APPENDIX I.

Annotated Bibliography

Kurt F. Anschuetz and Thomas Merlan

Aberle, Sophie D.

1948 The Pueblo Indians of New Mexico: Their Land, Economy, and Civil Organization. Memoirs 70. Menasha, WI: American Anthropological Association.

In the introduction, Aberle emphasizes the importance of the relationship between the Pueblos and their ethnographic landscapes:

> *Land being the basis of Pueblo economy, to understand the Indian's relation to his soil is vital. The years of contention over boundaries, titles to grants, and legislation influence the Indian's habit of thought as well as his laws…Land in the eyes of the Indian is his most precious possession. (p. 5)*

Aberle adds that before the Europeans' introduction of legal concepts for the private ownership of land, "Land was probably owned communally as is all the range and some agricultural land today, with small farms controlled by generations of the same family, but always with the tacit approval of the head man of the tribe" (p. 7).

Adams, Eleanor B., ed.

1954 Bishop Tamarón's Visitation of New Mexico, 1760. Publications in History, 15. Santa Fe: Historical Society of New Mexico.

Bishop Tamarón visited New Mexico in 1760. He briefly described Jémez Pueblo.

Adams also includes two letters of Bishop Crespo describing his visitation of 1730. Crespo notes that Jémez is "five leagues from the Navahos" (p. 98). Nesbit and Parker note the proximity of Jémez Pueblo to Navajo country in 1851 (see entry for Church n.d.).

Adams, Karen R.

1980 Pollen, Parched Seeds and Prehistory: A Pilot Investigation of Prehistoric Plant Remains from Salmon Ruin, A Chacoan Pueblo in Northwestern New Mexico. Contributions in Anthropology, 9. Portales, NM: Eastern New Mexico University Press.

Adams offers a wealth of ethnobotanical information for plants found in archaeological contexts. Major plant groups from Adam's study also found in the Valles Caldera National Preserve (VCNP) today include the amaranth (*Amaranthus* sp.), cactus (*Opuntia* sp.), goosefoot (*Chenopodium* sp.), sunflower (*Artemesia* sp. and *Helianthus* sp.), mustard (*Descurainia* sp.), sedge (*Scirpus* sp.), spurge (*Euphorbia* sp.), grass (*Oryzopsis* sp.), rush (*Juncus* sp.), buckwheat (*Eriogonom* sp. and *Polygonom* sp.), potato (*Physalis* sp.), and cattail (*Typha* sp.) families.

Adovasio, J. M., and J. D. Gunn

1986 The Antelope House Basketry Industry. *In* Archaeological Investigations at Antelope House. Don P. Morris, ed. Pp. 306–397. Washington, DC: U.S. Department of the Interior, National Park Service.

The authors discuss archaeological evidence for the pre-Columbian use of *Yucca baccata* in basketry.

Akins, Nancy J.

1993 Traditional Use Areas in New Mexico. Archaeology Notes 141. Santa Fe: Museum of New Mexico, Office of Archaeological Studies.

Relying heavily on materials generated by land claims litigated by the Indian Claims Commission (ICC), Akins addresses traditional use areas of aboriginal groups in New Mexico. The author states that given a number of reasons, "The boundaries identified in the

ICC cases are not always equivalent to an aboriginal or traditional use area" (p. 4). The land claims were based on exclusive use and occupancy of an area at the time the U.S. assumed political sovereignty over the Southwest in 1848. Akins implicitly recognizes this and notes, "No attempt was made to include areas that might be claimed on the basis of remote ancestry" (p. 9). Given the inherent limitations of information compiled for land claims cases, Akins considers only shrines and ancestral villages as traditional cultural properties associated with a community's aboriginal use areas.

In this overview, Akins discusses traditional (Indian) associations with all regions of New Mexico. She identifies the Baca Location No. 1 (Baca Location) as entirely within the aboriginal lands of the Jémez people and lists shrines in and near the Baca Location important to the Pueblo (including Wa-ve-ma; a.k.a. Cerro Redondo) (pp. 62–69). She references archeological evidence that suggests the first arrival of Towa speakers in this general area dates to ca. A.D. 1300–1325 (see entry for Ford et al. 1972).

Further inspection of Akins' compiled map information reveals that the following Indian communities included the Valles Caldera locality within their far-reaching aboriginal territories: Jicarilla Apache (pp. 70–77), Navajo (pp. 107–113), San Ildefonso Pueblo (pp. 126–131), San Juan Pueblo (pp. 132–138), Santa Ana Pueblo (pp. 139–141), Santa Clara Pueblo (pp. 145–148), Santo Domingo Pueblo (pp. 150–153), Tesuque Pueblo (pp. 163–165), Ute (pp. 168–174), and Zía Pueblo (pp. 181–186).

Allen, Craig D.

1989 Changes in the Landscape of the Jemez Mountains, New Mexico. Ph.D. dissertation. Wildlife Resource Science, University of California, Berkeley.

This dissertation examines the landscape ecology of the Jémez Mountains in and around Bandelier National Monument. The objectives of the study were to document and explain current landscape patterns, to identify and explain historic landscape changes and to discuss the implications of landscape change for local land management, in particular, Bandelier National Monument.

Allen emphasizes historic human interactions with natural processes. In a short section (pp. 145–149) titled "Anthropogenic Disturbances," he discusses livestock grazing. He concludes that (1) the extremely high historic stocking rates have led to gross alterations in the species composition of local vegetation associations (p. 147), (2) continuous grazing has caused marked reductions in herbaceous plant and litter ground cover and overgrazing has been seen as a major cause of soil erosion and arroyo cutting, and (3) overgrazing in the late nineteenth and early twentieth centuries effectively suppressed previous surface fire regimes throughout the landscape.

The accompanying references are extensive, and relate mainly to natural history and ecology.

Amsden, Charles Avery

1934 Navajo Weaving: Its Technic and History. Santa Ana, CA: Fine Arts Press, in cooperation with Southwest Museum.

Amsden follows Matthews (1897) in defining the Navajo landscape:

> *Each of the four cardinal points has its sacred mountains, the cosmic limit in that direction. North is marked by a mountain (not surely identified) in the San Juan range of southwestern Colorado; South by Mount San Mateo, later called Mount Taylor in the region of Laguna; East by a peak in the Jemez Mountains, thought by Matthews to be Pelado; West by the San Francisco Peaks, just north of Flagstaff, Arizona. (p. 123)*

Anschuetz, Kurt F.

1998a Genesis of Centers Within a Whole: Considering Community Formation Within the Tewa Cultural Landscape. Paper presented at Representing Common Destinies: History and the Social Construction of Community in the Southwest, sponsored by Center for Southwest Research, University of New Mexico, and the Southwest Center, University of Arizona General Library, Albuquerque, November 6, 1998.

In this short paper, Anschuetz elaborates on the Tewa concept of center in traditional community landscape constructions. Centers are formally understood negative spaces, such as plazas and caves. In the Pueblos' world view, centers are understood and sustained through their many-tiered relationships and connectedness to peripheries.

Anschuetz, Kurt F.

1998b Not Waiting for the Rain: Integrated Systems of Water Management by Pre-Columbian Pueblo Farmers in North-Central New Mexico. Ph.D. dissertation. Department of Anthropology, University of Michigan. Ann Arbor, MI: University Microfilms.

This archaeological study deals primarily with the tactics and strategies of agricultural production by Tewa Pueblo people in upland settings of the Tewa Basin. Anschuetz's evaluation of the settlement dynamics observed archaeologically in the Lower Río Chama Valley—one of the places of intensive Tewa occupation between the late thirteenth and sixteenth centuries—is germane to the VCNP land use history study because it develops a landscape framework for considering archaeological traces in terms of what Pueblo people say about their world.

Anschuetz draws from a variety of Tewa ethnographic literature for ideas about Pueblo people's understandings of their cultural landscapes and their senses of place and time across expansive homelands in the face of ever changing natural, social, and cultural environmental conditions. This study considers the Tewas' understandings about movement as an intrinsic part of all life in their cosmos to be congruent with the people's material need to shift residence in response to changing environmental conditions. In doing so, this work provides a useful review of the Pueblos concepts of center, periphery, process, and connectedness.

Anschuetz, Kurt F.

1998c The View from Atop Tsi Mayoh: Reflections on Spanish Colonial History; Refractions of Pueblo Tradition. Paper presented at Pecos Conference, Pecos National Historical Park, August 13–16, 1998.

Anschuetz reviews traditional archaeological and historical constructions that characterize late pre-Columbian Pueblo and early Historic period Pueblo landscape occupation in terms of the abandonment of major tracts of the communities' traditional homeland areas. He offers a landscape approach as an alternative perspective for viewing the archaeological record of Pueblo history. The paper neither casts static descriptions of Pueblo architecture, features, and artifacts as sufficient measures of culture nor depends on interpretive frameworks that view the Pueblos continued occupation of their traditional homelands only in terms of habitation sites.

Anschuetz, Kurt F., and Cherie L. Scheick

1998 Unveiling Archaeological Terra Incognita: Evaluating Time, Place-making and Tradition through a Cultural Landscape Paradigm. Paper presented at the 63rd Annual Meeting of the Society for American Archaeology, Seattle, March 25–29, 1998.

Anschuetz and Scheick examine how the cultural landscape construct, as defined in explicitly anthropological terms, provides an umbrella for integrating diverse studies of human behavior, both past and present. They suggest that this construct provides a framework for evaluating the ideationally informed grammars that helped structure the composition and distribution of the material traces making up the archaeological record. They frame the argument that landscape, as a material construct that communicates information and serves as a kind of historical text, embodies fundamental organizing principles that refer to the forms and structures of activities as people interact with the land, its waters and other resources, as well as one another. They suggest further that the cultural landscape offers an integrative framework for examining how past communities of people organized time, space, and activity in their day-to-day interactions with their physical, social, and ideational environments.

Anschuetz, Kurt F., Richard W. Wilshusen, and Cherie L. Scheick

2001 An Archaeology of Landscapes: Perspectives and Directions. Journal of Archaeological Research 9:157–211.

The authors, building upon the preliminary framework offered by Anschuetz and Scheick (1998), contribute further to a comprehensive landscape approach in explicitly anthropological terms. They trace the development of the landscape idea over its history in the social sciences and examine the compatibility between this concept and traditional anthropological practice. They call for practitioners to adopt a common terminology and methodology to build a construct paradigm that will allow them to use a landscape approach as a "pattern which connects" human behavior with particular places and times. They suggest understandings of settlement ecology, ritual landscapes, and ethnic landscapes not only will

contribute toward the definition of a construct paradigm but also will facilitate dialogue with traditional communities.

Anschuetz, Kurt F.

2002a A Healing Place: Río Grande Pueblo Cultural Landscapes and the Petroglyph National Monument. *In* **"That Place People Talk About": The Petroglyph National Monument Ethnographic Landscape Report, by Kurt F. Anschuetz, T. J. Ferguson, Harris Francis, Klara B. Kelley, and Cherie L. Scheick. Pp. 3.1–3.47. Community and Cultural Landscape Contribution VIII. Prepared for: National Park Service, Petroglyph National Monument, Albuquerque, New Mexico, NPS Contract No. 14431CX712098003 (RGF 109B). Santa Fe, NM: Río Grande Foundation for Communities and Cultural Landscapes.**

This discussion provides a review of the ideational and organizational principles of the traditional landscape constructions generally shared among New Mexico's 16 Río Grande Pueblos (i.e., Cochití, Isleta, Jémez, Nambé, Picurís, Pojoaque, Sandia, Santa Ana, San Felipe, San Ildefonso, San Juan, Santa Clara, Santo Domingo, Taos, Tesuque, and Zía). The themes of center, breath, emergence, movement, and connectedness are relevant to the VCNP Land-Use History Project.

Anschuetz provides insights into why the Río Grande Pueblos consider shrines, volcanoes, caves, trails, plants, and animals to be important landscape features. He also reviews community concerns about the protection and management of these landscape elements.

Anschuetz, Kurt F.

2002b A Place of Power at the Edge: Apache Cultural Landscapes and the Petroglyph National Monument. *In* **That Place People Talk About: The Petroglyph National Monument Ethnographic Landscape Report, by Kurt F. Anschuetz, T. J. Ferguson, Harris Francis, Klara B. Kelley, and Cherie L. Scheick. Pp. 6.1–6.18. Community and Cultural Landscape Contribution VIII. Prepared for: National Park Service, Petroglyph National Monument, Albuquerque, New Mexico, NPS Contract No. 14431CX712098003 (RGF 109B). Santa Fe, NM: Río Grande Foundation for Communities and Cultural Landscapes.**

This essay examines the founding principles of the traditional landscape constructions sustained by Apache communities. The discussion focuses on how places at the edge of the Apache landscape, such as the Jémez Mountains, are the source of power for sustaining life throughout the cosmos.

Anschuetz considers the cultural significance of mountains, caves, lava rocks, plants, animals, and minerals. He reviews community concerns about the protection and management of these features.

Anschuetz, Kurt F.

2002c Contested Commons: Nuevomexicano and Hispano Cultural Landscapes and the Petroglyph National Monument. *In* **"That Place People Talk About": The Petroglyph National Monument Ethnographic Landscape Report, by Kurt F. Anschuetz, T. J. Ferguson, Harris Francis, Klara B. Kelley, and Cherie L. Scheick. Pp. 7.1–7.28. Community and Cultural Landscape Contribution VIII. Prepared for: National Park Service, Petroglyph National Monument, Albuquerque, New Mexico, NPS Contract No. 14431CX712098003 (RGF 109B). Santa Fe, NM: Río Grande Foundation for Communities and Cultural Landscapes.**

This chapter addresses the landscape constructions of New Mexico's traditional Hispanic communities. It finds that through cultural processes of *mestizaje* and religious syncretism, northern New Mexico's rural Hispanic communities have incorporated the ideas of center, periphery, and ensoulment found among the region's cultural diverse aboriginal people into their own understandings of landscape.

Anschuetz's review of important Hispanic landscape elements includes many of the kinds of features found in the VCNP, including shrines, lava rock, plants, animals, minerals, and vistas. Just as the authors of the other chapters in this volume (see entries for Anschuetz 2002a,b; Ferguson 2002; and Kelley and Francis 2002), he reviews community concerns about the protection and management of these features.

Arnon, Nancy S., and W. W. Hill

1979 Santa Clara Pueblo. *In* Southwest. Alfonso Ortiz, ed. Pp. 296–307. Vol. 9 of Handbook of North American Indians, William Sturtevant, ed. Washington, DC: Smithsonian Institution.

This article provides a concise overview of the anthropology and history of Santa Clara Pueblo.

Ayer, Mrs. Edward E., trans.

1916 The Memorial of Fray Alonso de Benavides. Chicago, IL: Privately printed.

Father Custodian Benavides wrote this report in 1630 and revised it 4 years later, to induce King Philip IV of Spain to send more missionaries to New Mexico and to build more churches. Although his population figures for the New Mexico pueblos were grossly exaggerated, his general and comparative descriptions are valuable because so few pre-Revolt sources exist. Benavides briefly describes Jémez Pueblo (pp. 24–25).

Notes include a background on fray Gerónimo de Zárate Salmerón, who served in New Mexico between 1618 and 1626, and prepared a report of his observations in or after 1629. As the resident missionary at Jémez Pueblo, Benavides prepared a catechism in Towa. He emphasizes the mineral wealth of New Mexico and states that he filed on many mineral locations in the Jémez Mountains (p. 217).

Baca Co. v. NM Timber, Inc.

1967 *Baca Land and Cattle Company and Dunigan Tool and Supply Company, and George W. Savage, Trustee Under Liquidating Trust Agreement, v. New Mexico Timber, Inc., and T. Gallagher and Co., Inc.* 384 F.2d 701 (10th Circuit Court of Appeals). 8NN-021-89-022 #5648, Federal Records Center (FRC) #76L0201, boxes 110 and 110A. Denver, CO: National Archives, Rocky Mountain Region.

Circuit Judges Warren L. Jones and John J. Hickey heard the appeal. Their opinion notes that the trial court granted summary judgment for the appellees (defendants) on the first two of three counts of the complaint. For Count I, the judges established the company's interest in a deed and contract conveying timber rights for 99 years to the company's predecessors in title. For Count II, they recognized damages for timber cut in violation of the terms of the "instruments" (that is, the deed of 1918 and the agreement of 1926). The court permitted an immediate appeal of their decisions for Counts I and II. It also directed that Count III, seeking damages for wasteful logging practices, be tried by a jury.

The Court of Appeals dismissed the plaintiffs' appeal because it was not appealable. The court explained this by saying that plaintiffs had a different legal theory for each count of their complaint but applied these different theories to the same set of facts. "Therefore, because each theory of the appellants arises out of the same transaction or occurrence, the pragmatic approach which all circuits apply directs us to conclude that the trail court's ruling is not appealable."

Bailey, Vernon

1913 Life Zones and Crop Zones of New Mexico. North American Fauna 35. Washington, DC: U.S. Department of Agriculture, Bureau of Biological Survey.

Bailey made a reconnaissance in the Valle Grande in 1906. This volume is a part of a series intended to encourage immigration to New Mexico by disseminating information about areas suitable for agriculture.

Bailey assigns the Valles Grande, San Antonio, and Santa Rosa to the Transition Life Zone.

Bancroft, Hubert Howe

1889 Works of Hubert Howe Bancroft, vol. 17. History of Arizona and New Mexico 1530–1888. San Francisco, CA: The History Company.

Although Bancroft's work has been greatly amplified by later generations of historians, his histories are still standard references. This volume covers Arizona and New Mexico from the beginnings of Spanish exploration to the late 1880s.

In his discussion of the last years of colonial administration (pp. 283–309), Bancroft covers early Anglo-American forays into New Mexico. Anglo-American and French Canadian trappers who tried to take furs into colonial New Mexico as well as traders who ventured

into the province were sometimes arrested and their goods confiscated. The Anglos established trade with an independent Mexico after 1821.

Bandelier, Adolf F.

1892 Final Report of Investigations among the Indians of the Southwestern United States, Carried on Mainly in the Years from 1880 to 1885, pt. 2. American Series IV. Papers of the Archaeological Institute of America. Cambridge, MA: John Wilson and Son.

This summary of Bandelier's early and immensely influential investigations in Southwestern archeology, prehistory, and ethnography contains a section on "The Country of the Jemez" (p. 200 ff.). Bandelier describes the area then as being used mainly for summer grazing, with only marginal agricultural development, and traditionally related to Jémez Pueblo:

> *The Valles Mountains separate the northern section of the Queres district from that claimed by the Jemez tribe. Against the chain of gently sloping summits which forms the main range from the peak of Abiquiu to the Sierra de la Palisada in the south abuts in the west an elevated plateau, containing a series of grassy basins to which the name of "Los Valles" (the valleys) has been applied. Permanent streams water it, and contribute to make an excellent grazing region of this plateau. But the seasons are short. For snow fills the passes sometimes till June, and may be expected again as early as September. During the three months of summer that the Valles enjoy, however, their appearance is very lovely. Heavy dews fall daily, and rains are common. The high summits are seldom completely shrouded for more than a few hours at a time, and as soon as the sun breaks through the mist, the grassy basins shine like sheets of malachite. Flocks of sheep dot their surface, and on the heights around the deep blue tops of the regal pines mingle with the white trunks and light verdure of the tall mountain aspens. It is also the country of the bear and the panther, and the brooks team with mountain trout.*
>
> *The descent to the east towards Santa Clara is through a long and rugged gorge, over a trail which beasts of burden must tread with caution, while towards Cochiti the paths are still more difficult. On the west a huge mountain mass, the Sierra de la Jara, interposes itself between the principal valley, that of Toledo, and the Jemez country. Both north and south of this mountain the heights are much less considerable; still the clefts by which they are traversed are none the less narrow, and the traveler is compelled to make long detours in order to reach the Jemez River.*
>
> *The country inhabited by the Jemez tribe lies west of the Valles… (pp. 200–201)*

(See also entries by Akins 1993, and Lange and Riley 1966.)

Barker, Elliott

1970 Western Life and Adventures 1889–1970. Albuquerque: University of New Mexico, Calvin Horn Collection.

Barker describes the program of predator control instituted by the Forest Service in 1916. The Forest Service program of hunting and poisoning reduced or eliminated elk, mule deer, turkey, and prairie dogs in and around the Baca Location. Therefore, gray wolves, mountain lions, and coyotes increasingly preyed on cattle and sheep.

Basso, Keith H.

1996 Wisdom Sits in Places: Landscape and Language Among the Western Apache. Albuquerque: University of New Mexico Press.

This definitive work about Western Apache landscape ideas and relationships serves as a compelling example of how people interact with their physical and social environments and how these relationships resonate through the structure and organization of a group's social institutions. Basso embraces the premise that "what people think about the environment—how they perceive it, how they conceptualize it, or…how they 'actively construct' it" (p. 67) with meaning is relevant. Basso adds that people, not their social institutions, make and act on cultural meanings. He addresses the issue of landscape constructions as the nexus of the intersection of a group's senses of place and time.

Baxter, John O.

1987 *Las Carneradas*: Sheep Trade in New Mexico 1700–1860. Albuquerque: University of New Mexico Press.

Baxter describes the introduction of sheep into New Mexico in 1598 and the origins and growth of the sheep trade in the province, through the colonial and Mexican periods and

into the American (Territorial) period. Although he does not mention the Valles Caldera, his overview provides valuable background information for understanding sheep raising in our study area.

> *During the summer and fall of 1757 New Mexico's governor, Francisco Antonio Marín del Valle made an official visitation of the area within his jurisdiction. The inspection team included the region's most famous eighteenth-century cartographer, Bernardo Miera y Pacheco. Using information gathered during the tour, don Bernardo produced a detailed map of New Mexico…On the map's margins Miera y Pacheco appended supplementary data…According to his tabulation, 5,170 Spaniards residing in New Mexico possessed 2,543 horses, 7,832 cattle, and 47,621 ganado menor (sheep and goats). The Pueblo and Hopi Indians, who numbered almost 9,000, owned 4,813 horses, 8,325 cattle, and 64,561 ganado menor. Obviously, New Mexico livestock had thrived since the Reconquest and the industry rested on a solid foundation at mid-century. (p. 42)*
>
> *As sheep became increasingly acceptable as a means of exchange for imported consumer goods, a small clique of rancher-merchants began to dominate livestock marketing within the province and to control other aspects of the local economy. Another important development for New Mexico comerciantes was the emergence of Chihuahua as their leading trading point and the consequent decline of Parral. (p. 42)*

Bell, Willis H., and Edward F. Castetter

1941 The Utilization of Yucca, Sotol, and Beargrass by the Aborigines in the American Southwest. Ethnological Studies in the American Southwest 7. University of New Mexico Bulletin. Albuquerque: University of New Mexico.

The authors discuss the use of yucca in basketry among many ethnographic groups in the Four Corners region.

Benally, Clyde, with Andrew O. Wiget, John R. Alley, and Garry Blake

1982 Dinéjí Nákéé′ Nááhane′: A Utah Navajo History. Monticello, UT: San Juan School District.

Benally and others relate the creation of the Navajo mountains of cardinal direction in the creation of the Fourth World. Following his creation of the pairs of Holy People (*Diyin Dine′é*),

> *First Man took out the inner forms of the sacred mountains, which he had brought up from the Third World. In the east, he placed the White Mountain (Sis Naajinii). He covered it with Dawn, Dark Cloud, Male Rain, and Dark Water. He fixed it to the earth with a bolt of Lightning. He then sent Dawn Boy and Girl there… (p. 8)*

This tale establishes the special subjective quality of timelessness in the Navajo conceptualization of the Holy Mountains. That is, the mountains were created and re-created through the succession of worlds from the beginning of time to the present.

Benally and others (p. viii) further elaborate on the symbolic associations of the four principal cardinal mountains in a schematic diagram:

Benally and others follow Haile (1938) rather than Matthews (1897) (see also entry for Sleight 1950) in associating the Navajo Holy Mountain of the East with Blanca Peak in southern Colorado rather than with Redondo Peak in the VCNP.

Bernalillo County, New Mexico

1849–1903 Bernalillo County Clerk's Office Records. Accession No. 1974-034. Reels 1–33. Santa Fe: New Mexico State Records Center and Archives.

Grantor-Grantee and Grantee-Grantor indices on Reels 1–4 show acquisition of interests within the Baca Location by Maríano Sabine Otero and his son, Frederico J. (F. J.). For example, the deed for the sale of lands in the Baca Location by Leandro Sanchez and wife to Maríano Otero on April 7, 1890, indexed in reel 3, is in book 12, p. 509 (reel 20, frames 259–260). Numerous transactions show that the Baca heirs sold their land piecemeal and the Oteros eventually bought up these interests, finally forming the Valles Land Company in 1899. (Note: The corporate name "Valles Land Company" appears in the *Whitney v. Otero* trial record as early as 1894.)

Blake, Kevin

1999 Sacred and Secular Landscape Symbolism at Mount Taylor. Journal of the Southwest 41:487–509.

Blake examines the symbolic Native American beliefs about mountains. He maintains that the recognition and understanding of these ideas and values is necessary for the sustained management of any mountain region (p. 487). In this process, Blake contributes to the comprehension of landscape Pueblo and Navajo constructions and how these culturally diverse peoples maintain significant associations with mountainous settings within their traditional homelands. He also offers several useful observations about traditional Hispanic landscape ideas in framing comparisons that illustrate his argument.

Bloom, Lansing B.

1946 [1922] The West Jemez Culture Area. New Mexico Historical Review 21:120–126. Originally published in El Palacio 12:19–25.

Bloom offers a cogent description of the Valles Caldera region and recognizes the traditional use of this locality by Jémez Pueblo:

> *Cerro Conejo, Cerro Pino, Cerro Pelado, Cerro Redondo, and Cerra Venado, were all mountains of that early Jemez world which extended from the high mesa east of Vallecito westward to the Río Puerco, and from the region of the present pueblo of Jemez to the San Anton. It was a world of mountain and valley, of towering forest and living streams, of high majestic mesas which tapered into many a commanding potrero flanked by deep canyons. Even today the Jemez have community rabbit drives in the valley, and in the sierras they hunt the deer and bear, the wolf and fox, the gallina de tierra and the eagle of the sky. But gone is the buffalo which (if we may trust the maps of Miera y Pacheco) formerly ranged the prairie like meadows of the upper Valles and the San Anton. The streams still teem with trout; the bluebird still flashes in the sunlight which filters down through the royal pines; the bluebells and grasses, mariposa lilies and yellow flowers of countless species still wave waist deep in the sun drenched glades of the mountains. (p. 121)*

Bloom also states that Oñate passed through the Valles Caldera on his way from San Juan Pueblo to Jémez Pueblo:

> *He "descended" thro [sic] the Valles to the pueblos in the Vallecito drainage then working to the west over the high mesa land he "descended" from the potrero to the "last pueblo" of the province which he associates with the marvelous hot springs. Guiusewa is the pueblo meant beyond any reasonable doubt, and the trail from the Vallecito down into Hot Springs is still in daily use. (p. 123)*

Bloom, Lansing B., and Lynn B. Mitchell

1938 The Chapter Elections in 1672. New Mexico Historical Review 13:85–119.

This article discusses the establishment of the Jémez missions, events before 1680, the Pueblo Revolt, and subsequent resettlement of the remnant Jémez population. Bloom and Mitchell point out that early Spanish colonial contact with the Jémez Pueblos took place in the Vallecito Viejo and the upper Valles, where at least seven Jémez (Towa) Pueblos existed (p. 91). (See entry for Schroeder 1979.)

Bohrer, Vorsila L.

1960 Zuni Agriculture. El Palacio 67:181–202.

The author includes discussion of *Amaranthus* sp. use by the Zuni.

Bohrer, Vorsila L.

1975 The Prehistoric and Historic Role of Cool-Season Grasses in the Southwest. Economic Botany 29:199–207.

Bohrer reports on the uses of various grasses, which occur in the VCNP, by various pre-Columbian and Historic Pueblo groups, among others. Examples include bluegrass (*Poa* sp.) and needle-and-thread (*Stipa* sp.).

Bolton, Herbert Eugene

1930 Spanish Exploration in the Southwest 1542–1706. New York: Charles Scribner's Sons.

This is a standard reference work for early Spanish exploration in the North American Southwest. Bolton's history contains the narrative of the Espejo expedition of 1583. Espejo describes the Jémez Pueblos (the mountain Pueblo not visited may be Giusewa):

> *Having traveled one day's journey to the northwest, a distance of about six leagues, we found a province, with seven pueblos, called the Province of the Emexes, where there are very many people, apparently about thirty thousand souls. The natives indicated to us that one of the pueblos was very large and in the mountains, but it appeared to Fray Bernardino Beltrán and some of the soldiers that our numbers were too small to go to so large a settlement and so we did not visit it, in order not to become divided into two parties. It consists of people, like those already passed, with the same provisions, apparel, and government. They have idols, bows and arrows, and other arms, as the provinces heretofore mentioned. (p. 182)*

Bond and Son

1917 Correspondence. Item 96. Bond, Frank, and Son Records. Albuquerque: Center for Southwest Research, General Library, University of New Mexico.

This bound volume of copies of correspondence includes a June 28, 1917, letter (p. 216) to Ed Wetmore of the Redondo Development Company, Warren, Pennsylvania. A messenger charged $10.00 to contact Mr. Shelton (surveyor); Louis Nohl apologizes for this "exorbitant charge."

In a July 20, 1917, letter (p. 557) to Ed Wetmore, Frank Bond says he cannot find [L. D. W.] Shelton. He also is concerned that the Indians (evidently Santa Clara Pueblo) have asserted that the Bond interests have built a fence on their land and they intend to cut it. Superintendent P. T. Lonergan (Southern Pueblos Agency) states that the only official survey is the (Francis) Joy survey.

Bond and Son

1918–1919 Ledger. Item 103. Bond, Frank, and Son Records. Albuquerque: Center for Southwest Research, General Library, University of New Mexico.

In this collection are 273 items and cartons. Most documents are numbered single volumes or ledgers.

Volume 95 includes a letter, dated March 20, 1918, from Frank Bond to Edward Wetmore. In this correspondence, Bond writes that while he would like to purchase the Baca Location, his concerns over the ongoing, widespread conflict (World War I) being waged in Europe, tempered his appetite for making great investments at this time. Although he withdrew his offer to purchase the tract, Bond concludes, "I still want to own the property some day."

Volume 170 is specific to the Baca Location and details the sheep operations for the year 1918. Information in this volume reveals that Frank Bond leased the Baca Location in 1918 for $500 per month. His lease required him to make certain improvements; he spent $3,054.20 on fencing and other work in 1918.

A note opposite p. 1 explains the item "Baca Location expense $1221.68" in the first journal entry as follows. The Bond-Connell Sheep and Wool Company had an interest in the lease and paid one half of it: $1,527.10. Frank Bond paid the other half, prorated to $305.42 per year. "At the end of one year the Baca Location was turned over to the Quemado Sheep Co. and Mr. Bond's ½ or $1527.10 less one year's prorate or $305.42 leaving $1221.68 was assumed by the Quemado Sheep Co."

Ledger Volume 170 also details sheep operations for 1918. In this year Bond had 73 employees on the Baca Location. All but three were Hispanic and most were sheepherders (*pastores*), camp tenders (*camperos*), or camp suppliers (*caporales*). The Baca Location had 17 sheep camps and 1 cattle camp in the summer of 1918. The number of sheep per camp averaged 1,257.

