

The Lower Colorado River lacked Pacific salmon runs but did support abundant fish life. Judging from documented ability of Southern Panya to catch large numbers of fish quickly in the Lower Gila River, Northern Panya on the Colorado could feed many traders on short notice.²¹ Fresh fish was a very scarce commodity among upland Peoples in the desert, so those without a taboo on fish consumption would have welcomed the fish-maize feasts that the Panya could provide. A Jesuit explorer reported that Northern Panya fished from reed balsas. He considered the

number of fish in the river "infinite" but said only that the Panya caught such species "on which they sustain themselves."²²

CRITICAL GEOPOLITICAL POSITION

All of the four major ethnic groups living in Lower Colorado River Valley oases traded with ethnic groups to their west, but only the Northern Panya traded on a major scale with other groups to the east. The reason was cultural rather than environmental. From the beginning of the historic record of these Peoples, the riverine tribes were aligned in two opposing, inimical alliances that involved several upland Peoples as well. The Mojave and Quechan were allied against the Panya and Cocopah. The Panya were allied and intermarried with the Northeastern Pai who lived immediately east of the Mojave. Hostile to Mojaves, the Pai blocked their access to Pueblo Peoples. Very early during historic times the Southern Panya occupied the lower Gila River tributary of the Colorado River immediately east of the Quechan. So they and their Gila Pima allies in the system blocked Quechan access to the east.

The westernmost Piman-speaking tribe, the *Hiatatk Au'autam*, did live among Quechan people on the Colorado River and traded with them. Their own access eastward was blocked, however, by their hostility toward their immediate eastern Piman-speaking neighbors, the *Imuris* tribe. For whatever reason the *Hiatatk Au'autam* were also hostile toward the Cocopah and usually blocked their eastward access. The Cocopah could at least occasionally, in historic times, evade the *Hiatatk Au'autam* and travel desert trails to the Gila Pima.

COMMODITIES MOVING THROUGH THE CENTER

Significant details about the operation of the Northern Panya trading center can be reconstructed from documents and physical remains elsewhere in the regions once served by the primary trade routes that passed across their territory. One reason one can be sure that the Northern Panya operated a trading center is the evidence of commodities traded over long distances that had to pass through their hands. Moreover, the Northern Panya

often had to decide where to route valuable commodities traded long distances. Thus they enjoyed many opportunities to maximize middleman profits by routing high value commodities toward consumers among whom demand was highest.

Marine Olivella shell, for example, enjoyed significant demand among both Pueblo Peoples and Piman tribes. Panya traders who obtained shipments of Gabrielino Olivella shells from Cahuilla middlemen could then decide whether to trade such valued items northward to Pai trading partners for the Pueblo market or southward to Gila River Pima trading partners for the Piman-Jocome-Manso market. As the schematic map shows, Northern Panya who received maritime commodities over one primary trail from the Pacific Coast chose between two primary routes eastward.

Red face and body paint entered the trading center from Pai partners to the northeast. Panya middlemen decided whether to exchange red hematite to Cahuilla trading partners destined for coastal Gabrielino consumption or to exchange it with Gila River Piman trading partners for consumption among Pimans or even farther southeast.

The geographic location of the center at a crucial junction of primary trade routes along which commodities moved west-east and north-south possibly guaranteed that the Northern Panya ran a trading center. Chart One summarizes movement of selected commodities through the center. It is a very simple form of input-output chart. "Reading out," Northern Panya imported marine shells from Cahuilla and exported shells they did not themselves use to Pai, the commodities moving west to east. In the opposite mode, Panya imported Pai red hematite and exported what they did not consume to Cahuilla. The chart does not imply that commodities were exchanged in specific ways.

A visual hint of the complexity of decisions comes from comparing Charts 1 and 2. While Pai were middlemen who exchanged valuable items moving in inter-ethnic commerce, they ran no trading center. Their exchange was lineal along one primary trade route. So a Pai input-output matrix (Chart 2) shows a balance between imports from Northern Panya and exports to Oraibi and between imports from Oraibi and exports to Panya. Surplus domestic production for export appears on neither input-output matrix. So total trading center operation was much more complex than Chart 1 indicates.