In 1926 Bond bought the Baca Location and a half interest in the mineral rights. The Redondo Development Company (seller) retained a 99-year lease on the timber.

Bond and Son

1918–1919 Ledger. Item 103. Bond, Frank, and Son Records. Albuquerque: Center for Southwest Research, General Library, University of New Mexico.

Ledger Item 103 has entries from November 23, 1918, to September 8, 1919. Some entries refer to the Baca Location. These entries record individuals grazing small numbers of stock "35 cows and 8 horses" "6 cows and 1 horse" (p. 1) on the Location, fees paid to Bond and Nohl Company, and balances due. The base price for a horse or cow was $1.25 for the summer season.

Bond and Son

1918–1921 Quemado Sheep Company 1918–1921. Carton 181. Bond, Frank, and Son Records. Albuquerque: Center for Southwest Research, General Library, University of New Mexico.

Carton 181 contains some correspondence about the Baca Location. Herman Wertheim, writing for Vicente Armijo from Domingo, New Mexico, on June 19, 1918, encloses a voucher for $116 in payment for grazing 116 head of cattle taken to the Baca Location on June 12. Moses Abouselman sends payments of $17 for 17 head of cattle and $65 for 65 head of cattle grazing on the Baca Location. Another letter refers to 14 head.

A letter from Moses Abouselman dated June 14, 1918, is on behalf of José Antonio Pecos of Jémez, who wants to put his horses on "the grant." In a previous letter on June 10, 1918, Abouselman wrote that he understood that he was to pay 50 cents per head of cattle for the month of May, or $1.25 for the season (i.e., "through the summer"). Some correspondence is from the Quemado Sheep Company at Peña Blanca.

Bond and Son

ca. 1960 Extracts and Notes from Frank Bond Correspondence. Vol. 76a. Bond, Frank, and Son Records, Albuquerque: Center for Southwest Research, General Library, University of New Mexico.

These extensive excerpts illustrate Frank Bond's style and business methods. The notes contain material on the *partido* system, the New Mexico Sheep Sanitary Board, scab or scabies (mange), and many subjects relating to sheep raising. They discuss the Bond companies and numerous partnerships.

Frank H. Grubbs excerpted the items of correspondence contained in this ledger as background for his biography of Frank Bond (**see entry for Grubbs 1960–1962**).

Bowden, J. J.

1969 Private Land Claims in the Southwest. Masters thesis. Houston, TX: Southern Methodist University.

Bowden outlines the history of the Luis María Cabeza de Baca Grant and the five Baca Locations. Note, however, that Bowden mistakenly places L. M. Baca's death in 1833. (See also entries for U.S. Public Law 167 1860; U.S. Congress, House 1860; and U.S. Congress, Senate 1860.)

Boyd, Dick

1938 Jemez High Country. New Mexico Magazine 16 (9):14–15, 35–39.

Boyd notes the natural and geological features of the region. He mentions that the Civilian Conservation Corps (CCC) built the road from Los Alamos to Cuba through Valle Grande in 1935. At the time of the article, the CCC camp in Paliza Canyon was active. Boyd describes Sulphur Springs and notes that Maríano Sabine Otero established a plant for refining sulphur, but that prevailing prices were so low that the venture was not profitable.

Brandt, Elizabeth A.

1979 Sandia Pueblo. *In* Handbook of the North American Indians, vol. 9, Southwest. Alfonso Ortiz, ed. Pp. 343–350. Washington, DC: Smithsonian Institution.

This article provides a concise overview of the anthropology and history of Sandia Pueblo.

Brewer, Sallie Pierce

1937 The "Long Walk" to Bosque Redondo, as Told by Peshlakai Etsedi. Museum of Northern Arizona Museum Notes 9(11):55–62.

Brewer provides testimony offered by Peshlakai Etsedi, who recounts important details of a post–Bosque Redondo conference held at a new fort at Bear Spring, which Ellis (1974:159) associates with Fort Lyon and Fort Wingate. At this conference, Nah Zizii, Hosteen Iltsuee Etsosa (Marriano), Hostin Be Dah Gah, and Becenti (and possibly other unidentified Navajo headmen) climbed to the top of a hill south of Fort Lyon. From this summit:

> *These men decided that the Navajos would have the country between Sisnajinee ["Black Belt" or Pelado], Zoet Zilth [Mount Taylor], Nahtah Ah Say Ay ["Corn Stairs" or Mount Thomas], Do Ko-osteed ["Suspended by Yellow Shell" or San Francisco Peaks], Nahto Zilth ["Tobacco Mountain" or Buckskin Mountain near Grand Canyon], Nah Ah Tsees Ahn [Navajo Mountain] and Devehn Tsah ["Mountain Sheep" or San Juan Mountains]. (p. 61; comments in brackets are Brewer's additions from endnote 54.)*

Brown, Lorin W.

1978 Hispano Folklife of New Mexico: The Lorin W. Brown Federal Writers' Project Manuscripts. Albuquerque: University of New Mexico.

Brown details his visit to a *pastor* (shepherd), Basilico Garduño, at his camp "in the shadow of El Cerro Redondo ('Round Peak'), near Jemez Hot Springs" (p. 158). Brown describes Garduño's camp, flock, dogs, gear, camp routine, and cooking, and repeats Garduño's explanations of how he predicts the weather by the traditional method of *las cabañuelas* (p. 163).

Garduño tells Brown that he will graze his sheep toward El Rito de San Antonio. Brown mentions that Garduño works for a *patron* (a wealthy man who owns much land), who later visits the camp, but Brown offers no details concerning him.

Garduño talks about his former *patrón,* don Maríano (Otero):

> *My father and I both worked for Don Mariano, who first owned those springs, that is, the grant on which they are located. He was muy rico, a man of many sheep and much land. We used to lamb in the grassy valley just above the springs and dip the sheep in troughs built just below the main sulphur spring. We used nothing else except the very water from the spring to rid the sheep of scab and ticks. It was much better than this stuff we have to use nowadays. (p. 166)*

Brown describes the shearers who arrive once a year as "itinerants, shearing sheep on a commission basis all over the state and into Colorado" (p. 171).

Brugge, David M.

1983 Navajo Prehistory and History to 1850. *In* Southwest. Alfonso Ortiz, ed. Pp. 489–501. Vol. 10 of Handbook of North American Indians, William Sturtevant, ed. Washington, DC: Smithsonian Institution.

This article is a good summary of early Navajo history. Brugge's figure 1, "Approximate Navajo settlement areas," shows the Valles Caldera portion of the Jémez Mountains to the east of the core of the settled Navajo territory. This observation does not necessarily preclude temporary Navajo use of the VCNP, however (cf. entry for Douglass 1917).

Bryan, Nonabah G., and Stella Young

940 Navajo Native Dyes: Their Preparation and Use. Washington, DC: Office of Indian Affairs.

Bryan and Young's discussion of Navajo dyes includes mention of the following plant taxa found in the VCNP: *Artemisia* sp., *Castilleja* sp., *Eriogonum* sp., *Hymenoxys* sp., *Juniperus* sp., *Prunus* sp., *Pterospora* sp., and *Townsendia sp*.

Cabeza de Baca, Fabiola

1994 We Fed Them Cactus. 2nd ed. Albuquerque: University of New Mexico Press.

In her history of the renowned Cabeza de Baca family, the author offers a passage about her grandfather, Don Tomás Dolores Cabeza de Baca (a.k.a. Tomás D. Baca). This recollection, although lacking desired detail, sheds insight on how Maríano Sabine Otero eventually gained significant interest in the Baca Location, an interest that he shrewdly leveraged against Joel Parker Whitney who initiated the partition suit that eventually stripped all the

Luis Maria Cabeza de Baca heirs of any right in the land grant (**see entry for *Whitney v. Otero* 1893**):

My grandfather, Don Tomás Dolores Cabeza de Baca was running fifteen thousand head of sheep on the Plaza Larga country in 1875. In the Pajarito country, where Newkirk is now, he ran more than two thousand head of cattle. In those days there were no bonding companies. My grandfather was one of the bondsmen of the newly-elected San Miguel County sheriff-clerk-treasurer, which offices were held by one man. At the end of his term, the officer was short on county funds. Grandfather had to produce $40,000. Ewes were worth one dollar per head, cows seven dollars. He sold all his livestock and to make up the balance, he mortgaged 100,000 acres of his land grant, El Valle Grande in Sandoval county, to Don José Leandro Perea [Maríano Otero's father-in-law] for $10,000. (pp. 72–73)

Cabeza de Baca recalls elsewhere that Tomás D. Baca previously had moved to Las Vegas from Peña Blanca in 1865. He owned a mercantile business and ran freight wagons on the Santa Fe Trail (p. 80).

Cajete, Gregory

1994 Look to the Mountain: An Ecology of Indigenous Education. Durango, CO: Kivakí Press.

Cajete, a Santa Clara Tewa educator, is concerned with sustaining traditional cultural knowledge as a way for communities to maintain their cultural identity and sense of well-being. Cajete explores indigenous education as an attempt "to develop insights into the community of shared metaphors and understandings that are specific to Indian cultures, yet reflect the nature of human learning as a whole" (p. 21). Chapter 3, The Spiritual Ecology of Indigenous Education, and chapter 4, The Environmental Foundation of Indigenous Education, are especially relevant to understanding the importance of place held by traditional communities in their ethnographic landscape constructions.

To Cajete, indigenous education is an exploration of spiritual ecology. Traditionally, "the ultimate goal of Indigenous education was to be fully knowledgeable about one's innate spirituality" (p. 42). The medium for attaining this knowledge is the many-layered spiritual connections Indian people feel with special places in their lands and in their lives. These connections have roots in mythic times and do not necessarily require material use to sustain their validity. "By talking about those special places,…[Indian people] connected their spirit to them through their words, thoughts, and feelings" (p. 43). Cajete explains further,

> *American Indians believe it is the breath that represents the most tangible expression of the spirit in all living things. Language is an expression of the spirit because it contains the power to move people and to express human thought and feeling. It is also the breath, along with water and thought, that connects all living things in direct relationship. The interrelation of water, thought (wind), and breath personifies the elemental relationship emanating from "that place that the Indians talk about," that place of the Center where all things are created. (p. 42)*

By understanding themselves as part of a natural community and an ecological process, Indian people express their relationships to the natural world in ways "that only can be called 'ensoulment' " (p. 83). Cajete defines *ensoulment* as the projection of the human sense of soul on particular entities, phenomena, and places in their natural environments. Moreover, by tracing their respective communities' metaphorical journeys across their landscapes, whereby people learned about themselves in relation to their natural world, indigenous groups view the landscape as "a textbook of ecological understanding, interpreted through the traditional stories and activities of tribes" (p. 91). Disruptions of the intensity and intimacy of the relationship between the people of traditional Indian communities and their ethnographic landscapes historically resulted in the disastrous loss of meaning and identity for individuals, families, and communities as a whole (p. 85).

Cajete, Gregory

1999 "Look to the Mountain": Reflections on Indigenous Ecology. *In* A People's Ecology: Explorations in Sustainable Living. Gregory Cajete, ed. Pp. 1–20. Santa Fe, NM: Clear Light.

This essay is a condensation of Cajete's (1994) larger work, *Look to the Mountain: An Ecology of Indigenous Education*. He introduces essential principles about the spiritual ecology of Pueblo people, including the ideas of breath, center, emergence, and movement, in a clear and cogent manner.

Callaway, Donald, Joel Janetski, and Omer C. Stewart

1986 Ute. *In* Great Basin. Warren L. D'azevedo, ed. Pp. 336–367. Vol. 11 of Handbook of North American Indians, William Sturtevant, ed. Washington, DC: Smithsonian Institution.

This article provides a concise overview of Ute anthropology and history. The authors identify the Muache and Capote as the principal Ute bands that traveled seasonally into New Mexico's mountains, with the Muache ranging as far south as Santa Fe. Their map showing the geographic expanse of early nineteenth-century Ute territory, however, does not show the full extent of the people's occupation of New Mexico (Figure 1 (p. 337)).

The authors identify Ute uses of the following plants found in the VCNP: Rocky Mountain juniper (*Juniperus scopulorum*), chokecherry (*Prunus virginiana*), Gambel oak (*Quercus gambelii*), and elderberries (*Sambucus* sp.) for food. They also mention that the Ute use stinging nettle (*Urtica* sp.) for fiber and mountain mahogany (*Cercocarpus montanus*) for tools.

Camazine, Scott, and Robert Bye

1980 A Study of the Medical Ethnobotany of the Zuni Indians of New Mexico. Journal of Ethnopharmacology 2(4):365–388.

The list of Zuni medicinal plants includes the following Valles Caldera native plants, among others: milkweed (*Astragalus* sp.), thistle (*Cirsium* sp.), buckwheat (*Eriogonum* sp.), spurge (*Euphorbia* sp.), southwestern stoneseed (*Lithospermum multiflorum*), Wright's deervetch (*Lotus wrightii*), Bigelow's tansy-aster (*Machaeranthera bigelovii*), narrowleaf four-o'clock (*Mirabilis linearis*), primrose (*Oenothera* sp.), scorpionweed (*Phacelia sp.*), piñon (*Pinus edulis*), common plantain (*Plantago major*), curlyleaf dock (*Rumex crispus*), and willow (*Salix sp.*).

Carmichael, David L.

1994 Places of Power: Mescalero Apache Sacred Sites and Sensitive Areas. *In* Sacred Sites, Sacred Places. David L. Carmichael, Jane Hubert, Brian Reeves, and Audhild Schanche, eds. Pp. 89–98. London: Routledge.

In an insightful overview, Carmichael considers "some of the kinds of sites and places considered sacred or sensitive in traditional Mescalero thought" (p. 89). He observes,

> *A fundamental aspect of traditional Mescalero thought is the belief in the sacred character of specific geographical places. Some are important because of the roles they played in the mythic time of Mescalero tribal history. Others are sources of natural resources required in traditional ceremonies. Most appear to be important because they are places of power… (p. 89)*

Carmichael examines the thesis that the Apache believe the sacred character of specific landscape features from which the people draw power is an essential component of Apache self-identity. He explains the Apache idea of power as "a spiritual energy or life force that enables an individual to interact with the forces of the natural and supernatural worlds" (p. 91). His observation, "Belief in the sacred character of specific features of the landscape is an essential component of Mescalero self-identity" (p. 96), imparts to the reader the gist of how Apache people ensoul their physical worlds through their acquisition of power in accord with the structured order communicated through the base metaphor (see Farrer 1991). Carmichael similarly provides a framework for unpacking key aspects of the ideational organization of places of power within the landscape that structure how Apache people obtain the power they need for sustaining balance and harmony.

Carrillo, Charles M., Kurt F. Anschuetz, Richard D. Holmes, and Susan Perlman

1997 Historic Overview of the Project Area. *In* OLE, vol. 1. Context. John C. Acklen, ed. Pp. 119–138. Albuquerque: Public Service Company of New Mexico.

Of interest to the land use history of the VCNP is the report that Tewa populations in the seventeenth and eighteenth centuries used a trail that started in Santa Clara Canyon to reach Navajo and Hispanic communities to the west and north. Apparently used exclusively during the warm season, this upland route allowed travelers to avoid flooded areas along the Río Chama valley (p. 132).

> *The trail left Santa Clara and traveled up the Cañada de Santa Clara to the headwaters of the canyon near Tsichoma Peak. From here the western branch of the route briefly headed in a southwestern direction and then down the Río de los Indios*

to the Río San Antonio. The Río San Antonio is located in the Valle de San Antonio across the northern third of Baca Location Number 1. This creek continues in a western direction toward the western edge of the Jemez Range. At one point a traveler can turn off this western branch and head south toward San Diego Canyon at Jemez. The other branch of the trail continues northward to Río del Oso, passes San Antonio de los Vallecitos, and swings in a western direction toward Polvadera Creek where it continues in a northern direction along the creek until it reaches the Piedra Lumbre Valley. A traveler can branch off the trail at Vallecitos and travel in a northerly direction. (p. 133)

Chama Valley residents apparently ran sheep across the uplands and crossed into the Valle San Antonio locality:

During the summer months herdsmen often lived in small tipi-like structures which they frequently moved as they herded their animals. The structures were built of hides or canvas (Informant F, personal communication 1991). This seasonal movement of livestock ensured that fresh grazing land was available and that valuable agricultural land was undisturbed by livestock. Documentary data and the oral history of villagers in Abiquiu, Cañones, and Youngsville, indicates that the entire area of the OLE line was at one time or another used for grazing, with the exception of the steep canyon walls. (p. 135)

One Chama Valley resident remembers visiting the Valles Caldera to collect native plants:

I recall gathering piñon nuts, broom grass, and other things in the area of the [proposed OLE] power line, especially the Baca Location. Broom grass was a sacred plant found in the Baca Location. (p. 137, citing Informant I, personal communication 1991)

Castañeda, Pedro de

1907 Narrative of the Expedition of Coronado. *In* **Spanish Explorers in the Southwestern United States 1528–1543. Frederick W. Hodge, ed. Pp. 273–387. New York: Charles Scribner's Sons.**

This is a collection of chronicles of early Spanish exploration. Castañeda describes the visit of Captain Francisco de Barrionuevo to the Jémez province in the summer of 1542.

Castetter, Edward F.

1935 Uncultivated Native Plants Used as Sources of Food. Ethnobiological Studies in the American Southwest 1. Albuquerque: University of New Mexico.

Castetter reports on ethnographically documented food uses of many native flora species that are found in or have close relatives in the Valles Caldera. Examples include the Eastern Keres' use of field mint (*Mentha arvensis*), sorrel (*Rumex sp*.), and nightshade (*Solanum* sp.). He notes that the Western Keres eat the common plantain (*Plantago* major). The Zuni eat products from the ponderosa pine (*Pinus ponderosa*), while the Navajo consume the chokecherry (*Prunus* sp.).

Chamberlin, Ralph V.

1909 Some Plant Names of the Ute Indians. American Anthropologist 11:27–40.

Chamberlin identifies the medicinal uses of several species that grow in the VCNP. These plants include yarrow (*Achillea* sp.), buckwheat (*Eriogonum* sp.), and marsh elder (*Iva* sp.).

Chinle Curriculum Center

1995 Diné Bikeyahdóó Ch'il Nanise' Altaas'éí: The Purpose and Uses of Plants of Navajoland. Chinle, AZ: Chinle Unified School District.

The authors discuss several plants that grow in the Valles Caldera area. These species include golden aster (*Cicuta maculata*), which has medicinal properties. Western bracken (*Pteridium aquilinum*) is both a medicine and a fiber source.

Church, Peggy Pond

n.d. Peggy Pond Church Correspondence. Los Alamos, NM: Los Alamos Historical Museum.

Peggy Pond Church was the daughter of Ashley Pond, the founder of the Los Alamos Ranch School. She was a published author with a special interest in the history of the Los Alamos area. This collection contains items of her correspondence with friends and researchers.

In a letter dated March 22, 1979, to "Art," Church cites a letter, from Richard Boyd, Albuquerque, to Homer Pickens, that Boyd's widow showed her. A road "made by the Army when the Missouri volunteers were stationed at Fort Marcy" ran up Pajarito Canyon to a point below the Llano Largo, "alongside Water Canyon on the mesa top and on over the mountain from Water Canyon site." This road was the route used by the soldiers hauling hay for draft animals at Fort Marcy. The Army abandoned the road, however, because a four-mule team hauling hay would eat most of the hay on the way to Santa Fe. Then, according to Boyd, the U.S. Army established a hay camp "west of Water Canyon on the rim about a mile [1.6 km] from the old Ted Mather cabin. You can still find evidence of this camp (1964)…" (LAHM-M1991–31–1–39, box 29, folder 5). Church questions her correspondent about "the old Ted Mather cabin," whose location is uncertain.

The Church Papers also include two texts identified as being in the records of the Adjutant General (National Archives, Washington, DC). The first is a letter from Robert Nesbit and Hiram Parker, dated July 1851, to Colonel Munroe, Commander, 9th Military Detachment. Nesbit and Parker held the contract to supply hay to the quartermaster. They bought a train of mule wagons from a Mr. Tully, and were engaged in delivering hay from "from what is known as the Grande Bioh [*sic*] some forty miles [64 km] from here." The "Grande Bioh" was the only place where natural hay could be obtained, due to the dryness of the season. On the night of July 2, 1851, a large band of Navajos attacked their "substantial" log house and corral and stole over 100 horses and mules.

A letter dated July 17, 1851, from B. H. Robertson to 1st Lieutenant L. McLaws states that 11 Jémez Indians pursued the Navajos. The Jémez party killed 2 Navajos on the border of Navajo country and captured four mules. He describes the ranch [of Nesbit and Parker] as "built of bottom wood logs…the corral is constructed of large, green cottonwood logs…" "The entire number of animals stolen was forty-nine…" (LAHM-M1991–31–1–15, box 28, folder 8).

Church also compiled a set of notes that she labeled "Ramón Vigil Grant—Roads Etc." In this she repeats the information derived from the Boyd letter about the hay road and camp (LAHM-M1991–31–1–16, box 28, folder 6). 3(See also entry for Parkhurst n.d.)

Cleland, Robert Glass

1950 This Reckless Breed of Men: The Trappers and Fur Traders of the Southwest. Albuquerque: University of New Mexico Press.

In this study of the fur trade in the Southwest, Cleland mentions the death of Luis María Baca. On June 6, 1827, Governor Manuel Armijo reported that he had confiscated a valuable collection of furs belonging to Ewing Young. Armijo invoked an 1824 statute that prohibited citizens of the United States from trapping furs in Mexican territory. According to Armijo, Luis María Baca had hidden Young's furs in Baca's house; Baca shot first, and was shot and killed by soldiers of an auxiliary troop (p. 219).

Colton, Harold S.

1974 Hopi Ethnobotany and Archaeological History. New York: Garland Publishing.

Colton reports that Hopi use Mountain mahogany (*Cercocarpus montanus*), Gambel oak (*Quercus gambelii*), and Narrowleaf cottonwood (*Populus angustifolia*) for making tools. They eat western wallflower (*Erysimum capitatum*), sunflower (*Helianthus* sp.), and four-o'clock (*Mirabilis* sp.). Gilia (*Ipomopsis* sp.) is a dye. Each of these plants grows in the VCNP.

Colton, Mary-Russell Ferrell

1965 Hopi Dyes. Flagstaff: Museum of Northern Arizona.

Hopi dye plants found in the VCNP include Mountain mahogany (*Cercocarpus montanus*) and piñon (*Pinus edulis*).

Cook, Sarah Louise

1930 The Ethnobotany of the Jemez Indians. Masters thesis. University of New Mexico, Albuquerque.

Cook identifies 57 native plants, plus lichen, moss and algae, used by the people of Jémez Pueblo. She provides cursory information on how the people use each taxon.

Cook's inventory includes a variety of plants present in the VCNP. Examples include bearberry (*Arctostaphylos uva ursi*), ragweed (*Hymenopappus* sp.), Rocky Mountain juniper

(*Juniperus scopulorum*), New Mexico Locust (*Robinia neomexicana*), and ragwort (*Senecio* sp.), which produce edible products. Indian paintbrush (*Castilleja* sp.) keeps chili seeds from spoiling. Aster (*Machaeranthera* sp.) has medicinal properties, while junegrass (*Koeleria macrantha*) makes a broom and split geranium epidermis (*Geranium* sp.) yields a thread for sewing moccasins.

Coolidge, Dane, and Mary Roberts Coolidge

1930 The Navajo Indians. Boston, MA: Houghton Mifflin.

The authors report the appearance (but not the location) of the Navajo Holy Mountain of the East, as described by Long Mustache of Klagetoh in his account of the separation of the Diné from their Apache relatives:

> *In this large country between the Four Holy Mountains the Dineh´ lived, but the different branches of the tribe were always quarreling about what territory they should occupy. At that time, over near Zith-nah-jinni, the Holy Mountain of the East, there was another called Tramped-Down Mountain because it was flat on top. It was full of bushes bearing berries and nuts but Zith-nah-jinni was smooth and barren-looking, being covered with grass. There were horses there, and deer and other game… (p. 8)*

Corlett, Charles H.

1974 Cowboy Pete. Santa Fe, NM: Sunstone Press.

Corlett, a career Army officer who rose to the rank of Major General, was Frank Bond's son-in-law and was briefly the manager of the Baca Location when Bond leased it from Redondo Development Company.

> *Because of the severe winter of 1919 many cattle and sheep died of starvation. Frank Bond was beside himself with worry and nearly out of his mind. John Davenport, overworked and somewhat discouraged as a result of the dreary winter, did not object when Bond made me manager, but became my loyal and valued assistant. I resigned my commission as lieutenant colonel (temporary) in the Army of the United States and became a stockman…After about four months at La Jara, the headquarters of the Baca, Amy and I moved down into the valley and occupied my mother's house. (pp. 46–47)*

Curtis, Edward S.

1926 The North American Indian: Being a Series of Volumes Picturing and Describing the Indians of the United States, the Dominion of Canada, and Alaska, vol. 17. The Tewa, the Zuni, Mythology. Norwood, MA: Plimpton Press.

Curtis is often criticized today for staging many of his artistically acclaimed photographs. In contrast, the ethnographic observations contained in the volumes are often overlooked.

In this volume Curtis provides information that Tewa communities far from Sandia Mountain, such as San Ildefonso, apparently define physiographic analogues within their immediate home territories for purposes of most regular pilgrimages and prayers.

Curtis retells a San Ildefonso story about the Warrior Twins who now live on Sandia Mountain and protect the communities they watch over. The story, "The War-Gods Destroy Tsimayó" (p. 172), is of interest to the VCNP Land-Use History project because of its references to the Warrior Twins, giants, mountains, caves, and volcanism.

The Warrior Twins drove away to Shúma the giant that had been plaguing the people of San Ildefonso Pueblo. Shúma is the high volcanic mesa south of the village at the beginning of the Río Grande Gorge.

> *There they destroyed him, and smoke was belched forth from Shúma, from Tsimayó [Chimayo mountain northeast of the village], from a large cave in a northern Mountain, and from the cave in Tú"yo. (p. 172)*

Curtis adds that all these smoke-belching features are of volcanic origin. He infers that the tale points to the Tewas' presence in the region at the time these craters were active.

The story is also useful because it reveals the traditional understanding among the Tewa that lava rock was once a liquid that flowed from the earth. According to Curtis' informants, the Warrior Twins lived directly among the people. Giants terrorized the people, who sought the Warrior Twins' assistance. The warriors chased the giants and fought them. When they finally killed the evil beings, the people saw nearby volcanic peaks and their caves belch smoke, if not also lava and fire, which hardened the earth.

Cushing, Frank Hamilton

1896 Outlines of Zuni Creation Myths. *In* **Thirteenth Annual Report of the Bureau of Ethnology to the Secretary of the Smithsonian Institution. Pp. 321–447. Washington, DC: U.S. Government Printing Office.**

In this classic ethnography, Cushing provides Zuni Pueblo understandings of volcanism through the following poetic account:

That the earth be made safer for men, and more stable,
Let us shelter the land where our children be resting,
Yea! The depths and the valleys shall be sheltered
By the shade of our cloud-shield! Let us lay to its circle
Our firebolts of thunder, aimed to all the four regions,
Then smite with our arrows of lightning from under
Lo! Fire shall belch outward and burn the world over,
And floods of hot water shall seethe swift before it!
Lo! Smoke of earth—stenches shall blacken the daylight
And deaden the senses of them else escaping
And lesson the number of fierce preying monsters!
That the earth be made safer for men, and more stable. (p. 389)

Cushing continues the account in narrative:

Dread was the din and stir. The heights staggered and the mountains reeled, the plains boomed and cracked under the floods and fires, and the high hollow places, hugged of men and the creatures, were black and awful, so that these grew crazed with panic and strove alike to escape or to hide more deeply. But ere-while they grew deafened and deadened, forgetful and asleep! A tree lighted of lightning burns not long! Presently thick rain fell, quenching the fires; and waters washed the face of the world, cutting deep trails from the heights downward, and scattering abroad the wrecks and corpses of stricken things and beings, or burying them deeply. Lo! they are seen in the mountains to this day; and in the trails of those fierce waters cool rivers now run, and where monsters perished lime of their bones (áluwe—calcareous nodules in malpais or volcanic tuff) we find, and use in food stuff! Gigantic were they, for their forms little and great were often burned or shriveled and contorted into stone. See are these, also, along the depths of the world. Where they huddled together and were blasted thus, their blood gushed forth and flowed deeply, here in rivers, there in floods; but it was charred and blistered and blackened by the fires, into the black rocks of the lower mesas (ápkwina, lava or malpais). There were vast plains of dust, ashes and cinders, reddened as is the mud of a hearth-place. There were great banks of clay and soil burned to hardness—as clay is when baked in the kiln-mound,—blackened, bleached, or stained yellow, gray, red, or white, streaked and banded, bended or twisted. Worn and broken by the heavings of the under-world and by the waters and breaths of the ages, they are the mountain-terraces of the Earth-mother, "dividing country from country." Yet many were the places behind and between these—dark canyons, deep valleys, sunken plains—unharmed by the fires, where they swerved or rolled higher—as, close to the trace of a forest-fire, green grow trees and grasses, and even flowers continue to bloom. Therein, and in the land sheltered by the shield, tarried the people, awakened, as from fearful dreams. Dry and more stable was the world now, less fearsome its long places; since, changed to rock were so many monsters of prey (some shriveled to the size of insects; made precious as amulets for the hunter and warrior, as told in other talks of our ancient speech). (pp. 389–390)

Cushing, Frank Hamilton

1920 Zuni Breadstuff. Indian Notes and Monographs Vol. 8. New York: Museum of the American Indian.

Cushing presents a perspective on Zuni concepts of volcanism that restate the information in his "Outlines of Zuni Creation Myths" (see entry for Cushing 1896) in this classic monograph of Zuni ethnobotany:

Then said the twin brothers: "Men, our children are poorer than the beasts, their enemies; for each creature has a special gift of strength or sagacity, while to men has been given only the power of guessing. Nor would we that our children be webfooted like the beings that live over the waters and damp places."

Therefore, they sent all men and harmless beings to a place of security; then laid their water-shield on the ground. Upon it they placed four thunderbolts, one pointing north, another west, another south, and the other eastward. When all was ready they let fly the thunderbolts. Instantly the world was covered with lurid fire and shaken with rolling thunders, as is a forest today burned and blasted where the lightning

has fallen. Thus as the clay of vessels is burned to rock, and the mud of the hearth crackled and reddened by fire, so the earth was mottled and crackled and hardened where now we see mountains and masses of rock. Many of the great monsters and prey-beings were changed in a twinkling to enduring rock or shriveled into twisted idols which the hunter and priest-warrior know best how to prize. Behold! their forms along every mountainside and ravine and in the far western valleys and plains still endure the tracks of the fathers of men and beings, the children of earth. Yet some of the beings of prey were spared, that the world might not become over-filled with life and starvation follow, and that men might breathe of their spirits and be inspired with the hearts of warriors and hunters. (pp. 32–33)

Dondanville, R. F.

1971 The Hydrothermal Geology of the Valles Caldera, Jemez Mountains, New Mexico. Open file consultant report. Santa Rosa, CA: Union Oil Co.

This 36-page report describes the first geothermal well drilled in the Valles Caldera (1960). Intended as an oil test well, the Westates-Bond 1 struck superheated water (about 392 ºF [200 ºC]) at shallow depths. This discovery led to a testing program that was finally abandoned in 1982 when the thermal capacity proved smaller than expected.

Douglass, William Boone

1917 Notes on the Shrines of the Tewa and Other Pueblo Indians of New Mexico. ***In*** **Proceedings of the Nineteenth International Congress of Americanists. Frederick W. Hodge, ed. Pp. 344–378. Washington, DC: International Congress of Americanists.**

Douglass identifies the following locations in his summary map (Plate I): 91—Río Jémez, 105—Rito de las Indias, 107—Río San Antonio, 106—Shrine of La Sierra de la Bola (a.k.a. Cerro Redondo), 108—Sulphur Creek and Hot Springs, 207—Rito Jaramillo, 208—La Jara Creek, and 209—Old Fort. He provides a comprehensive description (pp. 357–362), two sketch maps (figs. 7 and 8), and two photographs of La Sierra de la Bola shrine (figs. 9 and 10).

Douglass reports that people from the pueblos of Jémez, Zía, Santo Domingo, Sandia, Cochití, San Ildefonso, Santa Clara, and San Juan are known to visit the shrine "every year during August" (p. 358). He describes finding a broken metate at the shrine during his visit and tells of a local Hispanic resident who found a heavy cast silver ornament (fig. 6), which apparently resembles styles made at the end of the seventeenth century, buried within the feature.

Douglass also provides comprehensive description and illustration of the shrine (figs. 1–5) located on the top of *Tsikumu* (a.k.a. Cerro Chicoma), which is just outside the northeast corner of the Baca Location (pp. 344–357). Douglass states that the directional orientation of the six trails (*awu-mu-waya* ["rain-roads"]) radiating from northeast to south from the shrine's center, suggest pilgrimages by the Pueblos of Taos, San Juan, Santa Clara, San Ildefonso, Jémez, and Cochití. The final opening, which leaves the shrine from the northwest, relates to Navajo visits to this holy place.

Douglass, William Boone, and Hugh M. Neighbour

n.d. Restorative Survey of the Baca Location No. 1. Microfiche on file: Santa Fe, NM: State Office, Bureau of Land Management.

U.S. Surveyor William Boone Douglass and transitman Hugh M. Neighbour conducted an examination survey of the Baca Location between September 7 and October 10, 1911, and then carried out a restorative survey between July 29 and October 10, 1912. Although their assignment was to find and reestablish the original surveyors' monuments (see entry for Sawyer and McBroom 1876), they determined that the Location contained 90,426 acres (36,593 ha)–8,844 acres (3,579 ha) less than found by the original survey. They could not find many of the original corners; they also noted that the first surveyors had marked many of the grant boundary lines by blazing trees.

Douglass' concluding "General Description" states:

The Baca Location No. 1 lies in the heart of the Jemez Mountains. In the main, it comprises three intermountain valleys, namely: Valle Grande, Valle Santa Rosa and Valle San Antonio. The mountain ridges towering above the valleys, from one to two thousand feet [305–915 m], wall in a quadrangle approximately twelve miles square [31 sq km], and roughly define the boundaries of the grant. The interspace is by no means level, but broken by lesser hills, is impassable for wagons, except along the

favored routes shown on the plat. Four important streams rise in this area. The Río Jemez drains the Valle Grande. The Río San Antonio with its tributaries, La Jara and Indian Creeks drain the other two valleys. At the South East corner of the grant, rises the Rito de los Frijoles; near the NE. Cor. Rises the Santa Clara Creek. All streams are tributaries of the Río Grande.

The soil of the valleys is a rich black loam, which may be classed as first rate. At many points in the higher lands the soil is almost as good. This coupled with a copious supply of moisture, produces a heavy growth of grass, making the grant ideal for grazing purposes. The lands, perhaps, have other agricultural values, especially that in the lower valleys, but the high altitude, a mean of about 9,000 ft. [2,744 m] above sea level, tends to prevent the maturing of crops.

The ridges, densely timbered with fir and spruce, and considerable pine, give good timber values.

The mineral values of the grant are unknown, with the exception of valuable mineral springs of sulphur, magnesia, alum and iron on the west boundary of the grant. Just west of the line is a mineral resort, known as Sulphur Springs. The outcropping stone indicated that gold, silver and copper may be found in these hills.

The grant is without permanent habitation. During the summer months, the owners maintain a cattle ranch, and near the SE. Cor. is a dairy ranch. The members of both ranches leave before winter sets in. In the valleys to the south and West without the bounds of the grant, permanent settlements are found, where the lands appear to be cultivated with a profit.

The grant may be reached from the following railway points: Buckman and Espanola on the D. and R. G. Ry., and Domingo and Bernalillo on the A. T. and S. F. Ry. The Espanola and Bernalillo routes are the most feasible for a wagon. (*p. 83)*

Dozier, Edward P.

1970 Pueblo Indians of North America. New York: Holt, Rinehart and Winston, Inc.

Dozier, a Santa Clara Pueblo native and trained anthropologist, provides an invaluable overview of Pueblo society, social organization, religion, history, and subsistence. Because he explains the historical record from the Pueblo point of view, his account makes it possible to understand the Pueblo reaction to and accommodation of the Spanish colonial invasion that began in the sixteenth century and led to the creation of contemporary New Mexican society.

Dozier discusses contact, the seventeenth century in New Mexico, the Pueblo Revolt, and its aftermath.

Dunmire, William W., and Gail D. Tierney

1995 Wild Plants of the Pueblo Province: Exploring Ancient and Enduring Uses. Santa Fe: Museum of New Mexico Press.

This volume is an invaluable summary of the ethnobotany of the 19 Pueblos (Ácoma, Cochití, Isleta, Jémez, Laguna, Nambé, Picurís, Pojoaque, San Felipe, Sandia, San Ildefonso, San Juan, Santa Ana, Santa Clara, Santo Domingo, Taos, Tesuque, Zía, and Zuni) of New Mexico. This study is an essential resource for evaluating the cultural significance of native plants in the VCNP.

The authors provide accessible discussions of the region's natural environmental diversity, the Pueblos' history and culture from pre-Columbian to contemporary times, the recognition of native flora as living cultural artifacts, and informative ethnobotanical overviews of commonly used tree, shrub, grass, grasslike, and herbaceous plant species.

Dunmire, William W., and Gail D. Tierney

1997 Wild Plants and Native Peoples of the Four Corners. Santa Fe: Museum of New Mexico Press.

As a complementary volume to their study, *Wild Plants of the Pueblo Province: Exploring Ancient and Enduring Uses* (see entry for Dunmire and Tierney 1995), the authors provide excellent introductions to the ethnobotany of the pre-Columbian Pueblo, and the Historic period Hopi, Navajo, Ute Mountain Ute, and Jicarilla peoples of the Four Corners region. They again provide readable, informative discussions of the region's natural environment, the Pueblos' pre-Columbian history, the recognition of native flora as living cultural artifacts, and informative ethnobotanical overviews of commonly used tree, shrub, grass, and herbaceous plant species.

Dutton, Bertha P.

1938 The Jemez Mountain Region. El Palacio 44:141–142.

In this travel guide, Dutton describes a trip from Coronado State Monument on Highway 44 to San Ysidro, then on Highway 12 through Jémez Pueblo and north and east into the Valle Grande. Boyd's Ranch is just outside the southeastern rim of the caldera. Dutton describes the caldera, formed by volcanic eruptions, as eighteen miles [29 km] long and twelve miles [19 km] across. She says that several permanent watercourses originate in the valley, and notes that "during the past century, when the U.S. Army had its headquarters in Santa Fe, they maintained a wagon road to El Valle Grande and there cut the hay necessary for their animal consumption" (p. 142).

Dutton, Bertha P.

1952 Highlights of the Jemez Region…With Notes on What To See and What To Do There... El Palacio 59:131–156.

This entry updates Dutton's (1938) article. Dutton now names the Triple H Ranch just outside the southeastern rim of the caldera. She also states that "hundreds of sheep and cattle are grazed" in the Valle Grande. Otherwise the entry has not changed from that of 1938.

Dutton describes the Valle Grande:

> *Past the Triple H Ranch a short distance, one skirts the southeastern rim of* **El Valle Grande***, also spoken of as the great Jémez Crater, where, according to some geologists, late Tertiary volcanic flows and tuffs were belched forth from the earth to extend down the slopes in every direction, in places thousands of feet thick. The eruption, or eruptions, caused a great basin or caldera to be formed, eighteen miles [29 km] in length and twelve miles [19 km] across. Several small streams derive their source from the waters which accumulate there. Stately trees outline the rim, and tall, luxuriant grasses grow in the basin, where hundreds of sheep and cattle are grazed. During the past century the U.S. Army, when it had its headquarters in Santa Fe, maintained a wagon road to El Valle Grande, and there cut the hay necessary for their animal consumption. (pp. 154–155; emphasis in the original]*

Elsewhere, Dutton describes the summits that bound the Valle Grande. Notably, she mistakenly identifies Pelado and Redondo as separate peaks. (Dutton seems to follow Harrington [1916:125] and Ellis [1974:166] in equating Pelado with Tsikumu [a.k.a. Cerro Chicoma], the Tewa Mountain of the West.)

> *Conspicuous are the rounded domes of* **Pelado, Redondo***, and other high peaks of the Jémez Mountains, ranging from 10,000 to 11,266 feet [3,049–3,435 m] in elevation. They are bald on the south sides and timbered on the north. (p. 154; emphasis in the original)*

Edleman, Sandra A.

1979 San Ildefonso Pueblo. ***In*** **Southwest. Alfonso Ortiz, ed. Pp. 278–295. Vol. 9 of Handbook of North American Indians, William Sturtevant, ed. Washington, DC: Smithsonian Institution.**

This article provides a concise overview of the anthropology and history of San Ildefonso Pueblo.

Edleman, Sandra A., and Alfonso Ortiz

1979 Tesuque Pueblo. ***In*** **Southwest. Alfonso Ortiz, ed. Pp. 330–335. Vol. 9 of Handbook of North American Indians, William Sturtevant, ed. Washington, DC: Smithsonian Institution.**

This article provides a concise overview of the anthropology and history of Tesuque Pueblo.

Ellis, Florence Hawley

1956 Anthropological Evidence Supporting the Land Claim of the Pueblos of Zia, Santa Ana, and Jemez. Santa Fe: Laboratory of Anthropology, Museum of New Mexico. Unpublished MS.

Ellis provides cultural-historical evidence that the Pueblos of Zía, Santa Ana, and Jémez traditionally occupied geographic territories that far exceeded their present-day land holdings. With respect to the Valles Caldera locality, Ellis writes,

> *The area around Mt. Pelado [a.k.a. Cerro Redondo], for example, formerly was a headquarters district for herding; there are evidences of old camps and corrals with potsherds. The area likewise was considered sacred for some distance around*

Mt. Pelado because on the peak was one of their most sacred shrines. The Baca location, nearby, was a shrine, a center of eagle and big game hunting, and later an area for herding horses. (p. 56)

More generally, Ellis adds,

There were specific places, miles from the present pueblos, from which to collect paint materials, red, blue, black, and yellow, as well as petrified wood, obsidian, basalt, sandstone, volcanic tuff, and the many types of stone and minerals used in making implements and pottery. There were springs, water holes, washes dammed with lines of stone to produce garden patch areas. And finally there were the many sacred spots, shrines to which groups must go for ceremonies especially pertinent to them, or where certain persons must go periodically to deposit prayer offerings. Many of these were springs, because water is especially sacred to these people. Some were caves, some prominent mesa-hills. (pp. 56–57)

Deer were hunted in the high country north and west of the pueblos; antelope were hunted in the plains east of Mesa Prieta; shrines involved with the ceremonies necessary for such activities were caves and springs within the areas. On such hunts the three pueblos customarily went together, each taking its turn at directing the hunting and conducting the requisite ceremonies in a cave in that area still marked with an eagle on its ceiling…When the Pueblos acquired flocks and herds, their officers exercised similar care in directing where they should be pastured, so that the grass would not be eaten down too far in any one spot. Their big hunting and grazing areas bear witness to this former land use in that large and small geographic features were given names, which people know still, so that districts within them might be designated by the war captains as hunting or herding spots for specific periods. (pp. 57–58)

Ellis, Florence Hawley

1964 A Reconstruction of the Basic Jemez Pattern of Social Organization, with Comparisons to Other Tanoan Social Structures. Publications in Anthropology 11. Albuquerque: University of New Mexico Press.

Ellis' study is concerned with what the social structure of the modern Pueblos can contribute to the problem of evaluating the relation between the archaeologically visible settlements in pre-Columbian culture areas and the contemporary communities. In her review of the organization of Jémez Pueblo societies and cults, she provides several useful observations for assessing the ethnographic significance of the Valles Caldera landscape.

The Underworld Chiefs Society, consisting ideally of 12 members, is a highly secretive organization that relies heavily on seclusion.

Their name refers to their relationships with the underworld. They use underground chambers, such as hidden caves beneath waterfalls or high in the mountains, for initiations, and shrines, although their meetings are held in the home of their chief in the village. Springs or lagoons, the home of their patron, the plumed serpent, also are used as places of initiation, for the society members are supposed to associate with the supernaturals of the underworld in springs and caves and to prophesy the future for the pueblo, on the basis of what they have seen below the water or on the walls or floors of caves, or of what they have heard in such underground contacts. (p. 32)

Ellis, Florence Hawley

1974 Navajo Indians I: An Anthropological Study of the Navajo Indians. New York: Garland Publishing.

In her discussion of Navajo holy places and shrines, Ellis states, "Mt. Pelado, highest peak in the Jemez range, is visited by Zia, Jemez, Santa Ana, San Felipe, Santo Domingo, Cochiti, and the Tewa Pueblos north of Santa Fe; all leave offerings here" (p. 157). She adds that some of the Pueblos' corpus mountains of cardinal direction, such as Mount Pelado,

claim one or the other of these mountains as boundary markers, and in some cases it is apparent that such a high peak, like any other outstanding natural feature, could well serve as a marker between two tribal territories or even as a corner indicating where more than two came together. But it is also apparent that all the tribes which deposit offerings on the top of such a mountain cannot possibly claim the <u>entire</u> mountain. A tribe might own the side closest to the rest of its own domain, or it might not lay claim to any more of the physical body of the mountain but only to a recognized right to deposit offerings upon it, that right presumably having come into being through permission of other users of the peak or simply through lack of prohibition of such use by other users. (pp. 157–158; emphasis in the original)

The Navajo claim that Mount Pelado, as well as Mount Taylor and the San Francisco Mountains, is holy to their people. Ellis observes that this belief apparently is not native to Navajo belief; rather, she states, "It definitely is a Pueblo concept and the presence of the concept among the Navajo and Jicarilla Apache presumably is the result of borrowing from the pueblos" (p. 158).

Ellis, Florence Hawley

1994 Pueblo Religious Patterns, Especially Types of Shrines and Areas for Collecting Herbs and Other Religious Necessities. Andrea Hawley Ellis, ed. *In* **Artifacts, Shrines, and Pueblos: Papers in Honor of Gordon Page. Meliha S. Duran and David T. Kirkpatrick, eds. Pp. 101–112. Archaeological Society of New Mexico 20. Albuquerque: Archaeological Society of New Mexico.**

This paper is a reiteration of a classified document bearing the same title that Florence Hawley Ellis and Andrea Ellis Dodge submitted at court on behalf of the Public Service Company and the Bureau of Indian Affairs. The published essay is a modified version of the introduction to a court document concerning specific areas identified by the Pueblos of San Juan, San Ildefonso, and Santa Clara that should be avoided during the construction of a proposed high-voltage power line across the Jémez Mountains. This work is important because it provides a variety of contextual information for understanding Pueblo statements regarding the sanctity of places on their ethnographic landscapes that community members identify as possessing special, fragile qualities.

The article is useful for its review of the topic of religious privacy. Ellis identifies the general Pueblo belief "that, if their religious concepts and rituals are divulged to outsiders, those facets lose power" (p. 101). In her discussion of the basic tenets of Pueblo religion, Ellis further explains the difficult situation posed when persons from outside a cultural community ask for explanations of religious belief and faith:

> *the old Pueblo concept contends that if one freely "gives away his religion" (lets it be known) to outsiders, it no longer holds as much strength. They recognize that, as any secret ceases to hold its mystery, it also becomes emasculated, losing its power, and thus becomes useless. (p. 103)*

In her discussion of shrines and other special power points on the Pueblos' ethnographic landscapes, Ellis offers several other observations that contribute greatly to the article's usefulness:

> *Shrines clearly are central to the practice of Pueblo religion, whether located within the village or at a distance. (p. 104)*
>
> *Communication with Earth Mothers and other types of…[supernatural beings]…is primarily through shrines. They are locations where the spirits are believed to be at hand, or possibly live, thus a shrine area may be small like a sipapu in a kiva or quite large. (p. 103)*
>
> *Shrines that have fallen out of present use remain sacred and revered, since each shrine is like a telephone receiver, whose line communicates with the supernatural switchboard even when rarely employed. Each shrine contains a sacred power to be respected and never desecrated. (p. 104)*

Ellis notes that desecration of shrines and other places of great cultural significance to Pueblo communities can occur even when a proposed land-altering activity is underlain by the best intentions. Modifications to improve a locality, such as the cementing of a spring to enhance the flow of water, might represent a profane contamination of a sacred locality that renders a place—and its resources—"entirely unusable in a ritual context" (p. 110).

Importantly, Ellis adds that within the Pueblos' views of their worlds, the physical visitation of places held with reverence on their ethnographic landscapes is not a precondition for maintaining the special, reverent quality of a place. She reports that shrines "may be directly addressed from afar by reverently placing ones [*sic*] thoughts in the location of the distant shrine or by visiting its…substitute" (p. 105) located closer to home or in a less public location. Moreover, buffer areas that are "necessarily and consistently" (p. 110) free from trespass are required to maintain the sanctity of power points on the Pueblos' ethnographic landscapes.

Elmore, Francis H.

1944 Ethnobotany of the Navajo. Monographs 8. Santa Fe, NM: School of American Research.

Elmore documents several plants found in the Valles Caldera area that have economic, social or cultural value to the Navajo. Examples include sorrel (*Rumex* sp.) and willow (*Salix* sp.) as foods, blue flag (*Iris missouriensis*) as a dye, piñon (*Pinus edulis*) and quaking aspen (*Populus tremuloides*) as fuelwoods, and woods rose (*Rosa woodsii*) and nightshade (*Solanum ptycanthum*) as medicines.

Farrer, Claire R.

1991 Living Life's Circle: Mescalero Apache Cosmovision. Albuquerque: University of New Mexico Press.

This volume gives the reader a remarkable and highly useful discussion of Mescalero Apache cosmology. Farrer shows how a seemingly simple metaphor—a quartered circle—represents the richly textured and multilayered idea of life in balance (pp. 26–32, 60–61). Farrer maintains that the base metaphor provides "an ever and predictable order that in its very existence speaks eloquently of the harmonious universe of Creation" (p. 69). Four fundamental themes—the number four, the complementarity inherent in the relationship between sound and silence, the dialectical correlation intrinsic in directionality, and the ideal of maintaining balance and harmony throughout the cosmos—help explicate the structure of Apache world view and the organization of people's behavior in their day-to-day lives. Farrer suggests further that to understand the genesis of the base metaphor in Mescalero Apache ideation, and the consequent value that the people place on this idea, illuminates aspects of highly patterned behavior among Athapaskan groups generally.

Farrer also includes an informative summary of Mescalero Apache history in an appendix.

Farrer, Claire R.

1992 "…By You They Will Know the Directions to Guide Them": Stars and Mescalero Apaches. *In* **Earth and Sky: Visions of the Cosmos in Native American Folklore. Ray A. Williamson and Claire R. Farrer, eds. Pp. 67–74. Albuquerque: University of New Mexico Press.**

Farrer uses this short, poetic article on Mescalero Apache ethnoastronomy to examine some of the potent ways in which the earth and sky are linked and how the people perceive and assign meanings in the patterns of the stars to structure their daily thought and to organize their activities. In so doing, Farrer provides the reader with additional examples of the power of the base metaphor (a seemingly simple quartered circle motif) in understanding key aspects of Apache cultural patterning.

Ferguson, T. J.

2002 Western Pueblos and the Petroglyph National Monument: A Preliminary Assessment of the Cultural Landscapes of Ácoma, Laguna, Zuni, and Hopi. *In* **"That Place People Talk About": The Petroglyph National Monument Ethnographic Landscape Report, by Kurt F. Anschuetz, T. J. Ferguson, Harris Francis, Klara B. Kelley, and Cherie L. Scheick. Pp. 4.1–4.24. Community and Cultural Landscape Contribution VIII. Prepared for: National Park Service, Petroglyph National Monument, Albuquerque, New Mexico, NPS Contract No. 14431CX712098003 (RGF 109B). Santa Fe, NM: Río Grande Foundation for Communities and Cultural Landscapes.**

Ferguson reviews some of the landscape features important to the Ácoma, Hopi, Laguna, and Zuni. He offers valuable discussion about the cultural context and importance of shrines, volcanoes and lava, trails, plants, animals, and vistas. He also addresses community concerns about the protection and management of these features.

Ferguson, T. J., and E. Richard Hart

1985 A Zuni Atlas. Norman: University of Oklahoma Press.

Ferguson and Hart compiled this atlas from anthropological and historical research undertaken for litigation of Zuni land claims. The atlas documents 234 land use sites, including shrines, ancestral villages, and resource collection areas. Most but not all occur within the Zuni claim area, which extends from Mount Taylor in the east to the San Francisco Peaks in the west, and from the Río Puerco of the East in the north to the Mogollon uplands in the south.

Three maps show four Zuni sites within or near the Valles Caldera. These are Map 15—Traditional Zuni Hunting Area (Site 31), Map 16—Traditional Zuni Plant Collection Area (Sites 31 and 93), and Map 18—Traditional Zuni Religious Use Area (sites 31, 48, 93, and 94). (Note: Additional Zuni cultural sites are on the east side of the Jémez Mountains where they are in proximity to the Río Grande Valley.

Site 31 (*He:mushina Yala:we*) is in the Jémez Mountains at the southwest margin of the Valles Caldera. The Zuni gathered medicinal herbs, collected white powder medicine, hunted, and obtained materials used in kiva initiations at this location. In addition, *He:mushina Yala:we* is a place name mentioned in medicine prayers (p. 127).

Site 48 (*K'ya:k'yałna' K'ya:kwayinna*) is near the southwest rim of the Valles Caldera. The Zuni traditionally collected mud and silt at this place, which also serves as a shrine area (p. 127).

Site 93 (*Dahna K'ohanna*) is near San Ysidro and represents a location where the Zuni harvested Apache plume and mountain mahogany and collected sand and clays. The Zuni also associate *Dahna K'ohanna* with the Nadir Kiva, with the Longhorn visiting this place annually (p. 129).

Site 94 (*Ts'iya'a:wa*) is along the southern edge of the Jémez Mountain range. The people visit this location as a ritual area for prayer offerings (p. 129).

Fewkes, J. Walter

1896 A Contribution to Ethnobotany. American Anthropologist 9:14–21.

Fewkes states that the Hopi eat several genera of milkweed (*Asclepias* sp. and *Astragalus* sp.), horsetail (*Equisetum* sp.), and currant (*Ribes cereum*) found growing in the VCNP. In addition, he notes that the Navajo use *Androsace* sp. for medicine.

Ford, Karen Cowan

1975 *Las Yerbas de la Gente***: A Study of Hispano-American Medicinal Plants. Anthropological Papers 50. Ann Arbor, MI: Museum of Anthropology, University of Michigan.**

This exhaustive compendium of 862 plants provides a baseline inventory of Hispanic medicinal folklore. Included are 62 genera that grow in the VCNP.

Ford, Richard I.

1992 An Ecological Analysis Involving the Population of San Juan Pueblo. New York: Garland Publishing.

This classic study in Pueblo ethnobotany examines the web of interrelationships that the San Juan Tewa maintain with the broad suite of domestic cultigens and native plants that they recognize as possessing economic, social, and cultural value. Plants growing in the VCNP that the San Juan use exclusively for food include parsley (*Cymopterus* sp.), peavine (*Lathyrus* sp.), mallow (*Malva* sp.), and penstemon (*Penstemon* sp.). The inventory of plants with varied food and medicinal uses include native onion (*Allium* sp.), bearberry (*Arctostaphylos uva*), milkweed (*Asclepias* sp.), and goosefoot (*Chenopodium* sp.). Other plants with medicinal properties include thistle (*Cirsium* sp.), buckweat (*Eriogonum* sp.), many-flowered stickseed (*Hackelia floribunda*), native mint (*Mentha* sp.), ponderosa pine (*Pinus ponderosa*), Gambel oak (*Quercus gambelii*), native rose (*Rosa* sp.), and several dock and sorrel species (*Rumex* sp.). Ford also reports the San Juan Tewa use of New Mexico locust (*Robinia neomexicana*) for making wood tools and use of quaking aspen (*Populus tremuloides*) for construction and fuel.

Ford, Richard I., Albert H. Schroeder, and Stewart L. Peckham

1972 Three Perspectives on Puebloan Prehistory. *In* **New Perspectives on the Pueblos. Alfonso Ortiz, ed. Pp. 19–39. Albuquerque: University of New Mexico Press.**

The authors use archaeological evidence to argue that Towa peoples ancestral to Jémez Pueblo first "moved into the mountainous Jemez country" (p. 25) from the Gallina region by A.D. 1250. They state, "Jemez B/W pottery is a direct descendant of the carbon painted Gallina B/W pottery, and where lithic artifacts and similarities in burial practice further support the connection" (p. 25).

Fowler, Catherine S.

1986 Subsistence. *In* Great Basin. Warren L. D'azevedo, ed. Pp. 64–97. Vol. 11 of Handbook of North American Indians, William Sturtevant, ed. Washington, DC: Smithsonian Institution.

Fowler reports that the Ute use Woods rose (*Rosa woodsii*), which grows in the VCNP, as a medicine.

Friedlander, Eva, and Pamela J. Pinyan

1980 Indian Use of the Santa Fe National Forest: A Determination From Ethnographic Sources. Ethnohistorical Report Series 1. Albuquerque, NM: Center for Anthropological Studies.

This small publication provides an introductory overview of documentary sources discussing the use of the Santa Fe National Forest by the culturally diverse Indian communities of the region. In their introduction, the authors note, "In addition to a general reluctance on the part of the Indians to reveal information considered private, including often sacred and secret place names, ethnographic research for the most part does not necessarily concern itself with the exact location of hunting, fishing, and gathering spots or ritual sites" (p. 2).

Friedlander and Pinyan identify two Pueblo uses of the Valles Caldera in figure 9 ("Known use areas of major resources in the study area"); they identify Redondo Peak as a "Religious Use Area" and identify a San Ildefonso Pueblo pigment resource area at the northeast margin of the Valles. Without citing any source, they state, "One of the most important shrines of the Jemez Indians is located on the Peak of Mount Pelado [a.k.a. Cerro Redondo]. The mountain and its surrounding area are considered highly sacred. At one time this used to be a favorite area for herding" (p. 28). Friedlander and Pinyan (pp. 20, 23) cite Guthe's (1925) study of San Ildefonso pottery as their source for their identification of a site for the procurement of a "rare yellow stone" (p. 23) used for making blackware paint. They do not mention Guthe's statement that San Ildefonso potters also obtained an orange-red slip from the same Valles Caldera vicinity.

Although they do not specifically mention the Valles Caldera and its mountain peaks, Friedlander and Pinyan offer valuable insights into how the Jémez and Zía pueblos incorporated the nearby high-altitude settings into their ceremonial lives.

> *Retreats into the mountains are an important part of ritual life here as well. In 1930, initiation into one of the societies required the shamans from several pueblos to go into the mountains and gather soapweed (yucca) whips, different kinds of grass, and oak for use in the ceremony. For their summer retreats the societies go to collect decorative material for the ceremonial chamber: spruce or pinon tree boughs, willow branches for prayersticks, oak for kicksticks, if a race is involved, and waterworn pebbles to be placed on sand paintings. (White 1962:172, 232)*
>
> *Water is especially sacred and many of the shrines are springs where groups go for ceremonies or where individuals visit periodically to deposit prayer offerings. Other shrines are caves or mesa hills. Although most of these are off reservation territory, they are visited secretly and people lament having lost them. (p. 28)*

Lastly, Friedlander and Pinyan make the important observation that the locations of shrines and gathering areas among the Zía, Jémez, and Santa Ana Pueblos often overlapped and that the people of these communities together conducted many activities, such as hunting (p. 28; see entry for Ellis 1956).

Fry, Gary F., and H. Johnson Hall

1986 Human Coprolites. *In* Archaeological Investigations at Antelope House. Don P. Morris, ed. Pp. 165–188. Washington, DC: U.S. Department of the Interior, National Park Service.

Fry and Hall offer archaeological evidence of the pre-Columbian Pueblo use of broadleaf yucca (*Yucca baccata*), a species that grows in the VCNP, for food.

Gill, Sam D.

1983 Navajo Views of Their Origin. *In* Southwest. Alfonso Ortiz, ed. Pp. 502–505. Vol. 10 of Handbook of North American Indians, William Sturtevant, ed. Washington, DC: Smithsonian Institution.

Gill provides a useful general summary of Navajo origin mythology. He argues that while there are numerous, widely varying stories of cosmic creation and the origin of the Navajo,

the accounts in his article are central to understanding the world view of the people. "The order and character of the world and of the place of human beings in that world, including their relationships with one another and with all other living things, is defined in these stories" (p. 505). By extension, these stories also establish the principles by which the Navajo define their relationship with the physical geography, including the VCNP, of the world in which they live.

Gill provides an illustration of the Navajo Holy Mountain of the East. Rendered by Harrison Begay, a Navajo artist, the work, titled "East Mountain," is one of a set of four paintings, each of which represents a cardinal mountain of direction. Drawing on traditional mythologies similar to those recorded by Matthews (1897:78–79), Begay depicts the male and female inner forms of the mountain (p. 503). These supernatural beings are sprinkling pollen on the two pigeon eggs placed on the peak's summit by First Man and First Woman. White shells, corn, and lightning decorate the mountain. A bolt of lightning, represented by a black band motif common in sandpaintings, fastens the peak to the earth.

Glasock, Michael D., Raymond Kunselman, and Daniel Wolfman

1999 Intrasource Chemical Differentiation of Obsidian in the Jemez Mountains and Taos Plateau, New Mexico. Journal of Archaeological Science 26:861–868.

This study reports the findings of instrumental neutron activation and X-ray fluorescence analyses for sourcing obsidian from northern New Mexico, including the Valles Caldera of the Jémez Mountains. The authors undertook this study because of the long recognition that northern New Mexican obsidian was "one of the most important sources of lithic resources for the prehistoric [and possibly also the early historic] peoples of the American Southwest and the Southern Great Plains" (p. 861). The article provides some references for discussions of pre-Columbian trade networks.

Goddard, Pliny Earle

1933 Navajo Texts. Anthropological Papers of the American Museum of Natural History 34(1):1–179. New York: American Museum of Natural History.

Goddard, in his retelling of the Navajo story *The Emergence*, identifies "sisnadjinne," the Holy Mountain of the East, as Pelado Peak (p. 11). He translates this name as "Blackbelt."

Goff, Fraser

2002 Geothermal Potential of Valles Caldera, New Mexico. Geo-Heat Center Bulletin 23(4):7-12. Klamath Falls: Oregon Institute of Technology.