SCHEMATIC MAP OF THE WESTERN SECTOR OF THE PACIFIC OCEAN-GREAT PLAINS TRADE ROUTES INDICATING THE DIVERSION OF THE UPPER AND LOWER RIO GRANDE VALLEY BRANCHES AMONG THE NORTHERN PANYA ON THE LOWER COLORADO RIVER:

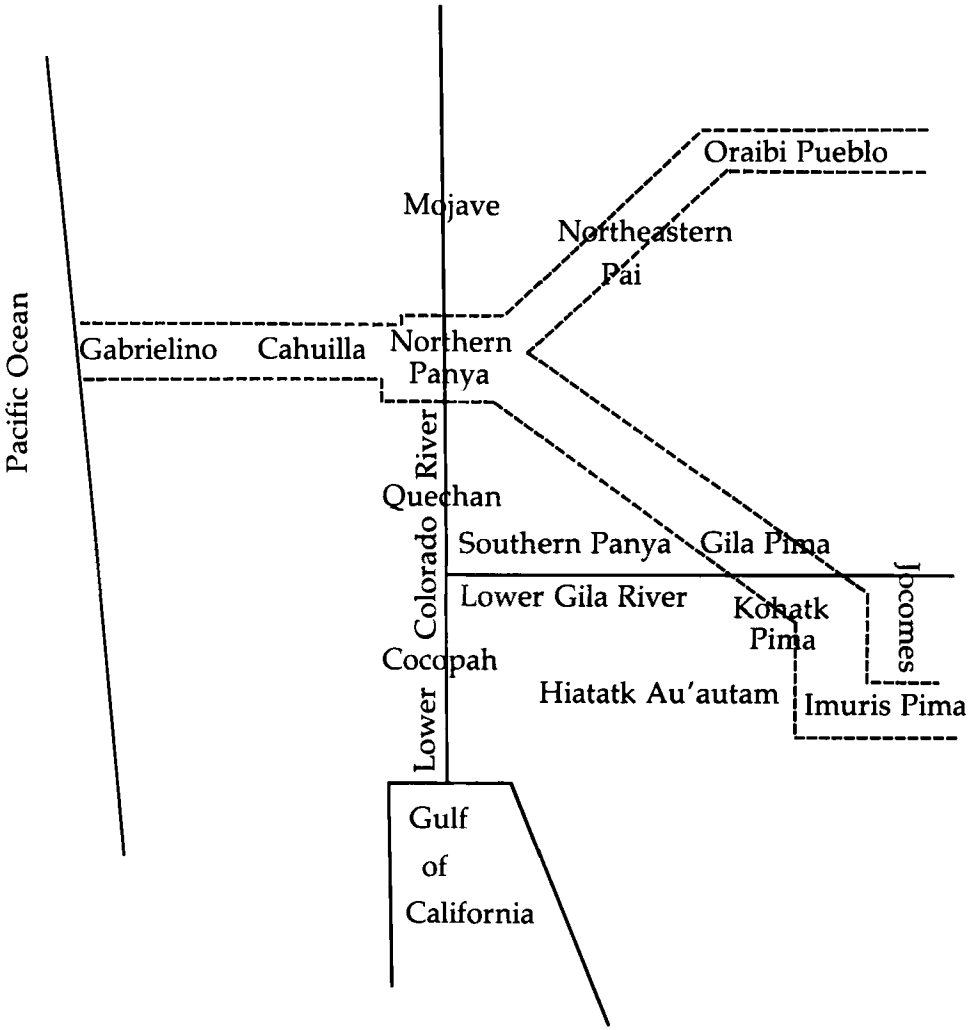


CHART II. INPUT-OUTPUT MATRIX FOR NORTHEASTERN PAI MIDDLEMENT ON THE PACIFIC COAST-UPPER RIO GRANDE-GREAT PLAINS PRIMARY TRADE ROUTE

EXPORTS

	Pueblo Textiles	Bison Hides	Turquoise	Hopi Pots	Sea Shell	Steatite	Seal Skins
Pueblo Textiles				Oraibi	Oraibi	Oraibi	
Bison Hides				Oraibi	Oraibi	Oraibi	
Turquoise				Oraibi	Oraibi	Oraibi	
Hopi Pots				Oraibi	Oraibi	Oraibi	
Sea Shells	Panya	Panya	Panya				
Steatite	Panya	Panya	Panya				
Seal Skins	Panya	Panya	Panya				

IMPORTS

NOTES

1. John C. Ewers, "The Indian Trade of the Upper Missouri before Lewis and Clark: An Interpretation," *Missouri Historical Society Bulletin*, 10:4 (July 1954). pp. 432, 441 map.

2. W. Raymond Wood, "Contrastive Features of Native North American Trade Systems," in F. W. Voget & R. L. Stephenson, eds., *For The Chief: Essays in Honor of Luther S. Cressman*. Eugene: University of Oregon Anthropological Papers No. 4, 1972. pp. 164-165.

3. Thomas G. Harding, *Voyagers of The Vitiaz Strait: A Study of A New Guinea Trade System*. Seattle: University of Washington Press for the American Ethnological Society, 1967. Monograph 44. pp. 118-153.

4. Ewers, op. cit. p. 432.

5. Bruce G. Trigger, *The Huron: Farmers of The North*. New York: Holt, Rinehart & Winston, 1969. pp. 26-27, 36-37. *The Children of Aataensic: A History of the Huron People to 1660*. Montreal: McGill-Queen's University Press, 1976. Volume I, p. 174.