After years of work and expense, investigators have proven only 20 Mwe of geothermal reservoir capacity in the Valles Caldera. Estimates of undeveloped capacity range as high as 1,000 Mwe, but these approximations remain unsubstantiated. The shallow heat with the Valles rocks is vast; however, extraction of large quantities of hot fluids from these rocks has proven difficult (p. 10).

Goff, Fraser E., and Stephen L. Bolivar

1983 Field Trip Guide to the Valles Caldera and Its Geothermal Systems. Tech. Rep. LA-9963-OBES. Los Alamos, NM: Los Alamos National Laboratory.

This guide is based on field trips led by the authors. The original guide was created to accompany a workshop held in Los Alamos in 1982 for the Continental Scientific Drilling Program. The guide describes a one-way trip of about 90 miles (144 km).

The guide discusses the volcanic geology of the Valles Caldera. A few notes on recent historic events include the drilling of some 20 geothermal wells in the Redondo Creek area in the period 1970–1982 (p. 30), the destruction of the Sulphur Springs resort by fire "several years ago" (p. 32), and the Fenton Hill Hot Dry Rock demonstration project designed and built by Los Alamos National Laboratory (p. 39).

The report notes heavy logging on Cerro Santa Rosa, Cerro del Abrigo, and Cerro del Medio (p. 22).

Goff, Fraser, and Jamie N. Gardner

1988 Valles Caldera Region, New Mexico, and the Emerging Continental Scientific Drilling Program. Journal of Geophysical Research 93(B6):5997–5999.

This article briefly summarizes early research activities.

John Wesley Powell first described the rocks of the Jémez Mountains region during reconnaissance work performed in the 1880s (**see entry for Powell 1961 below**). The region was known at the time as the Tewan Plateau. Powell recognized it as an extensive volcanic field that had erupted many types of volcanic rocks, including voluminous deposits of ash.

Iddings (1890) presented petrographic and chemical data for some of Powell's samples including Bandelier Tuff and some quartz-bearing basalts.

Gold claims were first staked in the Cochití Mining District in the southeast Jémez Mountains in 1893. The two largest mines, the Lone Star and Albemarle, produced ore from quartz veins in altered volcanic rocks primarily from 1897 to 1903 and from 1914 to 1916 (see entry for L. C. Graton 1910). About 185,000 tons (187,968,678 kg) of ore grading about 0.2 ounce per ton (6 mg/kg) gold and 4 ounces per ton (124 mg/kg) silver have been mined from the district, "but only recently have workers realized that the deposit was formed in an earlier hydrothermal system of the Jemez Mountains volcanic field" (p. 5997).

C. S. Ross of the U.S. Geological Survey first began surveys in the Jémez Mountains in the 1920s (p. 5997; see entry for Ross 1931).

In the mid-1940s, Ross returned to the area to continue geologic mapping and volcanic studies with R. L. Smith, and again in 1954 with R. A. Bailey (p. 5997). These investigations resulted in a series of papers on ash flow tuffs, eruption mechanisms, ring dikes, resurgent cauldrons, and ash flow magmatism (see also entries by Ross and Smith 1961; Smith et al. 1961; Smith and Bailey 1966, 1968; and Smith 1979).

The first geothermal well to be drilled in the Valles Caldera (in 1960) was not intended as such; it was an oil test on the west flank of the resurgent dome. The Westates–Bond 1 well struck superheated water (about 392 °F or 200 °C) at shallow depths (see entry for Dondanville 1971). Three more wells were drilled in the 1960s in the same general area. Unocal drilled its first well (Baca 4) in the resurgent dome in 1970. Twenty more wells were drilled before the project ended in 1984. Because the Department of Energy (DOE) provided funding to the project, its results are public, forming "one of the most extensive, publicly available data bases of any drilled caldera system in the world" (p. 5997).

The first hot dry rock (HDR) geothermal experiments were performed on the west margin of the Valles Caldera (see also entry for Goff and Janik 2002:300). Four deep wells were drilled to depths as great as 7.2 miles (4.5 km) to determine whether electricity could be generated commercially from a built reservoir. High development costs and continuing low prices for fossil fuels finally ended this project in 1998 (see also entry for Goff and Janik 2002:300).

In the 1980s the Valles Caldera became a locus of investigations of processes in magmatism, hydrothermal systems, and ore deposit mechanisms. The DOE's Office of Basic Energy Sciences sponsored investigations that led to papers describing the hydrothermal system; the collapse, resurgence, and location of calderas; the evolution of volcanism and tectonics; and the geophysical structure of the caldera (pp. 5997–5998).

Goff, Fraser, and Cathy J. Janik

2002 Gas Geochemistry of the Valles Caldera Region, New Mexico and Comparisons with Gases at Yellowstone, Long Valley and Other Geothermal Systems. Journal of Volcanology and Geothermal Research 116:299–323.

Approximately 40 deep exploration and research wells were drilled in the Valles Caldera in the period 1959–1983, defining a small, but hot (572 °F [300 °C]), neutral-chloride, liquid-dominated geothermal system (p. 300). "The system proved to be too small in volume for economic development" (p. 301).

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"The HDR concept was developed and tested in Precambrian crystalline rocks beneath the west margin of the caldera from 1972 to 1998" (p. 302). Cold water was pumped down an injection well, forced through artificially fractured reservoir rocks, and extracted from a nearby production well. The cold water dissolved minerals lining the fractured rocks and absorbed CO_2 and other gases while reaching thermal equilibrium between –256 and 320 °F (±160 °C). Depth of circulation was greater than 8,200 feet (2.5 km) (pp. 304–305).

Acid-sulfate springs, mud pots, and fumaroles at Sulphur Springs issue from the west side of the central resurgent dome of Valles Caldera (p. 301).

Goff, Fraser, Lisa Shevenell, Jamie N. Gardner, Francois-D. Vuataz, and Charles O. Grigsby

1988 The Hydrothermal Outflow Plume of Valles Caldera, New Mexico, and a Comparison with Other Outflow Plumes. Journal of Geophysical Research 93 (B6):6041–6058.

Two reservoirs have been drilled in the Valles hydrothermal system: the Redondo Creek reservoir and the Sulphur Springs reservoir. The deep reservoir fluids are described as neutral-chloride; they contain about 16 to 58 ounces per ton (500–1,800 mg/kg) total dissolved solids (TDS). About 6.3 miles (10 km) from the Valles Caldera, two sets of neutral-chloride hot springs discharge along the pre-caldera Jémez fault zone at Soda Dam and Jémez Springs. These springs have strong chemical similarities to the deep fluids within the caldera. The conclusion generally drawn from this is that a hydrothermal outflow plume travels out of the caldera in the subsurface along the Jémez fault zone and within adjacent sedimentary rocks toward the springs (p. 6041).

Gregg, Josiah

1954 [1844] Commerce of the Prairies 2 vols. Max L. Moorhead ed. Norman: University of Oklahoma Press. (Originally published Philadelphia: J. B. Lippincott).

Based on Gregg's travels on the Great Plains, this is the best known of the hundreds of eyewitness descriptions of the Santa Fe Trail. Between 1831 and 1840 Gregg traveled from Missouri to New Mexico and back four times, and also visited the Mexican interior states. Gregg pioneered the shorter Santa Fe Trail route on the Canadian River in 1839.

Gregg offers this description of the original Luis María Baca Grant as he saw it in 1832:

> *At Gallinas creek, we found a large flock of sheep grazing upon the adjacent plain; while a little hovel at the foot of a cliff showed it to be a rancho. A swarthy ranchero soon made his appearance, from whom we procured a treat of goat's milk, with some dirty ewe's milk 'curdle cheese' to supply the place of bread. (pp. 76–77)*

The ranchero was a Baca, possibly Tomás, Luis María's son. This ranch is on the Río Gallinas 20 miles (32 km) from Mora Creek. Moorhead notes that the house described here was the first structure in what became Las Vegas (Old Town).

Grubbs, Frank H.

1960–1962 Frank Bond: Gentleman Sheepherder of Northern New Mexico. New Mexico Historical Review 35:168–99; 35:293–309; 36:128–58, 230–243, 274–345; 37:43–71.

Grubbs describes the 1906 organization of the G. W. Bond and Brothers Mercantile Company and the Bond and Nohl Company, both of which operated out of Española. Their highest profits in wool and sheep were achieved in 1909 and 1912. G. W. Bond and Brothers Company established *partido* arrangements throughout the region. They sustained heavy losses of sheep in the severe winter of 1914–1915.

Guthe, Carl E.

1925 Pueblo Pottery Making: A Study at the Village of San Ildefonso. Papers of the Phillips Academy Southwestern Expedition 2. New Haven, CT: Yale University Press.

Guthe identifies the Valles Caldera as a source for orange-red slip and black ware paint made at San Ildefonso. He identifies the location, procurement, and use of these resources:

> **Orange Red Slip**
>
> *This substance is a yellow clayey earth, in texture somewhat like the two white slips. It occurs in the "Valle" to the west, beyond the first Jemez range, near Ojo Caliente. It was dug with a stick…and is carried home in shawls and bags. Before being stored it is put out into the sun to dry thoroughly, then placed in ollas and kept until needed. Like the other slips, it is prepared for use by being mixed with water. A saturated solution is made, but the consistency remains that of water.*
>
> *This material, which in solution is a brilliant yellow, is used for two purposes—as a slip to color the bases of bowls and ollas, and as a paint to supply the red elements of polychrome designs. After being fired it assumes an orange-red or burnt-sienna color…*
>
> **Black Ware Paint**
>
> *This is a paint used for making matte designs on polished black ware, a new departure in decorative technique first used by Maria and Julian Martinez of San Ildefonso, in June, 1921. The substance is a hard yellow stone, said to occur in the "Valle," west of the Jemez range, near Ojo Caliente, in the same district as the orange-red paint.*

The first step in preparing the paint for use is to scrape the stone with a knife. The resulting powder is mixed with water, and there is then added about one-fourth as much dissolved "guaco"…as there is paint. It is said that the purpose of the guaco is to make the paint "stick" to the polished surface. This paint, when ready for use, is kept in a small earthenware or china dish. The consistency of the mixture, like the other paints, is that of water. (pp. 24–25)

Gutiérrez, Ramón A.

1991 When Jesus Came, the Corn Mothers Went Away: Marriage, Sexuality and Power in New Mexico 1500–1846. Stanford, CA: Stanford University Press.

This social history of New Mexico between 1500 and 1846 analyzes marriage as a means to a more general understanding of social relations. The discussion of social, legal, and ethnic relations in the colonial and Mexican periods has general interest.

Gutiérrez' discussion of economic reform in the period of the Bourbon Reforms (1770s–1790s) describes the expansion of livestock raising and the livestock trade (Gutiérrez 1991:319–320).

Haile, Father Berard

1938 Origin Legend of the Navajo Enemy Way: Text and Translation. Yale University Publications in Anthropology 1. New Haven, CT: Yale University Press.

Haile, a renowned student of Navajo ceremonialism and language, defines "sisna·žiní" as "Horizontal black belt" and states that this translation "is apparently more in harmony with the true appearance of this mountain, than 'vertical or downward black belt'" (p. 66). Haile contends that Blanca Peak of Colorado is the Navajo Holy Mountain of the East, which normally would place his study outside the geographic scope of interest for the VCNP. In Sleight's critical review of the controversy surrounding the identification of the Navajo Holy Mountain of the East, Sleight (1950) rebuffs this claim, in part, by using Haile's own careful translation of the Navajo name for the Holy Mountain of the East.

On September 8, 1912, Haile visited Blanca Peak, accompanied by his Navajo collaborators, Slim Curly and River Junction Curly, both of whom were singers from the Leupp, Arizona area, and his translator, Albert Sandoval. The singers spent the entire day exploring the peak and gathered soils, various herbs, and stones for later use in ceremonies in the Navajo homeland. This observation suggests that Navajos making pilgrimages to Redondo Peak would have gathered similar materials for rituals back home.

Haile, Father Berard

1947 Prayer Stick Cutting in a Five Night Navajo Ceremonial of the Male Branch of Shootingway. Chicago, IL: University of Chicago Press.

Haile reports that toward the end of the third day of the Shootingway ceremonial, the singer recites a prayer for each of the eight sticks that he makes. He recounts the basic prayer and provides a synoptic summary of additions, including mention of the Jémez Mountains:

Additions to this prayer are concerned with place names of Shootingway and holy young man: may good conditions come to me from jarring mountain; from rock extending to the skies…from trees extending up the mountain side…from floating feather, Jemez range and other Shootingway localities. (p. 170)

Haile, Father Berard

1950 Part One: Legend of the Ghostway Ritual in the Male Branch of Shootingway. Saint Michaels, AZ: St. Michaels Press.

Haile continues to identify "sisna·žiní" with Blanca Peak in his retelling of the Ghostway ritual (pp. 112, 114).

Halmo, David B., Richard W. Stoffle, and Michael J. Evans

Paitu Nanasuagaindu Pahonupi (*Three Sacred Valleys*): Cultural Significance of Gosiute, Paiute, and Ute Plants. Human Organization 52(2):142–150.

Halmo and others provide information about the cultural significance of six plant taxa traditionally used by the Ute. These species are *Juniperus osteosperma* (juniper/cedar), *Opuntia erinacea* (Mojave prickly pear), *Chrysothamnus nauseosus* (rabbitbrush), *Artemisia nova* (sagebrush), *Ephedra nevadensis* (Indian tea), and *Artemisia spinescens* (budsage). This discussion provides a basis for building a critical evaluation of the cultural significance that Ute peoples assign to native plants growing within the VCNP.

Harper, Blanche Wurdack

1929 Notes on Documentary History, the Language, and the Rituals and Customs of the Jemez Pueblo. Masters Thesis. University of New Mexico, Albuquerque.

This unpublished Masters thesis includes a section on the documentary history of Jémez Pueblo, a fairly extensive Towa vocabulary, and notes on rituals and customs.

The history section (Section 1) does not mention the Baca Location. Harper states that the Navajo and Ute, among others, waged "ceaseless war" (Section 1, p. 5) on Jémez Pueblo after the Pueblo Revolt of 1680.

Harper notes that Jémez Pueblo recognizes holy waters and mountains of direction, but the people do not have an inventory of cardinal shells, trees, birds, snakes, or Corn Maidens (Section 2, p. 9). She gives Jémez Pueblo's Holy North Mountain as Wä́ v ā mä, which she translates as "Father of All North Mountains" (Section 2, p. 30). Dā́ lā shĭng, "Chicken Mountain," is just to the north (section 2, p. 31).

The vocabulary includes a name for Vallecito Creek (Wä lắ tō pắ wä) and the entry:

> *The 'Sulphurs' 10 miles [16 km] above Jemez Springs: Pă gē ā shō lū nūng ("Place of the boiling water." Pắ: water, Gē ō shō lū: boiling, nūng: place). [Section 2, p. 33)*

The Jémez term for "spring" is Pä́ tē ā shē ō la nūng. (Section 2, p. 39)

Harrington, John Peabody.

1916 The Ethnogeography of the Tewa Indians. *In* Twenty-Ninth Annual Report of the Bureau of American Ethnology to the Secretary of the Smithsonian Institution, 1907–1908. W. H. Holmes, ed. Pp. 29–636. Washington, DC: U.S. Government Printing Office.

This volume remains the quintessential work about how Tewa people construct and assign meaning to their ethnographic landscapes. Because Harrington's study is a general review of Tewa ethnogeography, the reader needs to be careful not to apply his findings uncritically among the different Pueblo linguistic communities; Pueblo landscape constructions are not uniform cross-culturally. In fact, some contemporary Tewas believe Harrington obscures important variability in place-name terminology and meaning still exhibited among the six contemporary Tewa communities.

Yet Harrington's work gives many valuable insights into the cosmological and cognitive grammars that organize the Tewas' view of their natural world and helps structure how they assign meaning to places in the physical environments contained within their traditional homelands. This framework, in turn, is useful in evaluating how non-Tewa communities construct their ethnographic landscapes.

When considered in terms of Tewa cosmography (see pp. 41–52) and meteorology (see pp. 53–60), Harrington's study illustrates a highly sophisticated system of interconnected metaphorical references about the movement of water between the supernatural and natural worlds of the Tewas' cosmos. Powerful lessons underlying Harrington's work include the ideas that Tewa landscape constructions (1) do not represent disparate spaces that can be understood in isolation of one another and (2) places are not defined easily by metrical metes and bounds.

Within this expansive discussion, Harrington documents the Tewa people's inclusion of the Valles Caldera within their cultural geographies and landscapes. He reports that the Tewa gloss the four principal valles, which are known generally to area populations by the Spanish names of Valle de los Posos [16:45 (p. 264)], Valle de Santa Rosa [16:45 (pp. 264–265)], Valle Grande [16:131 (p. 276)], and Valle de San Antonio [27:6 (p. 391)], using the terms (in English translation) "beyond the mountains," "beyond the western mountains," and "the Jemez Mountains."

Harrington provides some additional detail in his presentation of place names for the Jémez Region (map 27). Of interest are eight places within the Valles Caldera known to the Tewa:

Wavema [27:4], a very large mountain north of the Valle de San Antonio (p. 391)
Valle de Santa Rosa [27:5] (p. 391)
Valle de San Antonio [27:6], a high grassy meadow (p. 391)
Valle Grande [27:7], the principal grassy meadow (p. 391)
Sulphur Springs [27:8], which is known by both the Tewa and the Jémez as the "place of the boiling water" (p. 391)

A peak north of Cerro Redondo known by its Jémez name of "chicken hawk mountain" [27:9] (p. 391)
Cerro Redondo (a.k.a., Cerro Pelado) [27:10], whose Jémez and Cochití names are variants of "butterfly mountain") (pp. 391–392)
San Antonio Creek [27:11) (pp. 392–393)

Hewett, Edgar J., and Bertha P. Dutton, eds.

1945 The Pueblo Indian World: Studies on the Natural History of the Río Grande Valley in Relation to Pueblo Indian Culture. Albuquerque: University of New Mexico and School of American Research.

This useful study discusses the various Pueblo communities' conceptualizations of the earth, sky, and world (pp. 20–51). Hewett and Dutton consider the features of Pueblo life common among all the groups, as well as selected understandings unique to one group. This accessible work offers much ethnographic detail about how Pueblo communities perceive and maintain affiliations with their traditional landscapes.

Hill, W. W.

1940 Some Aspects of Navajo Political Structure. Plateau 13(1):23–28.

Hill discusses ritual actions associated with the induction of a headman into office during the Chief Blessingway:

> *According to Slim Gambler, it was customary for the newly elected man to journey to the four sacred mountains and plant corn at each one. White corn was planted at Pelado Peak (Blanco Peak) in the east, yellow corn at Mt. Taylor in the south, blue corn at the San Francisco Peaks in the west, and variegated corn at the San Juan Mountains (La Plata Mountains) in the north. (p. 27)*

Hill implies that some headman initiates from Navajo communities, which recognized Redondo Peak as the Holy Mountain of the East, might have ritually planted corn in the VCNP.

Hill, W. W.

1982 An Ethnology of Santa Clara Pueblo, New Mexico. Charles H. Lange, ed. Albuquerque: University of New Mexico Press.

Hill reports that three plants growing in the VCNP have use to the Tewa of Santa Clara Pueblo: Native parsley (*Cymopterus* sp.) is a medicine, mock-orange (*Philadelphus microphyllus*) provides dye, and piñon (*Pinus edulis*) has medicinal uses.

Hillstrom, Laurie Collier

1998 Ute. ***In*** **The Gale Encyclopedia of Native American Tribes, vol. 2. Sharon Malinowski and Anna Sheets, eds. Pp. 38–43. Detroit, IL: Gale.**

This article is a brief summary of Ute culture and history. Hillstrom includes a Ute oral tradition story titled "Smoking Waters" that provides valuable insights into Ute cosmology and the origins of hot springs.

> *A long time ago, the people of the mountains lived in peace. The forests and streams fed them so that they never slept hungry. They were content with their brothers and sisters. They were safe in the shelter of the mountains.*
>
> *In time, a restless young man named Many Feathers became chief and things began to change. Many Feathers fished the streams he had fished before and wished for new ones. He looked at the sheltering mountain slopes and felt imprisoned. Then when the old ones told tales of people beyond the mountains, Many Feathers dreamed he wore the robe of a great chief, a leader of many warriors.*
>
> *"Our elders say the people beyond the mountains have more horses than they have children," Many Feathers exclaimed one day. "If we fight them, their horses can be ours."*
>
> *Some listened.*
>
> *"Great battles make great heroes. A brave warrior walks in honor on every path," he said.*
>
> *And others listened.*
>
> *So Many Feathers called a council in the shadow of the mountains and told the old ones to teach them the war dances of their ancestors. One of the old ones, a medicine man named Smoking Waters, refused.*

"We are happy here," said the old man, and his arm swept for-ward, tracing the circle of surrounding mountains. "The birds of the sky and creatures of the land are our brothers here," he said. "We have what we need. We need nothing more."

"You are afraid, old man!" laughed Many Feathers, mocking him. "Stay in the lodge with the women and children."

"My brother speaks with the voice of the North Wind," responded Smoking Waters gravely. "As the North Wind brings snow and winter's death, so you will bring sorrow and death to our people."

"I will bring power to our people!" shouted Many Feathers.

Then Many Feathers turned to face his people. "This old man is like the timid rabbit who runs before he looks," he cried. "Beat the drums! Dance the war dances! We shall make ourselves heroes!"

Many Feathers' words made the hearts of his people proud. They cheered and beat the drums. When they left the council, the people laughed at the old medicine man and drove him from the tribe.

The people danced the forgotten war dances. They tightened their bows. They painted their faces and dressed their hair with feathers, bone, and thongs of hide. Then the fathers, sons, and brothers marched beyond the mountains to war.

Many of them died.

Later, deep in the mountains, where his lonely campfire burned on the bank of a stream, Smoking Waters saw his people in a vision. But where were the hunters, he wondered. Where had the fathers gone? Children were crying for food. The women were thin and bent with sickness. Drums beat out the death chants. The people of the mountains no longer sang their joyful songs.

As Smoking Waters wept for his people, his tears mingled with the waters of the mountain stream. He cried for the ones who had died and for those who suffered. He grieved until the sadness was bigger than life, and then the old medicine man died.

But Smoking Waters' love for his people lived on in the fire he had built. It burned on without dying through the nights and the years. It burns even today, warming the waters of the streams that flow within the mountains. Now, as it was then, the mountain hot springs soothe the sick and the weary and heal the wounded. They are Smoking Waters' gift of love and peace to all the people. (pp. 39–41)

Hoebel, E. Adamson

1979 Zia Pueblo. *In* **Southwest. Alfonso Ortiz, ed. Pp. 407–417. Vol. 9 of Handbook of North American Indians, William Sturtevant, ed. Washington, DC: Smithsonian Institution.**

This article provides a concise overview of the anthropology and history of Zía Pueblo.

Hucko, Bruce

1996 Where There Is No Name for Art: The Art of Tewa Pueblo Children. Santa Fe, NM: School of American Research.

Hucko, a self-described "art coach," introduces the reader to some of the Tewa students he worked with at the Santa Clara, San Ildefonso, San Juan, Pojoaque, and Nambé Pueblo day schools. The children, who were involved in every step of the book's publishing process, talk about their histories, families, and communities, share insights into their culture and heritage, and discuss the process of making art. In talking about petroglyphs and about their communities' cultural landscapes, the children show that the meaningfulness referred to by their elders transcends the generations.

Hudspeth, William B.

1997 Environmental Setting. *In* **OLE, vol. 1. Context. John C. Acklen, ed. Pp. 9–42. Albuquerque: Public Service Company of New Mexico.**

In table 2.1 Hudspeth identifies the edible parts, seasonality and distribution of more than 125 plant species that grow in the VCNP.

Huning, Franz

1973 Trader on the Santa Fe Trail: Memoirs of Franz Huning, with Notes by His Granddaughter, Lina Fergusson Browne. Albuquerque: University of New Mexico, Calvin Horne Collection.

Huning notes (pp. 63–64) that when he was at Jémez Springs for about three weeks in 1856, he saw Manuel Abrego, whom he already knew. Abrego's ranch at Sulphur Springs may have been the first Anglo-European settlement near Redondo Creek.

Iddings, J. P.

1890 On a Group of Rocks from the Tewan Mountains, New Mexico, and on the Occurrence of Primary Quartz in Certain Basalts. U.S. Geological Survey Bulletin 66.

In this article Iddings presents petrographic and chemical data for some of the samples taken by J. W. Powell (see entry for Powell 1961 [1885]). The samples included Bandelier Tuff and some quartz-bearing basalts.

Indian Claims Commission

1974 Commission Findings on the Pueblo Indians. New York: Garland Publishing.

This volume contains the Findings of Fact and Opinions pertaining to Pueblo land claims decided by the Indian Claims Commission (ICC). Since no Pueblo community claimed exclusive use of the Valles Caldera, this book contains little information pertinent to the VCNP. The ICC heard claims only for land exclusively used and occupied as of February 2, 1848, the date of the Treaty of Guadalupe Hidalgo. Claims for areas used in earlier periods and for areas used by more than one tribe were not allowed. The ICC also determined that all valid Spanish and Mexican land grants were private property and not part of the United States public domain. This decision meant that any Pueblo uses of areas within Spanish and Mexican land grants were not subject to claims litigation "even though the particular tribe may have used and occupied parts of them from aboriginal time" (17 ICC 615, p. 618). The Commission found that some land use activities (e.g., hunting) took place "at great distance to points outside the claimed area" (p. 629).

Jefferson, James, Robert W. Delaney, and Gregory C. Thompson

1972 The Southern Utes: A Tribal History. Floyd A. O'Neil, ed. Ignacio, CO: Southern Ute Tribe.

This scholarly summary of Ute history provides documentary information about Ute material culture during the early Historic period (e.g., see p. 2).

Of relevance to the VCNP is an unlabeled figure (p. xi) illustrating the Ute's aboriginal domain. This diagram shows the Ute's hunting territories extending farther into northern New Mexico than many maps accompanying Ute historical reviews (e.g., see entry for Callaway et al. 1986). This common-place omission of the Utes traveling into New Mexico as far as Santa Fe is surprising given that documentary sources commonly cite these seasonal rounds into the Jémez Mountains and the Chama Valley.

Johnson, George

1996 Fire in the Mind: Science, Faith, and the Search for Order. New York: Vintage Books.

In this provocative essay, Johnson juxtaposes systems of traditional community belief and understandings obtained through science to explore the question of where religion ends and science begins. Johnson compares recent contributions by New Mexican scientists in quantum physics, information science, and complexity with the traditional cosmologies of the region's Tewa Pueblo people and Nuevomexicano Catholic Penitentes. More immediately relevant to the VCNP Land-Use History project, Johnson confirms that the Río Grande Pueblo people, just as their Western Pueblo counterparts, traditionally conceptualized flowing lava as "hot water" (p. 300).

Jones, Volney H.

1931 The Ethnobotany of the Isleta Indians. Masters thesis. University of New Mexico, Albuquerque.

Jones identifies the Isleta Pueblo consumption of mock-orange (*Philadelphus microphyllus*) for food.

Jones, Volney H., and Robert E. Fonner

1954 Plant Materials from Sites in the Durango and La Plata Areas, Colorado. *In* **Basketmaker Sites near Durango, Colorado, by Earl H. Morris and Robert F. Burgh. Pp. 93–115. Publication 604. Washington, DC: Carnegie Institute.**

Jones and Fonner identify the pre-Columbian uses of several plant species found in the VCNP. Examples include bur-reed (*Sparganium* sp.), which is a food, and American vetch (*Vicia americana*), which has medicinal value.

Jordan, Terry G.

1993 North American Cattle Ranching Frontiers: Origins, Diffusion and Differentiation. Albuquerque: University of New Mexico Press.

Jordan discusses Old World cattle ranching in Europe and Africa, and how its patterns and practices explain ranching in the New World. He notes that ranching is not specific to open grasslands:

> *Cattle ranching...thrived in a great variety of New World physical environments, from tropical savannas to subtropical pine barrens and midlatitude prairies, from fertile lowland plains to rugged mountain ranges, from rainy districts to semideserts. (p. 9)*
>
> *By the time of the discovery of America, range cattle raising occupied a broken belt of land on the Atlantic rim from Scandinavia and the British Isles down to Angola in Africa.*
>
> *Range cattle raising was to be found in highlands, islands, marshes, moors, savannas and semideserts, having been forced to the edges of two continents by more intensive farming practices. Ranching would similarly become established in a wide variety of coastal, marsh, plains and highland environments in the New World.*
>
> *Permanent Hispanic settlement began in New Mexico in 1598 with the colonizer Juan de Oñate, but Hispanic New Mexico never became a center of cattle ranching. Perhaps the single greatest retarding factor was the presence of a substantial established population of Pueblo Indian irrigation farmers. (p. 146)*

Jordan contends the mission fathers blocked development of a large-scale cattle industry in order to protect the Indians' fields and crops. Oñate introduced breeder flocks of sheep, which dominated even after the 1690s Reconquest of New Mexico. For example, Diego Padilla south of Albuquerque owned 1,700 sheep but only 141 cattle in 1740.

By 1757 all the Hispanics of the province combined owned fewer than 8,000 cattle and fewer than 2,500 horses. In 1832, 240,000 sheep were in the department but only 5,000 cattle and 850 horses. Sheep became "the economic hallmark of the regional Euroamerican culture" (p. 147) and also were adopted by the Navajos and Utes.

Although the book is about cattle, not sheep, and does not mention the Valles Caldera, it provides valuable background for the VCNP Land-Use study.

Keleher, William A.

1982 [1952] Turmoil in New Mexico, 1846–1868. Albuquerque: University of New Mexico Press.

The author mentions the Valles Caldera in a discussion of actions taken by the U.S. Army to deter Navajo and Apache movement through the locality during the final Navajo Wars of 1863. Under orders from General James A. Carleton Lieutenant Erastus W. Wood, 5 non-commissioned officers, and 31 privates from Company A, 1st Infantry, California Volunteers, manned the Old Fort encampment, which Nesbit and Parker had occupied a decade earlier as a hay camp (see entry for Church n.d.; and McNitt 1972). General Carleton's instructed Lieutenant Wood and his men:

> *. . . to lie in wait for thirty days to kill every Navajo or Apache Indian who attempts to go through that noted thoroughfare. No women and children will be harmed; these will be captured. (quoted on p. 314).*

Keleher notes that on September 27, 1863, five weeks after General Carleton's orders to Lieutenant Wood to set up a month-long post at Old Fort in the Valles Caldera, Lieutenant P. A. J. Russell led four mounted men and a group of Pueblo warriors from the Valle Grande. They rode in pursuit of a band of Navajo raiders who had stolen livestock from nearby Río Grande Pueblo villages. This contingent surprised the raiders at Jémez Springs, killing 8 men, capturing 20 women and children, and recovering 125 sheep and 2 horses (Keleher 1982:314).

Kelley, Klara Bonsack, and Harris Francis

Navajo Sacred Places. Bloomington: Indiana University Press.

Although Kelley and Francis do not specifically discuss places important to the Navajo within the VCNP, their study offers important background information and perspectives for examining and comprehending the significance of the people's cultural landscapes through careful consideration of selected examples. For example, Kelley and Francis (p. 125) state that volcanic calderas "are important in the songs, prayers, and stories of many ceremonial repertoires that involve the power of thunder and lightning (which seeks depressions and lava rock) and wind" (p. 125).

Kelley, Klara Bonsack, and Harris Francis

2002 *Chézhin Sinil* **(***Rock-That-Defends***): Navajo Cultural Landscapes and the Petroglyph National Monument.** *In* **"That Place People Talk About": The Petroglyph National Monument Ethnographic Landscape Report, by Kurt F. Anschuetz, T. J. Ferguson, Harris Francis, Klara B. Kelley, and Cherie L. Scheick. Pp. 5.1–5.30. Community and Cultural Landscape Contribution VIII. Prepared for: National Park Service, Petroglyph National Monument, Albuquerque, New Mexico, NPS Contract No. 14431CX712098003 (RGF 109B). Santa Fe: Río Grande Foundation for Communities and Cultural Landscapes.**

Kelley and Francis use published accounts of Navajo oral tradition to establish principles and themes concerning the importance of the landscape in sustaining community heritage and identity. The authors demonstrate how oral traditions, in combination with contemporary ethnographic study, can be used effectively to establish the existence of essential community relationships with places and provide informed contexts for the responsible management of culturally sensitive landscape features and other kinds of traditional cultural properties.

Kelley and Francis address several kinds of landscape features found within the VCNP, including shrines, lava rocks, plants, animals, minerals, and vistas. They include Navajo community concerns about the management of these landscape features as cultural resources.

Kelly, Daniel T., and Beatrice Chauvenet

1972 The Buffalo Head: A Century of Mercantile Pioneering in the Southwest. Santa Fe, NM: Vergara Publishing.

The author was the son of Harry Kelly, cofounder of Gross, Kelly and Company, a major New Mexico corporation dealing mainly in sheep and wool and, as Kelly explains, a direct competitor of the Bond brothers.

Although Kelly does not deal with the Baca Location, his discussion of the Bonds (pp. 96–97) and his explanation of *partido* (pp. 190–191) are useful in understanding how the Location entered into a regional and national mercantile system.

Kent, Kate Peck

1983 Prehistoric Textiles of the Southwest. Santa Fe: School of American Research, and Albuquerque: University of New Mexico Press.

Kent notes that pre-Columbian peoples used milkweed (*Asclepias* sp.), which grows in the Valles Caldera area, for making dye.

Keur, Dorothy Louise

1941 Big Bead Mesa: An Archaeological Study of Navajo Acculturation, 1745–1812. Memoirs of the Society for American Archaeology, 1. Menasha, WI. (Reprinted Millwood, NY: Kraus Publishing Company, 1974).

Keur follows Matthews (1897) in retelling the Navajo story of emergence. In her discussion of the Navajo Holy Mountains of Direction, she states, "The name for the sacred mountain to the east probably means Dark Horizontal Belt, and it is situated somewhere near the Pueblo of Jemez, in Bernalillo county, New Mexico; probably Pelado Peak, twenty miles [32 km] north-northeast of the pueblo" (p. 8).

Kirk, Donald R.

1970 Wild Edible Plants of the Western United States. Heraldsburg, CA: Naturegraph.

Kirk provides information on the preparation and uses, habitat and distribution, and physical appearance of many different edible plants found throughout the West. His sample includes 89 plant families found in the VCNP.

Klah, Hasteen

1942 Navajo Creation Myth: The Story of the Emergence. Recorded by Mary C. Wheelwright. Navajo Religion Series, Vol. 1. Santa Fe: Museum of Navajo Ceremonial Art.

Klah refers to Nehochee-otso, a large hollow place on the top of the Jémez Mountains where Tseh-nagi (Rolling Rock) lived. This monster was "a great striped rock which could roll very quickly in any direction, and killed people by rolling on them" (p. 71). The story of the destruction of Rolling Rock establishes that the Navajo view the Jémez Mountains as a portal between the natural and supernatural worlds of the cosmos:

> *Nayenezgani, the Hero Twin Monster Slayer, traveled to the Jemez Mountains to kill Tseh-nagi in his quest to rid the world of the monsters that plagued the people. When Nayenezgani tried to approach Tseh-nagi, the Rock began to roll towards him and he shot his lightning arrow at the Rock from the east, but could not hit it, and the Rock then rolled back to its den. Then Nayenezgani shot at it from the south and managed to knock a little splinter from it while the Rock pursued him. He then approached the Rock from the west and the same thing happened, and also from the north, and at the end he only managed to knock off a few pieces and could not injure it, and meanwhile it kept chasing him while he was barely able to avoid it.*
>
> *At his home at Huefano the magic kehtahn began to burn very brightly, which showed that Nayenezgani was in great danger. So they [other immortals] sent hail, big rain, and cyclones to attack the Rock. And the water soaked it, and Hashjeshjin [the Fire God] burnt it with his fire, and then hit it with a stone knife, and large pieces were broken off it. The Rock tried to escape them, but they chased it into a mountain from which it burst out as though from a volcano, and finally they chased the Rock four times around the earth, while it grew smaller and smaller, until at last it fell into the Grand Canyon, where it is now. (pp. 93–94)*

In his telling of the Navajo Story of the Emergence, we learn that Begochiddy, "the great creating God, fair-haired and blue-eyed" (p. 212), lives on Síss-nah-jíni, the Holy Mountain of the East (p. 228). Moreover, in the succession of four worlds in the Navajo creation story, Begochiddy took earth from the previous world and created the mountains of the east, south, west, and north, as well as the plants that grew on and between these summits and the clouds that gathered over them (cf. pp. 29, 41, 43, 62).

Krenetsky, John C.

1964 Phytosociological Study of the Picuris Grant and Ethnobotanical Study of the Picuris Indians. Masters thesis. University of New Mexico, Albuquerque.

In his study of Picurís Pueblo ethnobotany, Krenetsky reports on the uses of several plants that grow also in the VCNP. Foods include Yarrow (*Achillea* sp.), Milkweed (*Asclepias* sp.), and Aster (*Aster* sp.). Medicine plants include white fire (*Abies concolor*), buckwheat (*Eriogonum* sp.), geranium (*Geranium* sp.), sneezeweed (*Hymenoxys* sp.), common plantain (*Plantago major*), native rose (*Rosa* sp.), and prairie coneflower (*Ratibida columnifera*).

Lambert, Marjorie

1979 Pojoaque Pueblo. *In* Southwest. Alfonso Ortiz, ed. Pp. 324–329. Vol. 9 of Handbook of North American Indians, William Sturtevant, ed. Washington, DC: Smithsonian Institution.

This article provides a concise overview of the anthropology and history of Pojoaque Pueblo.

Lang, Richard W.

1986 Artifacts of Woody Materials from Arroyo Hondo Pueblo. *In* Food, Diet, and Population at Prehistoric Arroyo Hondo Pueblo. Wilma Wetterstrom, ed. Arroyo Hondo Archaeological Series, 6. Pp. 251–276. Santa Fe, NM: School of American Research Press.

Lang presents the archaeological use of narrow-leaf cattail (*Typha angustifolia*) in basketry at this major village outside Santa Fe.

Lange, Charles H.

1959 Cochiti: A New Mexico Pueblo, Past and Present. Austin: University of Texas Press.

Lange documents the varied ethnographic uses of six plant families at Cochití Pueblo that grow also in the VCNP: grama grass (*Bouteloua* sp.), throughwort (*Eupatorium* sp.), spurge

(*Euphorbia* sp.), piñon (*Pinus edulis* sp.), narrowleaf cottonwood (*Populus angustifolia*), and nightshade (*Solanum* sp.).

Lange, Charles H.
1978 The Spanish-Mexican Presence in the Cochiti-Bandelier Area, New Mexico. ***In*** **Across the Chichimec Sea. Carroll L. Riley and Basil C. Hedrick, eds. Pp. 34–52. Carbondale: Southern Illinois University Press.**

Lange summarizes contacts between the Coronado (1540–1542), Chamuscado-Rodríguez (1581–1582), Espejo (1582), and Castaño de Sosa (1590) expeditions and the Río Grande Pueblos. He describes the *entrada* of Juan de Oñate and his colonists. Lange notes that the missionary friars were assigned to their respective pueblos on September 9, 1598, and that Father Juan de Rozas was sent to the Keresans. "Thus, it appears likely that the summer and autumn of 1598 marked the first sustained and substantial [Hispanic] influence on the Cochiti-Bandelier area" (p. 43). Lange reviews the events of the Pueblo Revolt and the Reconquest.

Lange notes a "virtually unique" characteristic of Cochití Pueblo: "As indicated in the 1765 census notes of Father Morfi and continuing into the present time, Cochiti has had a resident Spanish population" (p. 48).

Lange, Charles H.
1979a Cochiti Pueblo. ***In*** **Southwest. Alfonso Ortiz, ed. Pp. 366–378. Vol. 9 of Handbook of North American Indians, William Sturtevant, ed. Washington, DC: Smithsonian Institution.**

This article provides a concise overview of the anthropology and history of Cochití Pueblo.

Lange, Charles H.
1979b Santo Domingo Pueblo. ***In*** **Southwest. Alfonso Ortiz, ed. Pp. 379–389. Vol. 9 of Handbook of North American Indians, William Sturtevant, ed. Washington, DC: Smithsonian Institution.**

This article provides a concise overview of the anthropology and history of Santo Domingo Pueblo.

Lange, Charles H., and Carroll L. Riley, eds.
1966 The Southwestern Journals of Adolph F. Bandelier 1880–1882. Albuquerque: University of New Mexico Press.

Bandelier notes that there are otters (known locally as "perritos de agua") in the Valle Grande (p. 214).

Lange, Charles H., and Carroll L. Riley, eds.
1984 The Southwestern Journals of Adolph F. Bandelier 1889–1892. Albuquerque: University of New Mexico Press.

Bandelier notes that on June 5, 1890, "several fires" were burning in the Valle Grande (p 108). The editors note, "The Valle Grande is a distinctive landmark and, once located, the several peaks surrounding it can be easily sighted from Santa Fe and much of the surrounding area" (p. 413, 474n).

Lange, Charles H., Carroll L. Riley, and Elizabeth M. Lange, eds.
1975 The Southwestern Journals of Adolph F. Bandelier 1885–1888. Albuquerque: University of New Mexico Press.

Bandelier describes a trip to the Valle Grande on July 19–20, 1888 (pp. 270–271). He reached it from Espanola, passing the ruin of Shu-finne, through the Santa Clara Canyon, to the source of the Río de la Jara, the Valle Grande (which he also calls Valle de Toledo), across the Valle de Santa Rosa and the Valle San Antonio, to the Ojos de San Antonio. He spent a day at the Ojos de San Antonio, then walked down to Jémez Springs.

"The sheep herds are out of the Valles and grazing in the adjacent timbered slopes" (p. 271; see also his sketch map that accompanies this excerpt).

Laughlin Papers

1907 Unsigned letter to L. W. Dennis, Chicago, Illinois, August 14, 1907. Napoleon B. Laughlin Papers, Accession No. 1959–131, Box 10, Folder 145. Santa Fe, NM: State Records Center and Archives.

L. D. W. Shelton, a land surveyor also referred to in the Bond, Frank, and Son records (see entry for Bond and Son 1917), might have written this unsigned letter. It is part of the voluminous correspondence sent, received, and collected by New Mexico Judge Napoleon B. Laughlin on issues relating to land grants.

This letter, postmarked Santa Fe, responds to an inquiry from L. W. Dennis of Chicago. Most of the letter consists of quotations attributed to two different "cruisers on the property," also referred to as "cruisers who were sent upon the ground…by prospective purchasers." The writer states, "I am not advised as to the name of either of these men." The second informant repeats some mining data supplied to him by "Mr. Woodward of Bland, N.M."

The timber on the Baca Location is estimated by one of the cruisers at 425 million board feet of white pine and from 15 to 25 million board feet of spruce. The writer says there are also "telegraph poles, ties, piling, mine props and stulls in large quantities," on the Baca Location. The other informant estimates 403 million board feet of merchantable timber on the property.

The title is described as "perfect" because it rests on a government deed "to the present owners in exchange for one of the Spanish Land Grants."

One cruiser says the valley and agricultural land are "excellent meadow…there is not a stump and very few stones. One valley is about eight miles [12.8 km] long and from two to three miles [3.2–4.8 km] wide, and contains about ten thousand (10,000) acres [4,047 ha], with a stream with a good flow of water running through it." The writer or writers describe "many fine springs" and "grazing…of the best to be found."

Liljeblad, Sven

1986 Oral Tradition: Content and Style of Verbal Arts. ***In*** **Great Basin. Warren L. D'azevedo, ed. Pp. 641–659. Vol. 11 of Handbook of North American Indians, William Sturtevant, ed. Washington, DC: Smithsonian Institution.**

Liljeblad presents additional insights that complement and illustrate Goth's commentary (see entry for Wright 2000) about how the Ute construct their landscape traditions through language.

Lindgren, Waldemar, Louis C. Graton, and Charles H. Gordon

1910 The Ore Deposits of New Mexico. Professional Paper 68. U.S. Department of the Interior, Geological Survey.

This reference work describes all metal mines developed up to ca. 1905 in New Mexico. The description of the "Cochiti or Bland District" explains,

> *The opposition of Mexicans, who claimed possession of the region under private grant, impeded development, and it was not till 1889 that prospecting began in earnest. In 1893 much activity was manifested in the district and many claims were located. Early in 1894 the Albemarle group was located. This proved to be the most important group in the district. In 1896 a mill, known as the Woodbury mill, was built in the valley about 7 miles [11 km] below Bland, for the purpose of treating the ores of the Iron King mine, but it was never a success. Late in 1899 the Albemarle cyanide mill was completed. This was closed in the spring of 1902 and was later dismantled. In the eleven years from the opening of 1894, when production began, to the close of 1904 the district had produced slightly over a million dollars. The greatest production in any one year was $359,135, in 1900. No production was reported in 1905. At present very little mining is being done in the district, and the prospects for resumption of work in the immediate future are not bright. (p. 150)*

The Albemarle, Washington, Lone Star, Iron King, and Crown Point mines had been developed in the Cochití District by 1905 (the year in which the authors did their fieldwork in the district). Lindgren, Graton, and Gordon describe these enterprises.

> *The authors did not visit the Washington mine. It was on the slope just west of Bland and was not active in 1905, the year of their survey. The authors estimated production up to that time at about $75,000.*
>
> *The Albemarle mine, situated on South Fork of Cholla Canyon, is owned by the Navajo Gold Mining Company, of Boston. Ore is said to have been discovered on this*

property early in 1894 as a result of prospecting along the prominent outcrop. The mine, which was sometimes called the Altoona, passed into the hands of the Cochiti Gold Mining Company, which afterward became the Navajo Company. From the time of its discovery the mine was conceded to be the most important in the district, and from 1899, when its mill was put into operation, till the closing of the mill in the spring of 1902, it is said to have produced $667,500. Since the latter date the property has not produced. (p. 158)

The Lone Star mine is situated a little north of the Washington, on the southeast slope of a side gulch which joins Pino Canyon just above Bland. It is on the same vein as and lies just south of the Iron King, the first discovery in the district. The present owner is the Navajo Gold Mining Company. A considerable amount of ore was shipped in the early history of the mine. Not very much ore has been taken out since the last sale of the property. Actual figures of production were not obtainable, but it is probable that between $50,000 and $100,000 has been taken out. (p. 159)

The Iron King, the first mine discovered in the district, lies just north of the Lone Star, close to Pino Canyon. It is reported that the ore extracted amounted to $50,000. The development includes a small shaft and a short adit from which a winze was sunk, the greatest depth attained being 136 feet [41.5 m]. An amalgamation mill was built in 1896, 7 miles [11 km] below Bland. In 1902 it was replaced by a 10-stamp mill, with ten cyanide tanks, but this was operated only a short time. The vein is the continuation of the Lone Star vein. (p. 160)

The Crown Point mine is situated on the northeast side of Pino Canyon, about three-quarters of a mile [1.2 km] above Bland. It is one of the early locations in the district and is commonly credited with the production of about $50,000, being said to have sent out 1,500 tons of shipping ore. The workings are on a vein which strikes N. 10° W. and dips 70° W. but steepens in the bottom. The vein has been regarded as the same as the Lone Star vein, or at least a spur from it. (p. 161)

Lindgren, Graton, and Gordon also describe several smaller mines and claims: the Tip Top mine, the Laura S. claim, and the Little Casino claim; the Black Girl, Hopewell, Good Hope, Allerton, Posey, Union and others on the southwest side of Pino Canyon; and the Little Mollie and Puzzle claims. Many others that never produced paying quantities of ore are not named. They mention a copper prospect "at the junction of Medio Dia and Cochiti canyons" where "some work was being done" (p. 162).

Linford, Laurance D.

2000 Navajo Places: History, Legend, Landscape: A Narrative of Important Places on and near the Navajo Reservation, with Notes on Their Significance to Navajo Culture and History. Salt Lake City: University of Utah Press.

This compendium is an essential resource for beginning studies of Navajo cultural geography within particular localities. It provides annotated entries for several areas in and around the VCNP, including the Jémez Mountains (pp. 221–222), Pelado Peak (pp. 242–243), and the Valle Grande (p. 278).

Los Alamos [NM] Monitor

1970 Baca Location to Change. Los Alamos Monitor, December 17:1.

This article reports on the cumulative impacts that New Mexico Timber, Inc.'s cable logging operations had already had in the Valles Caldera and the prospect that major damage would continue over the next seven years. The article opens with the statement that New Mexico Timber, Inc., was "cutting trees on the property at a ferocious rate, 24 million board feet of lumber per year" (p. 1). Elsewhere, it reports that the company employed 175 men and operated 2 mills to achieve these production levels.

At the present rates of timber harvesting, the Los Alamos Monitor offers the grim assessment that:

Virtually every tree on the ranch that can be sawed into two by fours will have been cut down. And it will take nature 40 to 50 years to restore in main the appearance of the ranch. (p. 1)

Worse for environmentalists and recreationalists still, the newspaper noted in a sidebar accompanying this article that the harvesting of the Baca Location's timber stands could be completed "within three years by going to two or three shifts a day at New Mexico Timber's mills" (p. 1).

The article is valuable because it provides an interview with Sam Bailey, who was New Mexico Timber, Inc.'s forester. In response to questions about the severity of the damage that cable-logging and clear-cutting were causing to the scenic values of the Valles Caldera, Bailey reported that New Mexico Timber, Inc., had harvested the majority of the Baca Location's original 68,000 wooded acres (27,200 ha) since 1935. Nevertheless, Bailey maintained that only half of the harvested acreage had "been subjected to the present 'clear cutting' techniques" (p. 1). He acknowledged further,

> *That a freshly clear cut area looks pretty bad, but he claimed that time, even a few years, quickly heals the scars…He said that the slash, which is obviously ugly in the newly logged regions, is soon covered by secondary growth if it is left alone. He said that an attempt to gather and haul off the limbs and tops would be wholly impractical. "There just aren't enough trucks." Burning the slash, Bailey noted, would simply kill the secondary growth. (p. 1)*

As a consequence of these damages, the Los Alamos Monitor notes that the State of New Mexico had begun considering

> *a new set of regulations, apparently aimed at logging, on the Baca. These regulations would cause drastic changes in the handling of slash and formalize a requirement for seeding and water barring roads. (p. 1)*

The article also provides a summary of Dunigan's legal suit against New Mexico Timber, Inc. It also reports in the sidebar that the Los Alamos Boy Scouts cut thousands of trees each holiday season for sale primarily to residents of Los Alamos in the late 1960s (p. 1).

Los Alamos [NM] Monitor

1972 Baca Location Timber Is Sold to Ranch Owner. Los Alamos Monitor, June 30:1.

This brief article reports the sale of the Baca Location's timber rights by New Mexico Timber, Inc., to the Baca Land and Cattle Company. In a joint statement announcing the sale of the timber rights and the cessation of logging, James Patrick Dunigan and T. P. Gallagher, Jr., stated, "The transaction settles all litigation between the parties" (p. 1). A representative for New Mexico Timber, Inc., notes further that half of the company's 300 employees might be laid off, although some crews would be kept active "hauling already cut logs from the area, reseeding the logging roads and cleaning up the slash" (p. 1).

Clear-cutting operations had focused on the slopes bordering the Valle San Antonio and the Valle Toledo. Timbering had moved into the Valle Grande during 1971.

Magers, Pamela C.

1986a Miscellaneous Wooden and Vegetal Artifacts. *In* **Archaeological Investigations at Antelope House. Don P. Morris, ed. Pp. 277–305. U.S. Department of the Interior, National Park Service.**

Plants found in the VCNP include alder (*Alnus* sp.), sagebrush (*Artemisia* sp.), birch (*Betula* sp.), sunflower (*Helianthus* sp.), and dropseed (*Sporobolus* sp.).

Magers, Pamela C.

1986b Weaving at Antelope House. *In* **Archaeological Investigations at Antelope House. Don P. Morris, ed. Pp. 224–276. U.S. Department of the Interior, National Park Service.**

Plant species in Mager's sample that grow in the VCNP include goosefoot (*Chenopodium* sp.), Rocky Mountain juniper (*Juniperus scopulorum*), Gambel oak (*Quercus gambelii*), and ragwort (*Senecio* sp.).

Marsh, Charles S.

1982 People of the Shining Mountains: The Utes of Colorado. Boulder, CO: Pruett Publishing.

This volume provides an overview of Ute history and culture from time immemorial. While Marsh does not specifically mention the use of the Valles Caldera by Ute bands, he states, "Ute lands extended from Shoshone country on the north along the Green River in Wyoming, southward across all of Colorado, and well into northern New Mexico. There was a time when Utes were commonly seen at Santa Fe" (p. 3).

In discussing the Ute Bands, Marsh notes, "The Mouache band of southern Utes lived in south central Colorado and northern New Mexico. They had very early contact with the Spanish near Taos and Santa Fe, along with the Capote Ute band who lived close by" (p. 19).

The map that follows of the geographic expanse of Ute aboriginal lands (p. 20) encompasses the VCNP, as well as the northern part of the Jémez Mountain range.

Marsh includes a discussion of selected aspects of Ute cosmology (e.g., see pp. 129–132). These ideas underlie the people's essential landscape constructions (see also entry for Wright 2000).

Martin, Craig

2003 Valle Grande: A History of the Baca Location No. 1. Los Alamos, NM: All Seasons Publishing.

This well-written, informative, and entertaining volume is an indispensable resource for all individuals interested in the history of the Baca Location and the VCNP. In its 11 chapters, Martin traces this locality from its early volcanic history through the 2.5 years of the VCNP as a working ranch owned by the people of the United States. The author provides many useful illustrations, maps, and photographs that help make this account an enjoyable read.

While Martin's volume and the present land-use history of the VCNP share much common ground, the two works have contrasting foci and voices. Martin's account is exceptional and invaluable for its emphasis on the social history of the individuals, including Luis María Cabeza de Baca, his grandsons Francisco Tomás and Tomás Dolores Baca, and entrepreneurs Maríano Sabine Otero, James Greenwood Whitney, Joel Parker Whitney, Frank Bond, and Patrick Dunigan. Each of these individuals played a key role in shaping the ownership and/or development of the Baca Location during the nineteenth and twentieth centuries. By sharing information about who these people were, what they valued, and how they interacted with their contemporaries, Martin helps put a living face on the land grant's history.

Matthews, Meridith H.

1992 Macrobotanical Analysis. ***In*** **Bandelier Archeological Excavation Project: Summer Excavations at Burnt Mesa Pueblo and Casa del Río. Timothy A. Kohler and Matthew J. Root, eds. Reports of Investigations 64. Pullman: Washington State University.**

Matthews identifies the Eastern Keres' medicinal use of Apache plume (*Fallugia paradoxa*), a plant found in the VCNP.

Matthews, Washington

1887 The Mountain Chant: A Navajo Ceremony. Fifth Annual Report, Bureau of American Ethnology. Washington, DC: Smithsonian Institution.

Matthews describes prayer sticks used as offerings in the Navajo Mountain Chant (and various other ceremonies):

> *The sacrifices made to the gods during these ceremonies…consist of nothing more than a few sticks and feathers, with the occasional addition of strings and beads—a form of sacrificial offering common among various tribes of the Southwest, including the sedentary pueblos. (p. 451)*

Matthews includes an illustration (fig. 58) of a prayer stick (*kethàwn* or *keçàn* {Matthews used these terms interchangeably, with the former representing an Anglicized version of the latter) "belonging, not to the Mountain Chant, but to klèdji-qaçàl, or chant of the night. It is sacred to the Youth and the Maiden of the Rock Crystal, divine beings who dwell in Tsisnàtcini, a great mountain north of the Pueblo of Jemez" (p. 452). The figure 58 caption explains:

> *The original is in the National Museum at Washington. It consists of two sticks coated with white earth and joined by a cotton string a yard long, which is tied to each stick by a clove hitch. A black bead is in the center of the string; a turkey feather and eagle feather are secured with the clove hitch to one of the strings. (p. 452)*

Matthews, Washington

1897 Navajo Legends. Memoirs of the American Folk-Lore Society 5. Menasha, WI: American Folk-Lore Society.

Matthews introduces the creation of the Navajo Holy Mountains of Direction:

> *190. …First Man and First Woman, Black Body and Blue Body, set out to build the seven sacred mountains of the present Navajo land. They made them all of earth which they had brought from similar mountains in the fourth world. The mountains they made were Tsĭsnadzĭ́ni in the east, Tsotsĭl (Taylor, San Mateo) in the south,*

Dokoslíd (San Francisco) in the west, Depĕ́ntsa (San Juan) in the north, with Dsĭlnáotĭl, Tsolíhi, and Akĭdanastáni (Hosta Butte) in the middle of the land.

191. Through Tsĭsnadzĭ́ni, in the east, they ran a bolt of lightning to fasten it to the earth. They decorated it with white shells, white lightning, white corn, white clouds, and he-rain. They set a big dish or bowl of shell on its summit, and in it they put two eggs of the Pigeon to make feathers for the mountain. The eggs they covered with a sacred buckskin to make them hatch (there are many wild pigeons in this mountain now). All these things they covered with a sheet of daylight, and they put Rock Crystal Boy and Rock Crystal Girl into the mountain to dwell. (pp. 78–79)

Matthews recounts more fully the story of the making of the sacred mountains in note 51.

Soon after the arrival of the people in the fifth world…, some one said: "It would be well if we had in this world such mountains as we had in the world below." "I have brought them with me," said First Man. He did not mean to say he had brought the whole of the mountains with him, but only a little earth from each, with which to start new mountains here. The people laid down four sacred buckskins and two sacred baskets for him to make his mountains on, for there were six sacred mountains in the lower world, just as there are six in this, and they were named the same there as they now are here. The mountain in the east, Tsĭsnadzĭ́ni, he made of clay from the mountain of the east below, mixed with white shell. The mountain of the south, Tsotsĭl, he made of earth below mixed with turquoise. The mountain of the west he made of earth mixed with haliotis or abalone shell. The mountain of the north he made of earth mixed with cannel coal. Dsĭlnáotĭl he made of earth from the similar mountain in the lower world, mixed with goods of all kinds…Tsolíhi he made of earth below, mixed with shells and precious stones of all kinds…While they were still on the buckskins and baskets, ten songs were sung which now belong to the rites of hozóni hatál…

When the people came up from the lower world they were under twelve chiefs, but only six of them joined in the singing of these songs, and to-day six men sing them. When the mountains were made, the god of each of the four quarters of the world carried one away and placed it where it now stands. The other two were left in the middle of the world and are there still. A pair of gods were then put to live in each mountain, as follows: East, Dawn Boy and Dawn Girl, called also White Shell Boy and White Shell Girl; south, Turquoise Boy and Turquoise Girl; west, Twilight Boy and Haliotis Girl; north, Darkness (or Cannel Coal) Boy and Darkness Girl; at Dsĭlnáotĭl, All-goods…Boy and All-goods Girl; at Tsolíhi, All-jewels …Boy and All-jewels Girl. (pp. 220–221)

Matthews, following his two principal Navajo collaborators, Tall Singer and Laughing Doctor, tentatively identifies the Navajo Holy Mountain of the East as Pelado Peak.

Tsĭsnadzĭ́ni is the name of the sacred mountain which the Navahoes regard as bounding their country on the east. It probably means Dark Horizontal Belt. The mountain is somewhere near the pueblo of Jemez, in Bernalillo County, New Mexico. It is probably Pelado Peak, 11,260 feet [3,433 m] high, 20 miles [32 km] N.E. of the pueblo. White shell and various other objects of white—the color of the east—belong to the mountain. (p. 221n52)

Mayes, Vernon O., and Barbara Bayless Lacy

1989 Nanise': A Navajo Herbal. Tsaile, AZ: Navajo Community College Press.

Mayes and Lacy mention three plant species found in the VCNP that Navajos use as medicines (rush [*Juncus* sp.] and common mallow [*Malva neglecta*]) or for use in making curing implements (ponderosa pine [*Pinus ponderosa*]).

McNitt, Frank

1972 Navajo Wars: Military Campaigns, Slave Raids, and Reprisals. Albuquerque: University of New Mexico Press.

McNitt summarizes Navajo hostilities with other tribes, Hispanics, and Anglos in historic times. Of interest to the VCNP is his comprehensive account of Governor José Antonio Vizcarra's 1823 punitive expedition against Navajo raiders, who at that time clearly held the upper hand in their ongoing war with the Mexican colony. At the end of Vizcarra's expedition in the Four Corners region, he passed through the Valle Grande on his return to Santa Fe.

On August 24, after negotiating the pass through the Chuska Mountains and reaching the valley below, Vizcarra discharged two regiments of militia to make their separate ways home to Río Arriba and Río Abajo. With the balance of the command he proceeded directly eastward for fifteen leagues until meeting the Chaco Wash at

Fajada Butte. For the next two days he followed his outward route, resting briefly at Pueblo Pintado before continuing past the Chacra Mesa and down Torreon Wash. Below the present town of Cuba the command turned east on a trail leading across the Jemez Mountains by way of the Valle Grande. At sunset on August 31, after an absence of seventy-four days, the troops arrived in Santa Fe. The expedition was over. (p. 65)

Vizcarra's action did not resolve the colony's troubles with Navajo raiders. For example, between 1826 and 1829, during Governor Antonio Narbona's administration,

Navajos raided along the Río Grande, striking repeatedly at Jemez but ranging from Abiquiu and the Valle Grande southward to Belen. Thousands of sheep and other livestock were run off; some of the pastors were carried away as slaves and others were killed. A token force of fifteen soldiers was sent in March 1829 to patrol the frontier at Jemez. (p. 70)

McNitt reports that a party of Utes arrived at Jémez Pueblo in early 1835 to trade (p. 73). After their departure, a delegation of Navajo traders arrived. When they left, the Navajo traders drove off 50 of the Pueblo's herd animals. The Pueblo pursued them, recovered 18 head of livestock, and killed 1 member of the Navajo party.

Blas de Hinojos led another punitive expedition into Navajo country following this raid. McNitt implies that Vizcarra's route of 1823, which crossed the Valle Grande, might have become a familiar military road to Casafuerte in the Four Corners region (p. 73).

A fight between U.S. Army contractors, under the leadership of Robert Nesbit and Hiram R. Parker, and Navajo raiders occurred in the Valles Caldera during the summer of 1851 (pp. 184–186). The Nesbit-Parker party was cutting hay for the U.S. Army quartermaster stationed in Santa Fe. Although McNitt does not identify the hay camp by name, this station later became known as Old Fort. Given its many useful details, McNitt's summary of this episode deserves retelling in its entirety.