6. Ronald L. Ives, trans., "Sedelmayr's Relacion of 1746." *Anthropological Papers No. 9*. Bureau of American Ethnology Bulletin 123. Washington: Smithsonian Institution, 1939. p. 108. (*Ohiaca* was a domesticated Amaranth.)

7. A. L. Kroeber, *Handbook of the Indians of California*. Washington: Bureau of American Ethnology Bulletin 78, 1925. pp. 735-736. Rpt.; Berkeley: California Book Co., Ltd. 1976.

8. C. Daryll Forde, *Ethnography of The Yuma Indians*. Berkeley: University of California Publications in American Archaeology and Ethnology Volume 28, Number 4, 1931. pp. 107-14.

9. Ives, op. cit. p. 110.

10. Elliott Coues, trans., *On The Trail of a Spanish Pioneer*. New York: Francis P. Harper, 1900. Volume II. p. 423-24.

11. Ives, op. cit. p. 108.

12. Jose F. Velasco, *Noticias Estadísticas del Estado de Sonora Acompañadas de Ligeras Reflexiones, Deducidas de Algunos Documentos y Conocimientos Practicos*. Mexico: Impr. de I. Cumplido, 1850.

13. Ives, op. cit. p. 108.

14. Ibid. p. 109.

15. Wood, op. cit. p. 156.

16. Gillet Griswold, "Aboriginal Patterns of Trade between the Columbia Basin and the Northern Plains," *Archaeology in Montana*, 11:2-3 (1970). pp. 15-17.

17. Wood, op. cit. p. 156.

18. Reuben Gold Thwaites, ed., *Original Journals of the Lewis and Clark Expedition, 1804-1806*. New York: Antiquarian Press, 1959. III. pp. 148-155. Leslie Spier and Edward Sapir, *Wishram Ethnography*. Seattle: University of Washington Publications in Anthropology, 3:3 (1930). p. 226. Bernard DeVoto (*The Journals of Lewis and Clark*. Boston: Houghton Mifflin Co., 1953) p. 309. modernized the archaic language of the journals to 30,000 pounds of pulverized, packaged dried salmon. I have converted the estimate to fifteen tons. The annual estimate seems low, inasmuch as the expedition reported seeing twenty

“stacks” of pulverized dried salmon on one small island. Each stack consisted of twelve baskets one by two feet in size holding 90 to 100 pounds each, or between 21,600 and 24,000 pounds per stack.

19. Griswold, op. cit. p. 21.

20. Spier & Sapir, op. cit. p. 226.

21. When Spanish explorers traveled along the Lower Gila River in the final decade of the seventeenth century, Southern Panya quickly netted so many fish to give to the explorers and their Native American retinue that the travelers could not carry them all. Ernest J. Burrus, ed., *Kino and Manje. Explorers of Sonora and Arizona: Their Vision of the Future, A Study of Their Expeditions and Plans*. Rome: Jesuit Historical Institute, 1971. p. 422.

22. Ives, op. cit. p. 109.

COMMODITIES

Pueblo textiles: Ives, op. cit. p. 108 (Hopi traders among Northern Panya); Coues, op. cit. Volume II. p. 424.

Bison hides: Ives, op. cit. p. 111.

Red Paint: Ives, op. cit. p. 116; Burrus, op. cit. pp. 344-345.

Sea Shells: Ives, p. 109; Herbert Eugene Bolton, trans., *Kino's Historical Memoir of Pimeria Alta*. Cleveland: Arthur Clark Co., 1919. Volume I. p. 231.

Steatite: Lowell John Bean & Charles R. Smith, “Gabrielino,” in R. F. Heizer, Volume Ed., *California Volume 8* and in W. C. Sturtevant, Gen. Ed., *Handbook of North American Indians*. Washington: Smithsonian Institution, 1978. p. 547. (Also shells)

Turquoise: Lowell John Bean, “Cahuilla,” in R. F. Heizer, Vol. Ed., *California Volume 8* and in W. C. Sturtevant, Gen. Ed., *Handbook of North American Indians*. Washington: Smithsonian Institution, 1978. p. 582.

Piñon Nuts: Katherine Luomala, “Tipai-Ipai,” in R. F. Heizer, Vol. Ed., *California Volume 8* and in W. C. Sturtevant, Gen. Ed., *Handbook of North American Indians*. Washington: Smithsonian Institution, 1978. p. 601.

Seal Skins: J. Manuel Espinosa, trans., *First Expedition of Vargas Into New Mexico, 1692*. Albuquerque: University of New Mexico Press, 1940. p. 104.

Hopi Pots: Henry F. Dobyns, *Prehistoric Indian Occupation within the Eastern Area of the Yuman Complex: A Study in Applied Archaeology*. New York: Garland Publishing, Inc., 1974.