A scarcity of spring rain had left the ground cover of the lower valleys short and brown; for lush grass the partners had been forced to a higher elevation in the Jemez Mountains. At the Valle Grande, an emerald swatch surrounded by tall timber some forty miles [64 km] from Santa Fe, a blockhouse of green cottonwood logs had been built. Connected to it at the rear was a corral of the same logs laid one on top of the other to a height of four or five feet [1.2–1.5 m]. Here with a train of mule wagons purchased from Henry Dodge's associate, Pinckney Tully, the Nesbit-Parker outfit had been cutting a rich harvest.

A soaking rain fell on the mountain meadows through the afternoon of July 2, turning to a steady drizzle after nightfall. Because of rain and darkness, Nesbit said later, a man posted on guard at the coral failed to detect any sign of danger until a Navajo's arrow pierced his neck. Almost at the same instant the guard pressed the trigger of his gun, the shot being enough to rouse the men asleep in the house. For two hours, Nesbit and Parker said, they and their beleaguered men "kept up a continued fight… on three sides of the house, while another portion of the Indians were endeavoring to pull down the corral to get the animals out, which they succeeded in doing after three o'clock—when they drove off all the animals, consisting of over one hundred in all."

Navajos in the attacking party, they informed Colonel Munroe, numbered between 250 and 300 warriors. Affidavits were to be furnished, and in the circumstances they would request Munroe to inform them how to recover their animals or, failing that, apply for cash indemnification, as the loss was so great that it might ruin them.

Another version of the incident was related shortly afterward by a party of eleven Pueblos of Jemez who by mere chance encountered a detachment of dragoons patrolling southward through the mountains from Abiquiu. They had been herding cattle in the vicinity the night of the attack, the Pueblos said. As the Navajos had withdrawn with the stolen horses and mules the Jemez had followed quietly, keeping themselves hidden. Finally, at a place where the Navajos had to descend a steep hill that left them exposed and at a disadvantage, the Jemez killed two of them and captured five mules. Two of the mules had been left on the road back to the Valle Grande; the other three had been restored to Nesbit and Parker. Lieutenant Beverly H. Robertson felt the matter worth investigating and persuaded one of the Pueblos to accompany his detachment back to the hay camp.

He reported later that he found the blockhouse situated on a hill of gentle declivity, within fifty yards of a piece of woodland, the corral, which joined the house, being on that side. He spoke with the guard who had been wounded at the start of the attack, examined a part of the corral that the Navajos had torn down, and was shown where forty to fifty arrows had been fired at the blockhouse door to discourage an effort

by the men inside to break out. There were no loopholes in the house, Robertson observed thoughtfully, and the only opening toward the corral (through which Parker had fired two shots from his revolver) was so high in the wall that one ball struck the topmost log on the opposite side of the corral.

"There were no guns fired at the Indians, except by the sentinel on Post," Robertson reported. "The sentinel said it was impossible from the darkness of the night, to tell their exact number, but he believed there could not have been less than forty."

The guard's story, Robertson believed, fitted rather well with what the Jemez had told him—that the Navajos numbered perhaps thirty or forty warriors. Men employed by Nesbit and Parker at the hay camp also confirmed the Pueblo's accounting for stolen livestock: the Navajos had driven off six horses and forty-three mules, of which five had been recovered. (pp. 184–185)

In a separate note, McNitt reports that Colonel Munroe stated that Nesbit and Parker never submitted affidavits in support of their claimed losses because of the raid (p. 185n4).

Lastly, McNitt (p. 278) mentions a raid by four Navajos on Peña Blanca in 1856. New Mexican militiamen pursued the raiders and engaged them in the Valle Grande, killing two of the Navajo.

Miera y Pacheco, Bernardo

1779 Plano de la Provincia Interna de Nuebo Mexico que hizo por mandado de el Tnte. Coronel de Caballeria, Gobernador y Comte. General de dha Prov.a Don Juan Bap.ta de Ansa. On file. Santa Fe: Map Room, Angélico Chávez History Library, Palace of the Governors, Museum of New Mexico.

As the title indicates, cartographer Bernardo Miera y Pacheco (who originally came to Santa Fe from El Paso ca. 1759 at the behest of his cousin, then Governor Marín del Valle), who identifies himself as "exempt soldier of the royal presidio of Santa Fe," drew this map at the request of Governor Juan Bautista de Anza. The Valle Grande is labeled "*Valle de los Bacas* (Valley of the Cows)." The map is not to scale, and the valley appears many times its actual size. This fact suggests that, although travelers and herders had admired the Valle Grande's majesty, no one had ever measured it.

Minnis, Paul E., and Richard I. Ford

1977 Appendix C: Analysis of Plant Remains from Chimney Rock Mesa, 1970–1972. *In* **Archaeological Investigations at Chimney Rock Mesa, 1970–1972. Frank W. Eddy, ed. Pp. 81–91. Memoirs of the Colorado Archaeological Society. Boulder: Colorado Archaeological Society.**

Minnis and Ford identify the food use of snowberry (*Symphoricarpos* sp.), a plant that grows in the VCNP, in the pre-Columbian Pueblo archaeological record of Chimney Rock.

Moore, Michael, compiler

1977 *Los Remedios de la Gente***: A Compilation of Traditional New Mexican Herbal Medicines and Their Use: 134 Different Leaves, Flowers, Roots, Barks & Gums in Spanish, English & Latin. Santa Fe, NM: Herbs Etcetera.**

Of the 134 Hispanic medicinal species reported by Moore, 57 genera grow in the Valles Caldera area. Of these, three Arnica (*Arnica* sp.), native hops (*Humulus lupulus*), and creeping barberry (*Mahonia repens*) are unique to Moore's compilation.

Morley, Sylvanus

1938 Appendix II: The Rito de los Frijoles in the Spanish Archives. *In* **Pajarito Plateau and Its Ancient People. Edgar L. Hewett, ed. Pp. 149–154. Albuquerque: University of New Mexico Press.**

In this article, Morley states that Hispanics first occupied the Rito de los Frijoles in 1780, when Governor Juan Bautista de Anza received a petition from Andres Montoya having to do with a grant made to Montoya by former Governor Tomás Velles Cachupin. Montoya had never occupied the tract. He asked Governor Anza to make it over to his son-in-law, Juan Antonio Lujan. This being done "said Lujan commenced to work said farm in which he labored very much in clearing it off, it being virgin land" (p. 150).

The Court of Private Land Claims dismissed a petition for confirmation of the Rito de los Frijoles Grant. By this decision, the boundary of the Ramón Vigil Grant was extended south

to the northern edge of the Rito de los Frijoles Canyon and the Cochití Pueblo Grant was extended north to the southern boundary of the Ramón Vigil Grant.

Naranjo, Tessie

1995 Thoughts on Migration by Santa Clara Pueblo. Journal of Anthropological Archaeology 14:247–250.

A sociologist from Santa Clara Pueblo, Naranjo helps explain the primacy of the concept of movement in Pueblo cosmology and landscape-making. Movement of people across the land, just as movement of life force through all the realms of the Pueblos' cosmos, means transformation and renewal. The European idea of abandonment is neither applicable nor appropriate.

In terms of movement specifically, Naranjo explains,

> *Movement is one of the big ideological concepts of Pueblo thought because it is necessary for the perpetuation of life. Movement, clouds, wind and rain are one. Movement must be emulated by the people. (p. 248)*

She adds, "The idea was to have boundaries to create a place—to fix a place—temporarily within the larger idea of movement" (p. 249).

Naranjo, Tito, and Rina Swentzell

1989 Healing Spaces in the Pueblo World. American Indian Culture and Research Journal 13(3–4):257–265.

Naranjo and Swentzell, both members of the Santa Clara Pueblo and educators, consider the Pueblos' concepts of center, periphery, movement, process, and connectedness in their understandings of landscape, place, time, and tradition. In their consideration of healing places, which are where a state of balance is maintained between human and natural environments (p. 257), they examine the importance of negative spaces, whether formally constructed (as in village plazas) or naturally occurring (as in caves), through which the energy of all life forces moves to unite all parts of the Pueblos' cosmos.

> *The symbolic openings are found in the plaza area, within the kiva, and in the enclosing hills as well as in the far mountains. These openings represent, again, an effort to connect this level of existence with that below. Each of the openings (nan-sipu and shrines) is a special healing space. Each is the primary point of energy flow between the simultaneous levels of the Pueblo world—it is where the movement of the universe is most intense. Those points were centering places of the Pueblo world, and human life can be in the connective flow of the universe. They are, however, inconspicuous points in the flow of the universe. (p. 262)*

Nichols, Robert F.

n.d. Wetherill Mesa Excavations: Step House, Mesa Verde National Park, Colorado. Manuscript on file: Mesa Verde, CO: U.S. Department of the Interior, National Park Service.

Nichols reports the use of wood from the common chokecherry (*Prunus virginiana*), the currant (*Ribes* sp.), and the elderberry (*Sambucus* sp.) in pre-Columbian Pueblo tool manufacture at Mesa Verde. All three of these plants occur in the VCNP.

O'Bryan, Aileen

1956 The Dîné: Origin Myths of the Navaho Indians. Bureau of American Ethnology Bulletin 163. Washington, DC: Smithsonian Institution.

In figure 3 O'Bryan provides an illustration of a Navajo sandpainting that represents the earth (p. 23). *Sisnádjini*, the Holy Mountain of the East, appears as a circle below the figure's left shoulder.

O'Bryan's retelling of the creation of the Holy Mountains in the present world largely follows that provided by Matthews (1897). In her account, O'Bryan relates that First Man and First Woman ask the Holy Beings, White Bead Boy and Rock Crystal Girl, to go inside the Mountain of the East. First Man and First Woman

> *then fastened Sis na´ jin to the earth with a bolt of lightning. They covered the mountain with a blanket of daylight, and they decorated it with white shells, white lightning, black clouds, and male rain. They placed the white shell basket on the summit; and in this basket two eggs of the…pigeon. They said that the pigeons were to be the mountain's feather; and that is why there are many wild pigeons in this*

mountain today. And lastly they sent the bear to guard the doorway of the White Bead Boy in the East. (p. 24)

O'Bryan continues the story by recounting that First Man and First Woman told the people:

. . . that they were to use the six sacred mountains indicated as their chief mountains. The place of emergence from the lower worlds was where it is now. The people could always see their great mountains above the lower mesa lands. When everything was finished a smoke was prepared for the mountains and the chants were sung. (p. 26)

O'Bryan notes further:

All the mountains have their prayers and chants which are called Dressing the Mountains. All the corner posts have their prayers and chants, as have the stars and markings in the sky and on the earth. It is their custom to keep the sky and the earth and the day and the night beautiful. The belief is that if this is done, living among the people of the earth will be good. (p. 24)

O'Bryan provides several of the Mountain chants (pp. 25, 27–30). In this ceremonial repertoire, the songs "tell of the mountain people: the bear, the deer, the squirrel, and of all the others" (p. 26). They also reinforce the many-tiered relationships among the people and the mountains that crosscut the dimensions of space and time.

Olson, Gilbert V.

1973 Field Notes of the Dependent Resurvey of a Portion of the North Boundary of the Baca Location No. 1 Grant, Portions of the East Boundary and Subdivisional Lines with the Subdivision of Certain Sections Township 18 North, Range 3 East. Microfiche. Santa Fe, NM: State Office, Bureau of Land Management.

This survey was carried out between October 15, 1970, and September 23, 1971, by Cadastral Surveyor Gilbert V. Olson, and was approved by the Chief, Division of Cadastral Survey, Bureau of Land Management, on November 21, 1973.

Olson tabulates earlier surveys including Sawyer and McBroom in 1876 (see entry for Sawyer and McBroom 1876); a survey of parts of the north, east and south boundaries by Albert F. Easley in 1883; Douglass and Neighbour in 1912 (see entry for Douglass and Neighbour n.d.); Osterhoudt, Hall and, Devendorf in 1920–1921; and a survey of some subdivision lines by Oscar B. Walsh in 1927.

This is a reestablishment of the survey performed by Easley in 1883 and of the resurvey performed by Osterhoudt, Hall and Devendorf in 1920-1921.

Opler, Morris E.

1936 A Summary of Jicarilla Apache Culture. American Anthropologist 38(2):202–223.

The author describes the Jicarilla use of the common chokecherry (*Prunus virginiana*) and acorns (*Quercus* sp.) for food. Both species occur in the VCNP.

Opler, Morris E.

1983a The Apachean Culture Pattern and Its Origins. ***In*** **Southwest. Alfonso Ortiz, ed. Pp. 368–392. Vol. 10 of Handbook of North American Indians, William Sturtevant, ed. Washington, DC: Smithsonian Institution.**

In this informative article, Opler provides practical general discussion of central tendencies and variations in the early culture-history of Apachean cultures.

Opler, Morris E.

1983b Mescalero Apache. ***In*** **Southwest. Alfonso Ortiz, ed. Pp. 419–439. Vol. 10 of Handbook of North American Indians, William Sturtevant, ed. Washington, DC: Smithsonian Institution.**

This article provides a concise overview of the anthropology and history of the Mescalero Apache Tribe.

Ortiz, Alfonso

1969 The Tewa World: Space, Time, Being, and Becoming in a Pueblo Society. Chicago: University of Chicago Press.

This now-classic ethnographic monograph provides a comprehensive symbolic analysis of Tewa culture, with the fundamental principles that structure the Tewa people's understandings of their cosmos. While this work offers no information directly related to the VCNP, Ortiz's study is an essential reference because it helps explain significant aspects of the conceptual Tewa world.

This book, like all of Ortiz's work, must be considered with care and respect. Now deceased, Ortiz was of mixed Tewa and Nuevomexicano descent, but he identified himself mainly with San Juan Pueblo. He became a source of controversy within San Juan Pueblo society because he divulged information about San Juan Tewa society and culture that some community members felt should not be shared with outsiders.

Ortiz offers a general understanding of the Tewa ethnographic landscape. He examines the relationships and meanings between the natural and supernatural worlds of the Tewas' cosmos to permit a cogent definition of Tewa ethnographic landscape structure and boundaries. He specifically considers questions concerning how the Tewa simultaneously divide and unite their world through a system of social and symbolic dualism, with the whole greater than the sum of its parts. As Fred Eggan notes in the book's forward:

> *. . . dualism is only part of the Tewa picture, though a fundamental part; the way in which the dual organization ties the human categories together into a larger structure is an important part of the author's contribution. (p. xii)*

Ortiz's analysis suggests that places on the Tewa's ethnographic landscape cannot be understood in isolation or as having discrete, impermeable spatial or temporal boundaries. His discussion of mountains in Tewa cultural geography is important in this regard:

> *The mountains are understood by the Tewa to be endowed with sacredness in several ways. First, a lake or pond is associated with each, and within this body of water live the "Dry Food Who Never Did Become," of the appropriate directional color. Secondly, there is a nan sipu or earth navel on top of each mountain, and within these live the Towa é who stand watch over the Tewa world. The color classification is again replicated. (p. 19; emphasis added)*

The identification of Sandia Mountain as the cardinal south summit with water, directional color association, a *nan sipu*, and the Towa é embodies many-layered and interrelated metaphorical referents. Used in conjunction with other Tewa ethnographical accounts, Ortiz's analysis provides guidelines for considering aspects of relationships among (1) mountains; (2) volcanoes and caves; and (3) the centers of the Tewa communities.

Ortiz, Alfonso

1972 Ritual Drama and the Pueblo World View. ***In*** **New Perspectives on the Pueblos. Alfonso Ortiz, ed. Pp. 135–161. Albuquerque: University of New Mexico Press.**

Ortiz distinguishes world view from religion:

> *A world view provides a people with a structure of reality; it defines, classifies, and orders the "really real" in the universe, in their world, and in their society….If world view provides an intellectually satisfying picture of reality, religion provides both an intellectually and emotionally satisfying picture of, and orientation toward, that reality. (p. 136; emphasis added]*

Ortiz adds:

> *A world view, then, is paramount in a cultural system in the sense that it denotes a system of symbols by means of which a people impose meaning and order on their world. This being so, the initial and most important question to ask of a people or a body of data is: What are the symbolic resources in terms of which they think and act? (p. 137)*

This essay documents the precision among Pueblo people in bringing their definitions of community space and time into line with their cosmologies. These constructions all are based on the premises that (1) all space is sacred, (2) sacred space is inexhaustible, and (3) everything—animate and inanimate—has its place in the cosmos.

Ortiz traces the relationship between boundary and center. Boundaries demarcate things between the living world and the underworld (i.e., a vertical dimension), while centers, such as a village plaza, occupy the middle of the world (i.e., a horizontal dimension). Ortiz notes

that in their attempt to reconcile their understandings of vertical and horizontal space in reference to the supernatural beings, the Pueblos characteristically place these beings just at, or just outside, their constructions of the living world. He argues:

One of the greater challenges in the study of the Pueblo world view is still that of determining the boundaries of particular Pueblo worlds, then working backward toward the center and filling them in. With their markedly centripetal point of view, this is the way the Pueblos think, too. (p. 154)

Ortiz, Alfonso

1979 San Juan Pueblo. *In* Southwest. Alfonso Ortiz, ed. Pp. 278–295. Vol. 9 of Handbook of North American Indians, William Sturtevant, ed. Washington, DC: Smithsonian Institution.

This article provides a concise overview of the anthropology and history of San Juan Pueblo.

Ortiz, Alfonso

1991 Through Tewa Eyes: Origins. National Geographic 180(4):6–13.

In this short article written for a general audience, Ortiz uses birth, naming, and death rituals to trace Tewa history from time immemorial. Ortiz outlines key principles of temporal and spatial relationship among the many places that make up the Tewas' ethnographic landscape and sustain the framework of community tradition. An illustration (pp. 12–13) conveys many aspects of the complex system of symbols that Ortiz evaluates comprehensively in his formal ethnographic study (1969).

Ortiz, Simon J.

1992 Woven Stone. Tucson: University of Arizona Press.

In this collection of poetic work derived from three previous volumes—*Going for the Rain*, *A Good Journey*, and *Fight Back: For the Sake of the People, For the Sake of the Land*—Ortiz, who is from Ácoma Pueblo, shares many insightful thoughts and stories about his life experiences and his views of the world in which he lives. Two poems, "That's the Place Indians Talk About" (pp. 321–324) and "We Have Been Told Many Things but We Know This To Be True" (pp. 324–325), richly illustrate the discussion Cajete (1994 [*see entry above*]) develops for Native American people's relationships with land and place.

Ortiz provides a thoughtful biographical essay as this volume's introduction. He offers a compelling observation about the many difficulties of expressing Pueblo ideas, which derive from his Keresan birth language, into English. This commentary deserves consideration when cultural resources planners, managers, and consultants confer with Pueblo people about their landscape constructions and meanings, which similarly derive from languages other than English.

[W]hen I learned English well and began to use it fluently, at least technically and intellectually, I found myself "objectifying" my native language, that is, in translation. And it felt awkward, almost like I was doing something I was forbidden but doing it anyway. I've posed myself the frequent question: Is it possible to translate from the Acoma language to another? Yes, I've insisted, but I'm not sure I am convinced of it or how complete the translation is. Since we're all human with the same human feelings and responses to feelings, we understand and share hurt, love, anger, joy, sadness, elation, a gamut of emotions. However, human languages are different from each other, and unique, and we have different and unique languages; it is not easy to translate from one language to another though we egotistically believe and *think* we can. And that is when I found myself objectifying my Acoma language and at emotional odds with myself. (p. 6; emphasis added]

Osterhoudt, L. A., W. V. Hall, and Charles W. Devendorf

1921 Independent Resurvey of the Baca Location No. 1. Microfiche. Santa Fe, NM: State Office, Bureau of Land Management.

U.S. Cadastral Engineers Osterhoudt, Hall, and Devendorf resurveyed the Baca Location between June 30, 1920, and August 24, 1921. This survey determined that the Location contained 99,289.37 acres (40,180.23 ha)—less than half an acre's (.2 ha) variance from the original 1876 survey by Sawyer and McBroom (see entry).

The "General Description" by Devendorf states:

> *This grant lies on the highest portion of the Jemez Range of mountains. The second highest mountain of the range, Pelado, about 11,700 ft. [3,567 m], is in the SW. corner of the grant. The highest mountain, Santa Clara Peak is in the section rendered fractional by the NE. cor. of the grant. Nearly all the grant is drained by the Jemez River, the 2 forks of which unite about a mile [1.6 km] SW. of the SW. cor. of the grant. The divide bet. the N. and S. drainage of the range lies just outside the grant at the NW. and NE. cors. And inside for a few miles near the middle of the N. side. The divide bet. the E. and SE. drainage lies entirely inside the grant but never far from the bdy. I estimate Santa Clara Peak to be about 12,600 ft. [3,841 m] high. There are numerous springs and swamps, giving rise to many streams on the grant. In the western portion, many of these springs contain sulphur or other mineral and many are warm to moderately hot. Sulphur Springs, a small but noted health resort is inside the W. body. of the grant, several sulphur springs being hot as desired for baths, and several springs of other kinds occurring in the same small tract.*

There are large open valleys and benches inside the grant, making about ¼ of the total area. This land and part of the mountain slopes is covered with a dense growth of grass, which reaches in many places any where from knee high to the height of the shoulders. A large proportion of these open places is swampy, but not too wet for grass. The remainder of the grant is covered with timber, the bulk of which is spruce, fir and aspen. Some of the lower elevations and southerly slopes, contain considerable valuable pine timber. Oak undergrowth occurs most in the higher pine levels.

The soil is generally a very rich black loam, but in some of the valleys it is a gravelly brown loam, and in much of the mountain country is more or less thin and stony. In the rougher mountainous portions the soil is largely bare, broken lava rock and huge boulders.

At this high elevation, 8,000 to 12,000 ft. [2,439–3,659 m], the rainfall is very heavy, also the snow fall. During the summer in the higher, rainier portion, I estimate that it rains at least one-fourth of the time, possibly one-half of the time. The rainfall along the lower S. side is considerably less than in the North and West portions, while it decreases rapidly in the to the S., E. and N., after leaving the grant. There is land with good soil and abundant rainfall N. of the grant. In the spring of 1921 the period between spring and autumn frosts at my camp was about 60 days. It is probably shorter on the higher mountains. (pp. 97–99)

Devendorf discusses the survey itself, noting that the chaining of the boundaries "is not as good as that of the center lines" (p. 99). He notes that the unofficial survey by L. D. W. Shelton was the basis for the grant line fences and that none of these is entirely on the true boundary but that the south fence "practically agrees" with the true boundary. He also notes that the grant conflicts with several homestead entries and cuts off certain lands surveyed for Santa Clara Pueblo.

Otero, Miguel Antonio

1935 My Life on the Frontier. Albuquerque, NM: Press of the Pioneers.

In 1881 Maríano Sabine Otero owned the Sulphur Springs, just outside the west boundary of the Baca Location as defined by the 1876 survey, and he and his uncle, Miguel Antonio Otero, jointly owned the Jémez Springs. Otero describes the creation of a commercial spring and bathhouses at Jémez Springs in 1882 (pp. 237–238; 241–277). The 1911 resurvey (see entry for USDA, Forest Service, 1915) established that Sulphur Springs is within the Baca Location boundary.

Page, Suzanne, and Jake Page

1982 Hopi. New York: Abradale Press.

The Pages portray many aspects of Hopi life rarely conveyed in academic ethnological monographs. One passage in particular captures the Hopis' conceptualization of their bipartite world and helps outsiders grasp the significance that Pueblo people attach to places, especially caves that connect the complementary parts of their world, on their ethnographic landscapes.

The Hopi land, the Hopi world, is completely peopled with spirits as real as—in fact, part of—the rocks. The sun rises from its house to the east and sets in its house to the west. Then from west to east it travels at night, making it day in the Underworld. The two worlds alternate but are not really separate: they are a continuum. (p. 187)

Parkhurst, T. Harmon

1920–1951 Photographs on file: Los Alamos, NM: Los Alamos Historical Museum.

T. Harmon Parkhurst (1883–1952), a native of upstate New York, came to Santa Fe about 1910 to participate in an archaeological reconnaissance in Frijoles Canyon. He then worked at the new Museum of New Mexico from 1910 to 1915 as museum photographer under the supervision of Jesse L. Nusbaum. Parkhurst opened a studio in Santa Fe about 1915, doing extensive regional photography on glass plate negatives. From 1920 through 1945 he worked with a 7- by 11-inch camera. Parkhurst was the official photographer of the Los Alamos Ranch School for most of its history. He retired in 1951 and lived his last years in Los Angeles.

Photographs on file at the Los Alamos Historical Museum include the following:

Fishing in the Valle Grande 1939 (LAHM-P1993-053–5520, box 3)
Ranch School students camping in Valle Grande (LAHM-P1977–323–1–4239, box 3)
Los Alamos Ranch School students at camp kitchen in Valle Grande (LAHM-P1981–585–1–4198, box 3)
Los Alamos Ranch School students at campsite in Valle de los Posos (LAHM-P–1981–585–1–4197, box 3)
Los Alamos Ranch School students at campsite in Valle Grande (LAHM-P–1981–585–1–4194, box 3)

Parsons, Elsie Clews

1925 The Pueblo of Jemez. Papers of the Phillips Academy Southwestern Expedition 3. New Haven, CT: Published for the Phillips Academy by Yale University Press.

Considered an essential and classic ethnographic study, this work is controversial because Parsons disclosed much traditional cultural knowledge held as sensitive by the people of Jémez Pueblo. As such, use of this work should be approached with care.

Parsons offers some information about the traditional associations that the Jémez maintain with the VCNP. For example, she reports that the Underworld Chief's Society makes a pilgrimage to Redondo Peak every summer (p. 63) and that community members go into the Jémez Mountains (presumably including the Valles Caldera) to harvest aspen trunks for making drums and *wati* grass from around springs for use in preparing prayer sticks (p. 104).

Parsons lists the mountains of cardinal directions as follows: "Yellow-Flint Mountain" to the east, "Blue-Flint Mountain" (i.e., *Wavema* [a.k.a. Redondo Peak]) to the north, "Red-Flint Mountain" to the west, and "Black-Flint Mountain" to the south (p. 137). She adds that the Jémez Mountains generally and Redondo Peak specifically recall the origins and ends of natural life and the eternity of all spiritual life. The Jémez Mountains represent "the place from which the people came and whence the newborn still come" (p. 125).

Parsons, Elsie Clews

1996 [1939] Pueblo Indian Religion. 2 vols. Lincoln: University of Nebraska. (Originally published Chicago, IL: University of Chicago Press.)

This monumental work is renowned both for its contributions to comparative Pueblo ethnography and the controversy that arises from their disclosure of substantive, secretive detail about Pueblo ceremonial practice and religious belief. Parsons was fully aware that she trespassed, both physically into areas where she did not have ritual empowerment and as an anthropologist interviewing people. She also was aware that she placed her consultants in personal and social risk through use of an unethical "secretive method" to record sensitive information (Strong, in Parsons 1996:x–xi). To many traditional people, Parsons' work was sacrilegious, desecrated the special qualities of places and personal relationships, and threatened to undermine the power of what she reported.

The information allows the reader to grasp certain elements of meaning embedded in statements by community scholars about the Pueblos' ethnographic landscapes in general and by community representatives about their village's traditional associations with the monument in particular. More importantly, Parson's work permits the identification of a coherent, layered system of belief and referent that guides how Pueblo communities construct and occupy their landscapes.

Peckham, Stewart

1990 From this Earth: The Ancient Art of Pueblo Pottery. Santa Fe: Museum of New Mexico Press.

In his introductory essay, Peckham (pp. 1–5) defines the concept of tradition in a manner that is both comprehensive and accessible to the layperson. In casting traditions as media through which people explain how "they became who they are" (p. 2), Peckham helps the reader understand how traditions are part of a living cultural and historical process that links the past with the present and provides continuity for preparing for the future. Peckham uses the following major points to organize his thoughtful discussion:

Traditions are persistent.
Traditions help to maintain order.
Traditions have continuity.
Traditions change through time.
Traditions occupy definable space.
Individuals may alter traditions.
Similar traditions rarely are identical.
Extinct traditions never really are revived.
A tradition is a thing of value.

Peckham also discusses the pre-Columbian Pueblo use of tansy mustard (*Descurainia pinnata*) in making paint for decorating pottery. This plant grows in the Valles Caldera area.

Photo Archives, Palace of the Governors

ca. 1935 Selected Photographs of the Valles Grandes by T. Harmon Parkhurst and Unattributed Photographs of Ranching Activity on the Baca Location No. 1. Santa Fe: Museum of New Mexico.

The photo collection includes views of the Valle Grande by T. Harmon Parkhurst ca. 1935. Negative numbers 50805–50808, 51455, 51459, 51461, 51462, 68912–68914, 57974, 57975, 88854, and 127488 are images of the Valles Caldera. An enclosed note refers to the Valles Grande, San Antonio, Telledo [*sic*], Rincon, Poso, Jaramillo, Seco and San Luis, but the photos themselves are not labeled by valley.

Several unattributed photographs are: a flock of sheep, a shepherd, and a dog (NN 5454); a flock of sheep and a Hispanic boy (NN 51461); a flock of sheep, a shepherd and a dog (NN 22701); a photo of several cattle grazing in the Valle Grande (NN 51455); and a flock of sheep grazing (NN 51457).

Powell, J. W.

1961 [1885] The Exploration of the Colorado River and Its Canyons. New York: Dover Publications. (Originally published as Exploration of the Colorado River of the West and Its Tributaries: Explored in 1869, 1870, 1871, and 1872, Under the Direction of the Secretary of the Smithsonian Institution. Washington, DC: U.S. Government Printing Office.)

The rocks of the Jémez Mountains region were first described by J. W. Powell during his 1880s reconnaissance work. The region was known then as the Tewan Plateau. Powell recognized it as an extensive volcanic field of many types of volcanic rocks and voluminous ash deposits.

Redondo Development Company

1915 Deed of Trust, Redondo Development Company to Warren Savings Bank, April 1, 1915. Sandoval County, New Mexico, Records, Deed Record No. 2 (1911–1922). Accession No. 1959-042. Santa Fe, NM: State Records Center and Archives.

The Redondo Development Company (with its principal office in Albuquerque, New Mexico) executed this mortgage to the Warren Savings Bank of Pennsylvania. The Redondo Development Company authorized the issuance of bonds in the value of $175,000, securing the payment of principal and interest (at 6 %) by this mortgage to Warren Savings Bank. The bonds were to mature on April 1, 1925. This mortgage is on "all that certain tract of land cummunly [*sic*] known as Baca Location No. One, situated in the counties of Sandoval and Río Arriba in the Territory of Mexico [*sic*], the same being one of the tracts of land located by the heirs of Luis Maria C. de Baca under the authority conffered [*sic*] by section 8 of an act of congress of the United States, approved June 21, 1860…" The Redondo Development

Company had the right to sell the timber on the lands, provided such sale or sales were not made for a price less than $175,000.

The mortgage instrument was signed by E. D. Wetmore, President, Redondo Development Company, and A. J. Haseltine, President, Warren Savings Bank.

Reichard, Gladys Amanda

1963 Navajo Religion: A Study of Symbolism. Bollingen Series 18. Princeton, NJ: Princeton University Press.

Reichard's insightful discussion of the Navajo's conceptualization of mountains warrants full reiteration:

> *Mountains, though places, are so personalized that I have classified them as deities. They may be included in lists of Holy People mentioned in formula and prayer; they have an "inner form," "something which lies inside"…, and stabilizes them, doubtless a counterpart of the Agate or Turquoise Man which makes a man invincible. When people in the lower worlds were forced by floods to leave, they took special care to bring tokens of the mountains with them. No Navajo conception of the world, whether in the past or the future, is conceivable without the contemporary arrangement of mountains. The mountain symbolism is due no doubt to the belief that they are homes of the gods, associated with hogans. (p. 452)*

Reichard next summarizes the difficulty, if not the outright impossibility, of identifying the precise geography for the Navajo Holy Mountain of the East. In her evaluation, she describes the traditional Navajo practices of variously collecting soil and water from these holy summits for later use in rituals closer to home.

> *The provenience of the "eastern mountain" is much discussed by Navaho chanters, but there is no agreement. sisnádjini, "the-particular-one-that-is-black-belted," is its name. Matthews [see entry for Matthews 1897] said it was Abiquiu Peak or the one next to Abiquiu, which might be Pedernal Peak. [In a footnote, Reichard notes that Matthews and others refer to "Belted Mountain" as Pelado Peak.] Father Berard accepts for the Navajo the mountain identified by the Jicarilla Apache as Blanca Peak in Colorado, and Sapier-Hojier, doubtless following his lead, also translate sisnáʿdjiní (their recording) as Blanca Peak. Father Berard's Navajo authorities, convinced that it was the Holy Mountain of the east [see entry for Haile 1938], collected soil to be ritualistically employed later.*
>
> *On the other hand, when in 1933 the Navaho decided to have the Rain Ceremony preformed, the Rain Singer conducted a pilgrimage to Wheeler Peak (sisnádjiniˑ), where they ceremonially collected waters. They explained, however, that "although Wheeler Peak is, as we know, pretty far east, it is the right mountain." From this and other conflicting remarks, we may well exercise caution in accepting any one as "the right" mountain. From the Rain Singer's qualification I infer that "too far east" indicates Pedernal or Pelado Peak as the nearest mythical location; Blanca Peak seems much too far north. Evidence of men who started out on a ritualistic quest without suggestion of whites is a bit more convincing than that of Navaho taken on a "scientific" field trip. I do not by these remarks mean to imply that anyone was insincere—I mean merely to demonstrate that mythical places may be easily rationalized as "scientifically" correct, even though one name be assigned to several. (pp. 452–453)*

In her chart 1, Reichard provides the following symbols that the Navajo associate with the Holy Mountain of the East:

color:	white
mountain:	sisnádjiniˑ
fastened by:	lightning
covered by:	daylight, dawn
jewel:	whiteshell, whiteshell with belt of dark cloud
bird:	pigeon, white thunder
vegetation:	spotted, white corn
sound:	thunder in young eagle's mouth
people by:	Rock Crystal Boy, Rock Crystal Girl, Whiteshell Boy, Whiteshell Girl, Dawn Boy, Dawn Girl
moved by:	spotted wind
extra gifts:	white lightning, dark cloud, male rain, white corn
tutelary:	xaˑctc′é′δγan

Reiter, Paul

1938 The Jemez Pueblo of Unshagi, New Mexico. University of New Mexico Bulletin 4(1). Monograph of the University of New Mexico and School of American Research. Albuquerque: University of New Mexico Press.

This report mainly concerns excavations at the Jémez village of Unshagi carried out by the University of New Mexico and School of American Research from 1928 to 1934.

Chapter II ("History") summarizes early history (1540 to the Reconquest and early eighteenth century). Reiter quotes Bustamante's description, in his narrative of the 1581 Rodríguez-Chamuscado expedition, of the Jémez pueblos; Espejo's account of the "province of the Emexes"; and Juan de Oñate's visit to the Jémez province in August 1598. He discusses fray Gerónimo de Zárate Salmerón's mission to the Jémez province in the period 1621–1626 (Reiter believes that Zárate arrived in New Mexico in 1621 rather than 1617 or 1618 as suggested by other sources) and his prospecting in the Jémez Mountains.

Robbins, W. W., J. P. Harrington, and Barbara Freire-Marreco.

1916 Ethnobotany of the Tewa Indians. Bureau of American Ethnology Bulletin 55. Washington, DC: Smithsonian Institution.

In this essential publication, Robbins and others provide a wealth of information on more than 100 plants used by the Tewa communities (Nambé, Pojoaque, San Ildefonso, San Juan, Santa Clara and Tesuque pueblos) of the northern Río Grande. Besides listing economically, socially, or useful plant taxa, they often provide cogent discussion of how the Tewa and some of their neighbors, including other Pueblos, the Navajo and the Jicarilla, name and use these materials. Several dozen of these plants grow in the VCNP. Examples include White fir (*Abies concolor*), which has medicinal applications and provides twigs suitable for making pipe stems. The authors note that one-seed juniper (*Juniperus monosperma*) provides food; fuelwood; bark for torches; leaves; twigs and berries for a variety of medicines; and boughs for making bows. Another all-purpose plant is broad-leaf yucca (*Yucca baccata*), whose uses include soap for personal hygiene and washing clothes, fiber for cord and rope, edible fruits, and brushes for painting pottery.

Romeo, Stephanie

1985 Concepts of Nature and Power: Environmental Ethics of the Northern Ute. Environmental Review 9(2):150–170.

Romeo shares perspectives of traditional Ute ideology about their environment, which, in turn, inform their landscape constructions. Ute traditionalists discuss community beliefs about water, land, mountains, plants, and wildlife.

Ross, Clarence S.

1931 The Valles Mountain Volcanic Center of New Mexico. Transactions of the American Geophysical Union 12:185–186.

Ross, a federal geologist with the U.S. Geological Survey, first began surveys in the Jémez Mountains in the 1920s. Although more recent investigations supersede this early discussion of the history of volcanism in northern New Mexico, it still offers useful insights. For example, Ross explains that explosive rhyolitic eruptions blasted a great crater out of older andesite-latite volcanics.

> *This was 16 to 18 miles [26–29 km] in diameter, over 50 miles [80 km] in circumference, and 600 to 800 feet [183–244 m] deep. The materials ejected were almost exclusively tuffs, which were deposited in even beds sloping from an elevation of about 9,000 feet [2,744 m] at the crater-rim to about 6,000 feet [1,829 m] at 12 to 14 miles [19–46 km] to the east at the Río Grande. This is the largest crater known, being even larger that the great Ngorongoro crater of Africa. (p. 185)*

Ross mistakenly states that the crater is not a caldera because there is no subsidence, a conclusion corrected in later work (see entry for Smith and Bailey 1968). Ross believed at this time that the Redondo Dome was made up of older volcanics that had not been blasted out of the crater; he did not recognize it as a resurgent dome.

Ross, Clarence S.

1938 The Valles Volcano, New Mexico. Washington Academy of Sciences Journal 28:417.

This description of the Valles Caldera is a continuation of Ross' earlier observations.

Ross, Clarence S., and Robert L. Smith

1960 Ash-Flow Tuffs: Their Origin, Geologic Relations and Identification. Professional Paper 366. Washington, DC: Geological Survey.

This discussion of ash flows, a volcanic phenomenon, is based on fieldwork in the Valles Mountains of northern New Mexico, as well as observations in Mexico, New Zealand, and Iceland. The authors observe that ash-flow deposits in the Valles Mountains reach a maximum thickness of nearly 1,000 feet (305 m) and an extent of more than 350 square miles (890 sq km) (p. 17).

The report includes an illustration of Battleship Rock in Cañon de San Diego. The authors note that this illustration shows the columnar structure of many characteristic ash-flow tuffs, ash-fall tuffs near the junction of Colle and Peralta Cañones, a welded-tuff scarp in Cañon Medio Día, an ash-flow tuff scarp below the Puye Ruins, the ash-flow tuff scarp of Capulin Canyon, and another ash-flow tuff scarp in the Valles Mountains.

Rothman, Hal

1989 Industrial Values and Marginal Land: Cultural and Environmental Change on the Pajarito Plateau 1880–1910. New Mexico Historical Review 64:185–211.

Rothman discusses environmental change and degradation on and around the Pajarito Plateau after the coming of the railroad in 1880. He states that American [Anglo] influence "telescoped into a few years much more environmental and cultural change than Spanish practices had produced in nearly three hundred years" (p. 188). The Anglos saw the commercial grazing and timber potential of the Plateau (p. 198). Rothman's emphasis is on the Ramón Vigil Grant, but his general explanation of environmental degradation and the growth of the cash economy and of creditor-borrower arrangements serves to explain how the Valles Caldera was incorporated into the national economy.

Rothman notes that the Anglo owners leased the timber rights on the Vigil Grant to H. S. Buckman, a lumberman from Oregon, in 1898. Buckman began cutting timber on the Plateau, and "Buckman's timber enterprise destroyed what remained of the native ecosystem on the Vigil Grant" (p. 203).

> *[C]hanging patterns of land use in the region ignited a complicated process of economic, social, political, and environmental change. This change was incremental. Each stage pushed the people of the area closer toward dependency on outside markets. Native American and Hispanic populations found themselves with less and less of the plateau at their disposal. The Vigil Grant, its productivity demolished by Bishop and Buckman, was no longer available. The density of Hispanic and Native American stock outside the Vigil Grant increased, and more animals competed for less grazing land. Anglo overgrazing extended the impact of earlier limited overgrazing by Hispanics and Native Americans; cattle and sheep trails were no longer centralized around water sources. Larger herds also drove game higher into the Jémez Mountains, and the black bear, wild turkeys, and pumas that characterized the pre-1800 plateau became more scarce. The advantages of the plateau as a subsistence environment quickly disappeared, and the people that depended on it had to find new sources of sustenance. Prior to the lumber camps and tie-gangs, few Hispanics or Native Americans worked for anyone else. Instead, they grew foodstuffs, tended animals, and traded for items that they could not produce themselves. Cash money was scarce, and labor was a commodity to be bartered, not sold. Buckman's crews received cash for their labor, and the influx of money made the goods in the stores by the railroad in Española more available to the people of the region. With motives born of desire and necessity, Hispanics and Native Americans began to participate in the cash economy. As their base of subsistence became less fruitful, many Hispanics entered the market to trade for foodstuffs. Many also sought to acquire the tools and implements of industrial America. These were expensive, and often required credit—the final step in becoming a part of the cash economy…the need for credit and its availability dramatically changed both farming and grazing in the Pajarito Plateau area. Cash crop farming became prevalent, and new patterns of land use emerged. (pp. 205–206)*

Rothman explains that decline in the quality of forage, the extension of the National Forests and the loss of open land forced many Hispanics to run sheep on shares, a business dominated by Frank Bond.

> *Bond acquired so much public and private grazing land that small herders, who could not find enough pasture for their stock, had to sign on with him. Bond's system tended to impoverish these small herdsmen. Partidarios took his sheep along with their own, and Bond made the herders fully responsible for the animals in their care. Their own*

stock served as collateral. Bond collected a fee for range use from the partidarios, who also had to outfit themselves from his store, where a flat 10 percent interest rate was charged. With expenses mounting, most partidarios were lucky to keep their own sheep at the end of a contract period. As Bond's empire grew he became the most influential man in the Española Valley. (pp. 209–210)

Saile, David G.

1977 Making a House: Building Rituals and Spatial Concepts in the Pueblo Indian World. Architectural Association Quarterly 9(2–3):72–81.

Saile provides a brief review of the conceptual underpinnings of Pueblo world view in relation to habitation architecture. Saile emphasizes that houses were "not solely a place of residence" but also were places "of potential communication with the spirit world" (p. 77). Figure 4, titled "Section through Pueblo world levels indicating places of potential communication with the spirits" (p. 4), illustrates both aspects of the understood relationships that unify the center and periphery of the Pueblos' natural world and the connections among the natural world and the upper and lower levels of the cosmos. He also explains,

> *At the centre was great potential power in a controlled form. With proper prescribed ritual and prayer the power would benefit and ensure the survival of the village and at greater depths [or] heights the power was potentially more dangerous and uncontrollable. Ortiz notes that the "further one ranges outward from a particular village or groups of villages, the greater is the tendency to attribute characteristics opposite of normal to anything of symbolic value, even if only by surrounding it with an aura of sacredness and mystery" (1972, p. 157). He refers to societies holding such ideas as centripetal. (p. 77)*

Saile adds that in the Pueblos' understandings of their world,

> *power appears to have been derived from that which existed within the structure of the world and within its related phenomena (weather, astronomical observances). This power in turn, ultimately came from the creators of the world.*
>
> *The structure of the world had to be reconstructed, or at least restated, periodically. Any "new" or altered thing, plant, animal, human, or architectural had to take its proper place in that framework…it is clear that spatial and formal organization did complement "becoming" or changes of state in human existence; for example at birth, naming, or during initiation. Places became "protected," set apart, or sanctified as a point of communication with spirits, in co-operation with "rights of passage" or changes in the life stages of Pueblo residents… (p. 79)*

Sando, Joe S.

1979 Jemez Pueblo. *In* **Southwest. Alfonso Ortiz, ed. Pp. 418–429. Vol. 9 of Handbook of North American Indians, William Sturtevant, ed. Washington, DC: Smithsonian Institution.**

This article provides a concise overview of the anthropology and history of Jémez Pueblo.

Sando, Joe S.

1982 Nee Hemish: A History of Jemez Pueblo. Albuquerque: University of New Mexico Press.

As Alfonso Ortiz writes in the foreword, this volume consists of an "intimate account of Jémez Pueblo from distant times to the modern era" (p. xi). Sando, a member of Jémez Pueblo, writes about history with a focus on the concerns of the people about their past, present, and future. The theme of continuous occupation and stewardship of the land that the Jémez inherited in time immemorial underlies Sando's discussion.

As the people came into the Jémez Valley region, they established shrines to document their occupation and to request protection by the supernatural beings "from the vicissitudes of nature—floods, lightening, tornadoes, and drought" (p. 11). In this way they established the essential relationships between themselves and the natural environment defining Jémez Pueblo's landscape.

> *In the new home area shrines were also placed at Tsung-paa-gi ("sad spring"), Wa-ha-bela-wa ("butterfly place"), both below Tu-va-kwa, and along the two creeks mentioned above [i.e., Río de las Vacas and the Río Cebolla]. The others were farther east, in San Diego Canyon: Guisewa ("soda dam"), Daha-enu ("battleship rock"), at Jemez Falls, and on top of Wa-ve-ma (Redondo Peak), and the northeast-corner boundary mark at Pa-shum-mu ("flower mountain"), now known as Chicoma Peak.*

Unfortunately, most of these places, though in use today, are no longer in Jemez ownership so, again, permission has to be obtained before visiting these places ceremonially. The only known spot owned by Jemez is on top of Redondo Peak, where a "generous" area, four feet by four feet, [1.2 x 1.2 m] is set aside by the "benevolent" owner of the surrounding timber and grazing area. The only reason it is set aside is that it contains a visible shrine. The most important shrines in use currently are Tu-va-kwa, Wa-ve-ma, and Pe-kwile-gi. (p. 11)

The author maintains that this ancient homeland remains a major part of Jémez tradition, even though the USDA Forest Service administers most of these lands today (pp. 15–16).

Sando also notes that Jémez men went into upland forested areas, including Valle Grande, to herd horses during the months of June and July (pp. 11, 16, 50). In late summer, the men brought back the horses of the pueblo for threshing wheat. These practices persisted until about 1927, as shown by dates that the herdsmen carved into aspen trees (p. 11).

Sando retells the story of a battle waged by the Jémez upon the Navajo raiders in the Valles Caldera.

There are many stories of the experiences of young Jemez men while they were out herding horses. In a particularly popular story told to the grandchildren, during the late 1800s a raiding Navajo group was discovered unaware in the Valles Grande, camped on the west edge near a thick grove of scrub oak. The Jemez men were camped on the southeast side of the large, grassy meadow of Valle Grande. Since the Jemez men had spotted the Navajos first, they had the advantage; individual assignments and instructions were given, including the method of communications (whistling in different tones and length, plus imitating different bird calls for different situations). Cristobal Sando, grandfather and great-grandfather of the present-day Sandos, was selected to shoot the Navajo purported to be the leader. With their bows and arrows three men penetrated the thick brush surrounding the Navajo camp; the others were stationed at different distances, to prevent the raiders from reaching the herd and from inflicting damage to the men. After patiently waiting for the right situation and position of the Navajo leader, Grandpa Sando let fly an arrow. The fatal shot reached its mark and caused great excitement, confusion, and furor among the raiders. They took off toward the west, with more Jemez arrows flying after them—intended more as scare tactics than to kill the raiders. In their haste the raiders left twisted strips of cowhide and some strips of tanned deerhide. (pp. 11–12)

Sando shares some information about the how Jémez Pueblo's people earned their livelihood, in part, by using the Valles Caldera's resources. Valle Grande was the pueblo's traditional pasture during the summer (p. 16). "The forested areas near the natural bowl [of the Valle Grande] were also used by the eagle catchers [of the Eagle Catching Society] in the late fall, following the harvest" (p. 16). Sando reports further that the area where the Jémez quarried the flagstone needed for making paper bread was just south of Pa-shun (a.k.a. Tsikumu and Cerro Chicoma) (p. 16).

Lastly, Sando provides a brief discussion of the Pueblo's relationship to and subsequent loss of the Valle Grande.

After the ancient homeland was granted to the Spaniards in 1798, under a grant known as the Cañón de San Diego de Jémez Land Grant, the Jémez people began to depend on the forested area farther east for religious activities, herb collecting, hunting, eagle catching, grazing community horse herds, and collecting fir branches for ceremonial dances. They had free access and use, along with neighboring Pueblo Indian tribes, until 1905.

On October 12, 1905, President Theodore Roosevelt declared 34,900.27 acres [14,123.37 ha] of aboriginal land to be the Jemez National Forest Reserve. This occurred in spite of Article 1, Section 8 of the Constitution of the United States, which states that Indian tribes, like foreign nations and states, will be consulted on important transactions. No records have been found to indicate that the United States Indian Service was consulted on this matter.

Further loss of aboriginal land in Valle Grande, amounting to 16,811.74 acres [6,863.34 ha], took place in the 1920s under the Homestead Act. This land was listed as Tract B before the Indian Claims Commission in Docket 137…The rest, Tract C, was taken over by the government under the Taylor Grazing Act of April 4, 1936. The total losses, as presented before the Indians Claims commission, were 282,415.73 acres [114,287.45 ha]… (pp. 49–50)

Sauer, Carl O.

1925 The Morphology of Landscape. University of California Publications in Geography 2:19–54.

More than 75 years ago, Sauer defined landscape in a way that remains relevant today because it recognizes people's interactions with their environments as a uniquely evolving cultural-historical process:

> *The cultural landscape is fashioned from a natural landscape by a culture group. Culture is the agent, the natural area is the medium, the cultural landscape is the result. Under the influence of a given culture, itself changing through time, the landscape undergoes development, passing through phases, and probably reaching ultimately the end of its cycle of development. With the introduction of a different—that is, alien-culture, a rejuvenation of the cultural landscape sets in, or a new landscape is superimposed on the remnants of an older one. (p. 46)*

Sawyer, Daniel and McBroom, William H.

1876 Field Notes of the Survey of Baca Location No. One, in New Mexico, being Grant made to the heirs of Luis Maria Baca by act of Congress approved June 21, 1860. Surveyed by Daniel Sawyer and William H. McBroom, U.S. Dep. Surs., under their Contract No. 68, of April 15, 1876. Microfiche on file: Santa Fe, NM: State Office, Bureau of Land Management.

This is the original survey of the Baca Location, carried out between June 12 and 16, 1876. Sawyer and McBroom determined that the Location contained 99,289 acres (40,180 ha). Later resurveys (the restorative survey by W. B. Douglass and Hugh M. Neighbour in 1911–1912; and the independent resurvey by Osterhoudt, Hall, and Devendorf in 1920–1921 examined and corrected the errors in this survey. Douglass concluded that Sawyer and McBroom had in fact surveyed the boundaries—an open question considering the methods and standards of surveys performed in the 1860s and 1870s, and the fact that this survey was done in four days.

In the concluding "General Description" signed by Surveyor General H. W. Atkinson, the Baca Locationis described as:

> *. . . finely adapted for stock growing, raising a fine rank growth of grass especially in the interior which is filled with several small valleys and fine streams containing myriads of trout. The soil in the valley is rich but on account of its Altitude is too cold to raise any kind of grain or vegetables. There are no settlers living upon the Grant. Large herds of sheep are kept here during the summer, but not during winter as the cold is too severe. The east and north boundaries run along the summit of the Valles mountains and are high and slightly broken. The grant contains an abundance of pine and aspen timber. (pp. 14–15)*

Schroeder, Albert H.

1979 Pueblos Abandoned in Historic Times. ***In*** **Southwest. Alfonso Ortiz, ed. Pp. 236–254. Vol. 9 of Handbook of North American Indians, William Sturtevant, ed. Washington, DC: Smithsonian Institution.**

Schroeder provides a discussion of the Southern Tiwa pueblos at European contact. He notes that the Tiwa abandoned the village of Alcanfor or Coofor in 1540 for the use of the Coronado expedition (p. 242). Schroeder also discusses the Rodríguez-Chamuscado expedition of 1581–1582, that of Gaspar Castaño de Sosa in 1591, and the colonizing expedition of Juan de Oñate in 1598. Schroeder summarizes the available historical evidence to determine the identity of the pueblos named by early Spanish explorers.

Scurlock, Dan

1981 Euro-American History of the Study Area. ***In*** **High Altitude Adaptations along Redondo Creek: The Baca Geothermal Anthropological Project. Craig Baker and Joseph C. Winter, eds. Pp. 131–160. Albuquerque: Office of Contract Archeology, University of New Mexico.**

Scurlock describes documentary research and interviews with 10 informants. He discusses the early Spanish Colonial period (1540–1679) exploration and settlement of the area, the Pueblo Revolt (1680), and the Reconquest (1692–1696). Jémez and other northern pueblos received formal land grants late in the seventeenth century, according to Scurlock. After the Reconquest of New Mexico, the governor of New Mexico began to make colonial land grants north of Jémez Pueblo and west of the Río Grande. Governor Fernando Chacón made the Cañon de San Diego Grant in 1798. The first European settlement on it was probably

Cañon, at the confluence of the Jémez and Guadalupe rivers. By 1821 the Jémez Valley had a Hispanic population of 864 (p. 135).

In 1851 Navajos raided a hay camp established by a civilian contractor to cut hay for the U.S. Army. This camp was on the East Fork of the Jémez River and "was apparently later the site of Camp Valles Grandes, established by the United States Army as a deterrent to Navajo and Apache movement through the area during the final Navajo Wars of 1863" (p. 137).

Scurlock notes (p. 137) that the development of large single-owner herds of sheep, increased military protection, and the subjugation of the Navajos and other nomadic Indians in the 1860s and 1870s caused expansion into previously little-known areas adjacent to the Río Grande Valley.

Two land grants of the Mexican Period, the Luis María Cabeza de Baca Grant (1821) and the Town of Las Vegas Grant (1835) embraced the same lands on the Gallinas River. To settle this conflict, the Baca heirs eventually relinquished their claim, in exchange for Congressional authorization (1860) to select an equal amount of land in five square blocks elsewhere in New Mexico. The first block they chose was the Baca Location. They did not, however, receive title until 1876, when the New Mexico Surveyor General completed the survey of the location.

Two homesteads were established near the Baca Location by about 1883 (p. 140). Maríano Sabine Otero and his uncle, Miguel Antonio Otero, developed Jémez Springs as a commercial resort (with the backing of officials of the Atchison, Topeka and Santa Fe Railroad) and built a hotel and bathhouses in 1882. Gold and silver were discovered about five miles [8 km] south of the Baca Location in 1889; major mines and the boomtowns of Albemarle, Allerton, and Bland followed about 1894. The demand for lumber led to the establishment of several sawmills (p. 140). Maríano Otero and his son, Frederico J. (F. J.), bought the Baca Location in 1899. F. J. Otero became president of the Valles Land Company and used the Baca Location as summer range.

In 1909 F. J. Otero sold the Baca Location to the Redondo Development Company (with headquarters in Pennsylvania) but kept the grazing rights and leased the Baca for grazing sheep up until 1918 when Frank Bond acquired the grazing rights. Bond, one of New Mexico's most important general merchants in the late Territorial and early statehood period, leased the Baca Location from the Redondo Development Company for $500 a month and used it for summer grazing, wintering his sheep on the Ramón Vigil Grant (which he bought in 1919) and the Alamo Ranch northwest of Bernalillo. Despite losses on the Baca in the severe winter of 1918–1919, Bond continued to develop his operations there. He bought the Baca in 1926, but the Redondo Development Company retained the timber for 99 years (p. 144).

Scurlock notes (p. 144, 147) that 73 Bond employees were on the Baca Location in the summer of 1918. He lists the employees identified by informants or found in the Bond and Son business records (see entry for Bond and Son 1918).

Guy H. Porter and his son, Frank H., formed the White Pine Lumber Company in 1922. In 1924 they began to ship timber from the San Diego Grant over the line to Bernalillo. (Note: This required the condemnation of a right-of-way across Jémez Pueblo, authorized by the [federal] Pueblo Lands Condemnation Act of 1926, subsequently reenacted in 1928.) The White Pine Lumber Company cut about 100 million board feet of lumber from 1924 to 1931. With the onset of the Depression and a drop in demand for lumber, the company ceased operations in 1931. T. P. Gallagher, Jr., president of the New Mexico Lumber and Timber Company, bought the White Pine Lumber Company and resumed logging on the upper San Diego Grant. In 1935, the Redondo Development Company sold the logging rights on the Baca to the Firesteel Lumber Company. Under agreement with Firesteel, New Mexico Timber began logging near Redondo Creek and built a logging camp on Redondo Creek ("Redondo Camp") (p. 148).

The timber rights were transferred to New Mexico Timber in 1939 (p. 148). Redondo Camp was abandoned in 1939, and most of the logging moved to the northwest part of the Baca. Logging continued into the war years and included cutting on Redondo Peak, at El Cajete, and along the Jaramillo drainage.

Because of a decline in wool prices in 1939–1940, Bond added cattle to his operation. After his death in 1945, the Bond family leased the Baca to various cattle ranchers. James Patrick Dunigan bought the Baca in 1962. He ran cattle, bought back the timber rights in 1971, and ended logging on the Baca (after suing New Mexico Timber in 1964 in federal district court to obtain recognition of his successor interest in the 99-year lease, and appealing his case to

the 10th Circuit Court of Appeals in 1967 [see entry for *Baca Co. v. NM Timber, Inc.*]). An experimental steam well was drilled in 1963. Dunigan made elk hunts a major part of the operation. In 1976 the National Park Service bought 3,076 acres (1,245 ha) of the southeast corner of the grant as an addition to Bandelier National Monument. The Park Service, Forest Service, and Fish and Wildlife Service began studies in 1979 with a view to acquiring the Baca for the public.

Scurlock, Dan

1982 Pastores of the Valles Caldera: Documenting a Vanishing Way of Life. El Palacio 88(1):3–11.

Clyde Smith, who was born on a homestead at Battleship Rock in1899 and worked for Maríano S. Otero as a young man, estimated that there were over 100,000 sheep on Baca Location pastures during the summers of 1917 and 1918 (p. 4). In a series of taped interviews with Scurlock, Smith described the lives of early twentieth-century Valles Caldera shepherds (*pastores*) and camp tenders (*camperos*) with invaluable detail. Major portions of Scurlock's summary of these interviews follows.

> *Herd sizes ranged from 1,000 to 1,500 head and came from winter pastures and ranches at or near towns such as Peña Blanca, Bernalillo, Cuba, Jemez Springs, Española, Santa Fe, Algodones, and Cordova. The pastores and camperos, on foot or mounted on saddle horses, herded their sheep with the aid of dogs that…usually were collies...Burros and mules carried the camp equipment and supplies in wooden boxes and water in five-gallon wooden kegs.*
>
> *Camps were moved on the average of once a week following depletion of available grass for the flocks. Herders often would burn off pasture to promote rapid new growth of grasses and forbs.*
>
> *Camps were set up in areas protected from predominant winds but away from solitary trees or small groves of trees that sometimes were struck y lightning during frequent afternoon thunderstorms. The sites were picked for proximity to good pasture and water for the stock. Tents were erected on a slight grade for drainage of runoff during rains. A ridgepole tent was used to store supplies of food and equipment, and a single, center-pole, tepee tent, about seven by seven feet, served as sleeping quarters for two men. Eight wooden stakes secured the bottom of the canvas tents. Shallow trenches, dug with shovels around each tent, prevented flooding of the interior.*
>
> *The doors of the tents were oriented either to the east or west, and a firepit for cooking meals was dug about two meters from the door of the sleeping tent. The firepit was about a foot deep, rectangular in shape (two by three feet) with dirt mounded along one side as a windbreak. Rocks were sometimes placed around the interior of the pit on which the coffee pot, skillet or dutch oven rested during cooking. The pack burros, mules and saddlehorses were tethered or hobbled close by. Scattered around the majada (bedding ground of the sheep) near the camp were canoas (troughs) of salt. These canoas were handmade from aspen logs; the salt was brought from natural deposits in the Estancia Valley or, in later years, from Bond's store at Española.*
>
> *The camperos generally took care of the camps, and their work included tending to the stock and preparing meals. Food was stored in wooden pack boxes in the supply tent. Basic foodstuffs included beans, canned tomatoes, potatoes, onions, rice, oatmeal, coffee (Arbuckle's was a favorite), canned condensed milk, flour, salt, pepper, lard, baking powder, and sugar. Potatoes were sometimes buried under the bedding in the herder's tent to prevent their freezing in the early spring and fall.*
>
> *Fresh beef, when available, was used in stews or cut into small chunks with gravy poured over it. Meat was preserved by jerking—cutting into long strips and drying in the sun. Mutton, trout caught from the numerous streams in the Valles region supplemented the pastores' diet…native plants gathered for food: cebollita del campo (onions), cota (Indian tea) used to make tea, and verduras (greens) used in salads.*
>
> *Beans were cooked in a small bucket with holes in the lid to emit steam as they baked slowly in the coals. These "bean pots" could be purchased, but they were also easily made by punching holes with a nail in the lid of a ten-pound lard pail. Two basic types of bread were made: a large loaf known as shepherd's bread, which was baked in dutch ovens, and gordas, thick, round cakes cooked in lard in a small pan.*
>
> *Other cooking equipment in the pastores' camps included a cast iron skillet, sheet iron skillet, metal coffee pot (sometimes graniteware or enamelware), and a small bread pan. Items used in food preparation include a butcher knife, metal spatula, cooking fork, stirring spoon, and coffee mill. Metal eating utensils, plates and cups completed the culinary array. Wooden matches for starting the fire were kept in a glass jar with a screw lid. Empty tin cans with other trash were buried near the camp.*

A water bucket, axe, extra handles, claw hammer, pliers, and sheepmarking stamps completed the inventory of camp equipment. The latter item was the owner's brand, carved from wood, which was dipped into dark paint and then pressed against the flank or back of the sheep after it was sheared. The caporals from each home ranch traveled on horseback from camp to camp once or twice a week to bring needed supplies on pack mules or horses and to count sheep in each flock…

The pastores hunted with .44 caliber rifles and pistols, popular weapons of the time; .32–.20 caliber pistols also were used but were less preferred. The weapons also provided protection of the sheep from coyotes, bears and gray wolves; the latter were exterminated in the Jemez Mountains by 1928. Other personal items usually carried by the pastores or camperos or kept at camp included a canteen, clasp (pocket) knife, walking stick, reata (Rope for pulling sheep out of a flock), honda (a slingshot for turning leaders of the flock or driving stragglers back to it), cigarette tobacco (Prince Albert was the most popular) and papers, and chewing tobacco (usually Star Brand). Most herders carried a small bag containing scissors, needle and thread, toothbrush, and salt or soda for cleaning teeth. The viejos (old ones) had a chispa (strike-a-light), flint and a cloth saturated with black powder used to catch sparks and start the fire.

For evening recreation, guitars, harmonicas and a deck of cards were necessities. Story and joke telling also frequently provided amusement around the campfires. The men slept on sheep skins placed on the canvas floor of their tent, and quilts made of patches of cloth sewn together or wool blankets provided warmth on the cold nights at the high altitude.

The pastores devoted leisure hours to various crafts: braiding horsehair or leather reatas and headstalls, making rawhide moccasins called leguas (although store-bought work shoes or boots eventually replaced this traditional footwear), and carving on the bark of aspen trees. Names, dates, place of residence, refranes (sayings), and portraits of horses, dogs, female figures, cattle, deer, and religious crosses were commonly carved subjects.

The lambing season in the Valles was from May to early June. In the early twentieth century, several sites on the Baca Location were used for lambing camps, which were located near a permanent water supply. Corrals were constructed from aspen or conifer logs in the early part of the period; while milled lumber was more commonly used as 1920. Sheds with tin roofs were built within the corrals to protect the ewes and lambs from inclement weather. Whole logs, or sometimes logs split in half, were laid with ends overlapping between two upright vertical posts to form corrals five to six feet high. The corral designs were round or rectangular.

Lambing camps were located on Redondo Creek and on Jaramillo Creek, at San Antonio hot springs, at El Cajete, at the Rincon de los Soldados on the northwest side of the Valle Grande, and at Paseo del Norte on the south boundary of the Baca grant near the present main entrance to the Baca Land and Cattle Company headquarters. The Paseo del Norte camp was established by Frank Bond in 1935, the year the road (now Highway 4) connecting Los Alamos to Cuba was completed by the Civilian Conservation Corps.

After lambing, the ewes were sheared at these same camps by trasquiladores (shearers) who came from various villages in northern New Mexico. These men could shear 50 to 100 animals a day and were paid twenty-five cents a head for their work. The sheared wool was stuffed into large burlap bags and hung from a wooden support. Ten to twelve full bags, each weighing approximately 500 pounds, were loaded into a freight wagon drawn by four mules or horses and hauled to Española, Bernalillo or Albuquerque.

The sheared animals were stamped with the owner's brand or marked with ear notches. To prevent scabies and eliminate ticks, the sheep were dipped in concrete vats or in pits dug in the ground and filled with such mixtures as Blackleaf 40 combined with sulphur and water. The main dipping camp was located at Sulphur Springs on the west edge of the Baca Location. (pp. 5–9; emphasis in original]

Sherman, James E., and Barbara H.

1975 Ghost Towns and Mining Camps of New Mexico. Norman: University of Oklahoma Press.

Gold and silver were discovered about five miles (8 km) south of the Baca Location in 1889 (see pp. 2–3; 13). The "Cochiti Mining District" was the general designation for the mines around the boomtowns of Albermarle, Allerton, and Bland. Sandoval County was created in 1903 from this part of Bernalillo County.

Silko, Leslie Marmon

1995 Interior and Exterior Landscapes: The Pueblo Migration Stories. *In* Landscape in America. George F. Thompson, ed. Pp. 155–169. Austin: University of Texas Press.

Silko, who is from Laguna Pueblo, argues that that Pueblo people are an inseparable part of the land.

> *Pueblo potters, and the creators of petroglyphs and oral narratives, never conceived of removing themselves from the earth and sky. So long as the human consciousness remains within the hills, canyons, cliffs, and the plants, clouds, and sky, the term landscape, as it has entered the English language is misleading. "A portion of territory the eye can comprehend in a single view" does not correctly describe the relationship between the human being and his or her surroundings. This assumes the viewer is somehow outside or separate from the territory he or she surveys. Viewers are as much a part of the landscape as the boulder they stand on. (p. 156; emphasis in the original]*

> *The land, the sky, and all that is within them—the landscape—includes human beings. Interrelationships in the Pueblo landscape are complex and fragile. The unpredictability of the weather, the aridity and harshness of much of the terrain in the high plateau country explain in large part the relentless attention the ancient Pueblo people gave to the sky and the earth around them. Survival depended upon harmony and cooperation not only among human beings, but also among all things—the animate and the less animate, since rocks and mountains were known on occasion to move. (p. 157)*

Sleight, Frederick W.

1950 The Navajo Sacred Mountain of the East: A Controversy. El Palacio 58:379–397.

Sleight builds his argument from the premise that Navajo traditional knowledge embodies "a broad manifestation of geographical understanding" (p. 379) and includes places-names that are known locales within the Navajo world. In this essay, Sleight summarizes his examination of 34 documentary sources and supplementary original fieldwork to identify, when possible, the geographic locations of the principal four Navajo mountains of direction: *Sisnádjini* (Holy Mountain of the East), *Tsodził* (Holy Mountain of the South), *Doko'osłi'd* (Holy Mountain of the West), and *Dibéntsah* (Holy Mountain of the North).

Sleight provides important context in his consideration whether the idea of a holy cardinal mountain, which can be identified with a particular geographic feature within the Navajo landscape, even exists:

> *One must acknowledge from the onset that the holy mountain concept is found first in mythic stories concerning the origin of things on the earth. The mountains are even personified and figure in numerous legends setting forth exploits of the Holy Ones. In such legends their names are listed among many places that are purely mythical and non-existent. Nevertheless, the cardinal mountains have emerged in the minds of the medicine men as the holiest of sacred places. Consequently, the Navajo, with his religion of symbolism, finds it necessary to identify certain concepts with things and places that are observable, tangible, and usable. Thus, the four (sometimes seven) holy mountains transcend the mythical realm and are considered by the Navajo medicine men as actual places that may be viewed, visited, and utilized for ritualistic purposes...*

> *The demonstration of feats of the Holy People through physiographic phenomena stands as a powerful force in the bringing of supernatural assurance to a people beset with the multiple forces of nature. The legends prescribe the collection and assemblage of numerous forms of ritualistic paraphernalia, and, on occasion, the place or source is given. Thus, through the need for a place from which to obtain such sacred materials, has developed the localization of actual geographic spots that subscribe to the legendary place description. Sacred soil, plants, and waters from the four holy mountains must be obtained if certain prerequisites of various ceremonials are to be realized, and if these ritual items are collected from the places prescribed by the Holy Ones, it is necessary that places be identified and recognized as sacred spots long ago sanctioned by the interpreters of the legends. (pp. 380–381)*

Sleight reports finding unanimity among his consultants in the identification of the south (Mount Taylor in western New Mexico), west (San Francisco Peaks in northern Arizona), and north (La Plata Range in southwestern Colorado) mountains. He offers reasoned explanations for why several earlier researchers misidentified some of these summits in their work.

The identification of the Navajo Holy Mountain of the East, however, has long been a subject of scholarly debate given the many contrasting statements offered by Navajo consultants on the matter. Sleight offers a comprehensive critical review of these varying opinions, including a number of other entries contained within this bibliography (see entries by Amsden 1934; Brewer 1937; Haile 1938; Matthews 1897).

Sleight concludes that Blanca Peak of Colorado, Wheeler Peak near Taos, and Pelado (a.k.a. Redondo) Peak in the VCNP are the three most likely candidates for the Navajo Holy Mountain of the East. He then offers an argument to show that the available historical and physiographic evidence favors the identification of Pelado Peak.

First, Sleight maintains that the geographic location of the Jémez Mountains is congruent with both the physiography and culture history of the Navajo homeland. Sleight states, "the Jémez Mountains presented an obvious, observable and impressive eastern limit to Navajo life and culture" (p. 391).

Second, Sleight, who relies on translation of the place-name *sisnádjini* as "Horizontal black belt" (see entry for Hale 1938), states that the description embodied in this term could easily be applied to the Jémez Mountains in general and Redondo Peak in particular. "When viewed from deep within the old Navajo country, the Jémez Range appears as an extended, level, black belt on the eastern horizon, and is the only mountain mass on the eastern side of the Navajo domain with this appearance" (p. 391). Sleight notes further that although several individual mountains fit the description embodied by the name "Horizontal black belt," "Redondo Peak…has an outstanding 'belt" on its western side in such a position that Navajos, approaching from their country, could not help but see it" (pp. 391–392). Nevertheless, acknowledging that Santa Fe Baldy Peak similarly has an impressive "black belt," he adds, "it is not difficult to rationalize the translation of *sisnádjini* to one of several peaks of the Jémez or Sangre de Cristo Ranges" (p. 392).

Third, citing the vivid geographical description associated with the place-name *sisnádjini* in a traditional community story about the division of the Navajo (see entry for Coolidge 1930), Sleight suggests that Redondo Peak is the strongest candidate for recognition as the Holy Mountain of the East:

> *The only one of the three mountains presently being considered that might fit this description is Redondo (Pelado) Peak of the Jémez Range, for it is smooth, barren looking on its summit, and covered with wide stretches of grass. Blanca Peak and Wheeler Peak, on the other hand, with their angular and rugged summits, could hardly conform to this native description. (p. 392)*

Fourth, Sleight says the inability of some Navajo consultants to identify a geographic location of *sisnádjini,* as well as the often contradictory designations provided by some individuals who do, are a product of (1) acculturation and (2) the restriction of the people's geographical domain since the mid-nineteenth century. He states that reservation life and limits "divorced Navajo thinking from a section of country that had been considered theirs for many generations" (pp. 392–393).

In concluding his essay, Sleight presents the results of his work with Navajo consultants, all of whom he identifies as medicine men (pp. 393–394). He reports that in all cases, the medicine men were unanimous in their identifications of the south, west, and north holy mountains (see above). Several individuals could not venture an opinion as to either the appearance or the location of the Holy Mountain of the East. Sleight reports that four consultants, however, offered insights that support Matthews' (1897:221) original assessment that *sisnádjini* is near the Pueblo of Jémez and probably means either the Jémez Mountains generally or is specifically the summit known today as Redondo Peak. Of interest are the medicine men's statements that *sisnádjini* (1) is visible on the eastern horizon from the Lukachukai Mountains, (2) appears as "that long line of mountain" (unidentified informant (p. 394)) on the eastern side of the Navajo homeland, and (3) can be seen on the north horizon from Albuquerque's heights. One consultant, many years earlier, reported that he:

> *. . . had actually visited sisnádjini and had collected holy articles for his "medicine." This aged medicine man stated that his pilgrimage carried him to the Pueblo of Jémez, amid the Jémez Mountains. From here he indicated he proceeded in a more or less northwesterly direction to the peak. (p. 393)*

Smith, Anne M.

1974 Ethnography of the Northern Utes. Papers in Anthropology 17. Santa Fe: Museum of New Mexico Press.

Smith notes northern Ute uses of several plants that grow in the Valles Caldera area, including piñon (*Pinus edulis*), quaking aspen (*Populus tremuloides*), and Woods rose (*Rosa woodsii*) for food and tool manufacture. While many groups ate the inner bark as a starvation food, the Ute particularly savored the sap of these trees. They also used some sagebrush bark (*Artemisia* sp.) for making cordage.

Smith, E. R.

1953 History of Grazing Industry and Range Conservation Developments in the Río Grande Basin. Journal of Range Management 6:405–409.

E. R. Smith was the regional administrator of the Bureau of Land Management when he presented this paper in Albuquerque in January 1953. The paper is mainly a discussion of the problems caused by the movement of sediment from the upper watershed through the Middle Río Grande to Elephant Butte Dam.

Smith says that from about 1855 onward, both Hispanic and Anglo operators extended grazing farther and farther from settlements, and that the arrival of the railroad in 1880 gave further impetus to livestock raising, the greatest number being reached about 1900 (220,000 cattle and 1.75 million sheep). He adds that the creation of the Santa Fe National Forest (actually Forest Reserve) in 1892 was the first move toward conservation in the Río Grande Basin.

Smith, Patricia Clark, with Paula Gunn Allen

1987 Earthly Relations, Carnal Knowledge: Southwestern American Indian Women Writers and Landscape. ***In*** **The Desert Is No Lady: Southwestern Landscapes in Women's Writing and Art. Vera Norwood and Janice Monk, eds. Pp. 174–196. New Haven, CT: Yale University Press.**

This insightful essay provides important context for understanding Native American landscape constructions—and the people's relationship with the land—through study of contemporary literature.

> *Long before context became an academic buzz word, it was a Spider Woman word. It speaks of things woven together, and of understanding the meaning of a thread in terms of the whole piece of goods. For southwestern American Indians, the whole is the land in the largest sense. The land is not only landscape as Anglo writers often think of it—arrangements of butte and bosque, mountain and river valley, light and cloud shadow. For American Indians, the land encompasses the butterfly and ant, man and woman, adobe wall and gourd vine, trout beneath the river water, rattler deep in his winter den, the North Star and the constellations, the flock of sandhill cranes flying too high to be seen against the sun. The land is Spider Woman's creation; it is the whole of the cosmos. (p. 176)*

> *Nontribal people often perceive the land as an object, as something faintly or greatly inimical, to be controlled, reshaped, painted, or feared. Tribal people see it as something mysterious, certainly beyond human domination, and yet as something to be met and spoken with rather than confronted. For them the land is not just a collection of objects you do things to, nor is it merely a place you do things in, a stage set for human action. Rather it is a multitude of entities who possess intelligence and personality. These entities are active participants with human beings in life processes, in thoughts and acts simultaneously mundane and spiritual. People and the land hold dialogue within the structure of ritual, in order to ensure balance and harmony. Ritual is the means by which people, spirits, rocks, animals, and other beings enter into conversation with each other. One major part of peoples' ritual responsibility is to speak with these nonhuman entities and to report the conversation; American Indian literature records echoes of that ongoing dialogue. (pp. 176–177)*

The authors examine selected works of Leslie Marmon Silko as part of their essay (see also entry for Silko 1995).

Smith, Robert L.

1979 Ash-Flow Magmatism. Special Paper 180. Boulder, CO: Geological Society of America.

In this technical paper, Smith proposes that calderas related to ash-flow sheets show a positive correlation between caldera area and ejecta volume. "This correlation places

constraints on magma drawdown during eruption and implies a systematic relationship between these parameters and magma volume of the chamber" (p. 5).

Smith focuses his discussion on the Bandelier Tuff. He is mainly concerned to explain the minor-element gradients common to the ash-flow sheets of the Otowi and Tshirege Members. He notes that compositional changes usually are understood to have taken place over an extended period of time. He concludes that eruptions producing ash flows erupt off the top of the magma body (p. 25). He also suggests that a general discernible pattern exists in the behavior of volcanic systems that produce ash flows.

Smith, Robert L., and Roy A. Bailey

1966 The Bandelier Tuff: A Study of Ash-Flow Eruption Cycles from Zoned Magma Chambers. Bulletin of Volcanology 29:83-104.

This article notes that the Bandelier Tuff is a Pleistocene rhyolitic ash-flow formation consisting of the Upper and Lower Bandelier members. The lower member erupted approximately 1.4 million years ago and collapsed to form the Toledo Caldera. The upper member erupted some 1 million years ago and collapsed to form the Valles Caldera.

> *The upper and lower members of the Bandelier thus form two cycles of ash-flow eruption and caldera formation that together are the culmination of a long history of basaltic and andesitic to quartz-latitic and rhyolitic volcanism in the Jemez Mountains. (p. 83)*

> *The lower Bandelier ash-flow sheet, though less perfectly preserved, shows many physical and chemical parallels with the upper sheet. All evidence indicates that the two sheets, separated in time by about 400,000 years, had comparable histories and common origins; and that considered together they broaden our concepts of volcanic cycles. (p. 101)*

Smith, Robert L., and Roy A. Bailey

1968 Resurgent Cauldrons. *In* **Studies in Volcanology A Memoir in Honor of Howel Williams. Memoir 116. Robert R. Coats, Richard L. Hay, and Charles A. Anderson, eds. Pp. 613–662. Boulder, CO: The Geological Society of America.**

Smith and Bailey explain that a resurgent cauldron (caldera) is one that has been uplifted, following subsidence, usually in the form of a structural dome, and that the Valles Caldera is among the best known (others are Toba, Creede, San Juan, Silverton, Lake City, and Timber Mountain). They go on to describe the Valles Caldera in more detail, noting that the structural dome in its center is the Redondo Dome. They state that volcanism in this area began in late Miocene or Pliocene times, continuing into mid-Pleistocene times, when the sequence ended with two gigantic pyroclastic outbursts that produced the Bandelier Tuff (see entry for Smith and Bailey 1966). Each outburst produced at least 50 cubic miles of rhyolite ash and pumice, mainly as ash flows, followed by caldera collapse. The first outburst produced the Toledo Caldera, of which only a semicircular fragment is extant; the second produced the Valles Caldera (p. 617).

Snow, David H.

1979 Rural Hispanic Community Organization in Northern New Mexico: An Historical Perspective. *In* **The Survival of Spanish American Villages. Paul Kutsche, ed. Pp. 45–52. The Colorado College Studies, 15. Colorado Springs: Research Committee, Colorado College.**

Snow adopts the thesis, "The way people arrange themselves on the landscape is a reflection of the patterns of social organization developed in response to natural and cultural environmental factors" (p. 45). Snow then sets out to dispel common characterizations of Nuevomexicano settlement as atomistic, factionalized, and lacking social organization. He considers what environmental factors underlay the dispersed settlement that characterized much of rural Nuevomexicano New Mexico following the Pueblo Revolt of 1680–1692. Snow concludes:

> *It seems safe to say that the overriding values in New Mexico's rural Hispanic communities are those which relate to land. It is the individual and community land which give shape and character to the village, which give justification for the village organization and roots to the people who live there. Without roots, without costumbre, the individual is homeless; without land the community ceases to exist. (p. 52; emphasis in the original)*

Stevenson, Matilda Coxe

1912 Ethnobotany of San Ildefonso and Santa Clara Pueblos. Archives of the Office of Anthropology. Unpublished Manuscript No. 4711. Washington, DC: Smithsonian Institution.

Stevenson reports that plants found in the Valles Caldera of use to the Tewa of San Ildefonso and Santa Clara include milkweed (*Asclepias* sp.) for medicine, western throughwort (*Eupatorium herbaceum*) for dye, spurge (*Euphorbia* sp.) for medicine, gilia (*Ipomopsis* sp.) for medicine, tansy-aster (*Machaeranthera* sp.) for medicine, broomrape (*Orobanche* sp.) for food, and scorpionweed (*Phacelia* sp.) for medicine.

Stevenson, Matilde Coxe

1915 Ethnobotany of the Zuni Indians. Thirtieth Annual Report of the Bureau of American Ethnology. Washington, DC: U.S. Government Printing Office.

Among the diverse assemblage of plants that the Zuni use, Stevenson identifies many taxa that grow in the VCNP. Examples used for food include serviceberry (*Amelanchier* sp.), sagebrush (*Artemisia* sp.), milkweed (*Astragalus* sp.), prickly pear (*Opuntia* sp.), broomrape (*Orobanche* sp.), Indian ricegrass (*Oryzopsis hymenoides*), curlytop knotweed (*Polygonum lapathifolium*), Prairie coneflower (*Ratibida columnifera*), and nightshade (*Solanum* sp.). Medicinal plants include sagebrush (*Artemisia* sp.), aster (*Aster* sp.), buckwheat (*Eriogonum* sp.), western throughwort (*Eupatorium herbaceum*), spurge (*Euphorbia* sp.), ragweed (*Hymenopappus* sp.), pingue (*Hymenoxys* sp.), native lettuce (*Lactuca* sp.), flax (*Linum* sp.), tansy-aster (*Machaeranthera* sp.), primrose (*Oenothera* sp.), prairie coneflower (*Ratibida columnifera*), yellowcress (*Rorippa* sp.), several sorrel and dock species (*Rumex* sp.), ragwort (*Senecio* sp.), nightshade (*Solanum* sp.), and goldenrod (*Solidago* sp.).

Stiger, Mark A.

1977 Anasazi Diet: The Coprolite Evidence. Masters thesis. University of Colorado, Boulder.

Stiger adds pepperweed (*Lepidium* sp.) to the list of VCNP plants that Native Americans potentially used for food while visiting this place.

Strong, Pauline Turner

1979a Santa Ana Pueblo. *In* **Southwest. Alfonso Ortiz, ed. Pp. 398–406. Vol. 9 of Handbook of North American Indians, William Sturtevant, ed. Washington, DC: Smithsonian Institution.**

This article provides a concise overview of the anthropology and history of Santa Ana Pueblo.

Strong, Pauline Turner

1979b San Felipe Pueblo. *In* **Southwest. Alfonso Ortiz, ed. Pp. 390–397. Vol. 9 of Handbook of North American Indians, William Sturtevant, ed. Washington, DC: Smithsonian Institution.**

This article provides a concise overview of the anthropology and history of San Felipe Pueblo.

Summers, W. K.

1976 Catalog of Thermal Waters in New Mexico. Hydrologic Report 4, New Mexico Bureau of Mines and Mineral Resources. Socorro: New Mexico Institute of Mining and Technology.

Summers notes that the upper Jémez River basin includes the caldera and several natural thermal features including hot springs, *fumaroles,* and *solfatara*. In the 1970s, Westates Petroleum Company, Baca Land and Cattle Company, and Union Oil Company drilled wells within the caldera that produced steam and hot water. Summers lists all known thermal waters in the caldera and maps all steam wells drilled to 1976.

Surveyor General, New Mexico

n.d.a Baca Location No. 1. Surveyor General Report, 20. Spanish Archives of New Mexico (SANM) I, Roll 14, Frames 1101–1437. Santa Fe, NM: State Records Center and Archives.

Although this report contains material concerning the four other locations or floats, most of the information has to do with Location No. 1. This file concerns the original grant,

the choice of Baca Location as authorized by federal law, and the surveys of the Baca Location from 1876 to 1912. It contains Luis María Baca's original petition to the provincial deputation of Durango dated January 16, 1821; the original grant by the Provincial Deputation of Durango dated 1825; Baca's request dated January 13, 1826, to be placed in possession of the grant; the details of the relinquishment by Baca's heirs of the original claim; an affidavit (January 28, 1858) of Manuel Antonio Baca (Socorro) the alcalde who placed Baca in possession of the original grant in 1826; and correspondence concerning the choice of the five locations.

The report provides few details concerning the original survey by McBroom and Sawyer 1876 (see entry for McBroom and Sawyer n.d.). Some correspondence pertains to the retracement survey of 1910 done by Lewis D. W. Shelton (who was a private surveyor, not a federal employee). Surveyor Lee Scott attempted a resurvey in 1908, but the U.S. Surveyor General found it inadequate and sent him back into the field. U.S. Surveyor W. B. Douglass recommended a restoration survey in 1911 in response to instructions of the Commissioner of the General Land Office (GLO).

A letter dated June 20, 1911, evidently from the U.S. Surveyor General in Santa Fe to the Commissioner of the GLO, relates to the assignment of U.S. Surveyor W. B. Douglass to perform a restoration survey (subsequently reported on April 8, 1912). This letter states that Douglass has asked that representatives of "such private interests as may desire to be present" (meaning probably both the Redondo Development Company's representatives and prospective buyers from Pennsylvania) should be allowed to be present at the survey because "the property rights at stake are of considerable value" (frame 1406).

U.S. Surveyor Douglass summarized the existing surveys of the Baca Location as of 1911. He noted missing corners, numerous problems with the original field notes of Sawyer and McBroom, and "large errors of alinement and measurement" (frame 1271) (1876, see entry for Douglass and Neighbour n.d.). He concluded by recommending a restoration survey of the boundaries (Frames 1266–1278).

> *A careful consideration of all the facts developed by this examination, while not conclusive, a large preponderance of the evidence supports the view that the survey was made in its entirety, notwithstanding that many corners cannot be found. Long field experience has taught me not to deny the existence of an early and defective survey, supported by topographical notations simply because the corner cannot be found….That such a complete agreement of the rougher topographical features could be the result of a guess cannot be admitted… (frame 1277)*

"I have the honor to recommend a restoration survey of the boundaries of the Baca Location No. 1 Grant…" (Frame 1278).

The restoration survey was carried out in 1912. Douglass filed his report on April 8, 1912. The commissioner of the General Land Office denied the petition of the Redondo Development Company for a resurvey of the boundaries of the grant on July 5, 1912.

Surveyor General, New Mexico

n.d.b Luis María Cabeza de Baca Grant. Surveyor General File No. 103. Spanish Archives of New Mexico (SANM) I, Roll 31, Frames 463–476. Santa Fe, NM: State Records Center and Archives.

This file contains the order of the *alcalde*, José Miguel Baca, dated September 12, 1827, recognizing Miguel Baca as the heir and representative of the deceased, Luis María Baca (frames 465–467). L. M. Baca was killed in June, 1827 (see entry for Cleland 1950). A power of attorney from L. M. Baca to his brother Miguel dated May 27, 1827 is included (frame 469). L. M. Baca signs with a cross, suggesting either that he is illiterate or too weak to sign his name. He also states that he wishes to die as a Christian.

This also file contains the will of L. M. Baca dated May 28, 1827 (signature and rubric; frames 470–471). These records seem to be at variance with the story of his death by violence the following month.

The file also contains a petition of Tomás Cabeza de Baca, resident of the town of Peña Blanca. His father, Luis María Cabeza de Baca, died in 1827. Reference is made to the property at Santa Cruz "about four miles [6.4 km] distant."

Swadesh, Frances Leon

1974 *Los Prímeros Pobladores*: Hispanic Americans on the Ute Frontier. Notre Dame, IN: University of Notre Dame Press.

In this important study of the Hispanic settlement of the Chama and San Luis valleys in the territory of what is now northern New Mexico and southern Colorado, Swadesh documents the ever-changing interactions between the locale's settlers and the region's Ute people, with Abiquiú serving as one of the principal sites for exchanges that ranged from trading, to raiding, to the subsequent ransoming of captives, during the eighteenth and nineteenth centuries.

Although she does not cite the Valles Caldera, it is clear that Utes traversed the whole region. For example, "Albert Schroeder credits the Capotes with the stock depredations complained of in 1736 by the settlers of the Río del Oso" (p. 164), which is just east of the Valles Caldera. Also,

> *The Sabuaganas apparently camped on what used to be called Sabuaganas (or Chaguagua) Creek, later called Chihuahueños or Pedernales Creek. The Capotes were camped on the Vega de Raiño (Raiño Meadow) near the mouth of Cañones Creek, when they fled from Santa Fe after the September 1844 massacre… (p. 232)*

Swadesh states further that Abiquiú's "importance in commerce and military maneuvers lay in its access to Navajo and Ute country" (p. 64; see also p. 163).

> *The Utes most in contact with Abiquiu were the Sabuagana (sometimes called Chaguagua) and Capote bands. Before 1762 they had started making annual trips to the Chama Valley and communities near Santa Cruz to conduct trade and ransom. By 1776 an annual trade fair was held for the Utes at Abiquiu. The Utes brought juvenile captives from the "heathen tribes," as well as deer, buffalo meat, and dressed hides… The growth of trading partnerships with the Utes made it possible for the settlers to petition for new grants and set up residence in areas remote from administrative, ecclesiastical, and military supervision. (p. 47)*

The outbreak of a decade-long period of hostilities between the Hispanics and the Utes in the mid-nineteenth century led to a change in the settlers' herding practices. Writing about the Tierra Amarilla Grant, Swadesh reports that documentary evidence and local traditions state that Hispanic herdsmen worked their prime stock ranges from small summer camps. "People say that the sheep were herded in small flocks and were scattered up the canyons when a Ute raid commenced, so that losses would be minimal" (pp. 62–63).

Swank, George R.

1932 The Ethnobotany of the Acoma and Laguna Indians. Masters thesis. University of New Mexico, Albuquerque.

In this important study, Swank identifies more than 60 plants found in the Valles Caldera area that are of economic, social, or cultural use to the Ácoma and Laguna Pueblos.

Swentzell, Rina

1988 Bupingeh: The Pueblo Plaza. El Palacio 94:14–19.

In this short article, Swentzell, an architectural historian and education consultant from the Tewa Pueblo of Santa Clara, discusses the idea of center in Tewa cosmology as the intersection of the horizontal and vertical regions of the Pueblos' physical and symbolic universe. Although she focuses on the formally negative spaces of Pueblo plazas, Swentzell also refers to the edges of the Pueblo world that necessarily help define centers. She considers the concept of connectedness that unifies peripheries with centers, as well as the energies of all life forces—both physical and metaphysical—that move throughout the sky, earth, and underworld of the Pueblos' cosmos.

Swentzell, Rina

1989a The Butterfly Effect: A Conversation with Rina Swentzell. El Palacio 95:24–29.

Swentzell further explores the idea of connectedness that unifies the many-layered understandings that the Pueblos possess of their cosmos. She explains,

> *That connection is—creativity from the source…, the po-wa-ha, literally "water-wind-breath." It is that energy that flows from everybody, everything—plants, stones. That's why everything takes on life in that world. We all breathe of the same breath the plants do, the rocks do. And so the world itself takes on a different structure. (p. 25)*

Swentzell, Rina

1989b Remembering Tewa Houses and Spaces. Native Peoples: The Arts and Lifeways 3(2):6–12.

Swentzell examines the Pueblos' concepts of center, breath, periphery, movement, and connectedness. In talking about how all these ideas come together within the Pueblos' traditional views of their cosmos, Swentzell concludes:

> *Most importantly, I treasure the sense of sacredness which pervaded that old Pueblo world. All of life, including walls, rocks and people, were part of an exquisite, flowing unity. (p. 12)*

Swentzell, Rina

1991 Levels of Truth: Southwest Archaeologists and Anasazi/Pueblo People. *In* **Puebloan Past and Present: Papers in Honor of Stewart Peckham. Meliha S. Duran and David T. Kirkpatrick, eds. Pp. 177–181. Archaeological Society of New Mexico 17. Albuquerque: Archaeological Society of New Mexico.**

In this extremely important philosophical article, Swentzell addresses the problem of why "the creative process of bringing together different ways of knowing and different modes of perception…does not happen" (p. 177) in interactions between Anglo and Pueblo peoples. She considers that the idea of connectedness underlies traditional Pueblo understandings of their cosmos, whereby "everything/everybody, even the largest whole, has a context or a larger whole within which it belongs" (p. 177). In comparison, Western ways of thinking:

> *. . . operate with the assumption that facts, if appropriately collected and fastidiously recorded, will uncover the truth. Absolute truth is, for the most part, taken for granted. It is there to be uncovered. (p. 178; emphasis added)*

Swentzell considers how dominance and power, tied with prestige that is informed by a particularly defined system of what can be understood, poses real obstacles to building significant cross-cultural understandings. She concludes:

> *The traditional Pueblo world is a world focused on equalitarianism, inclusiveness, and linkages—feminine qualities or values of the human being. The Western-European world is recognized…as a world that focuses on ways of thinking, valuing, and understanding that are characteristically masculine. (p. 180; emphasis added)*

Tiller, Veronica E.

1983 Jicarilla Apache. *In* **Southwest. Alfonso Ortiz, ed. Pp. 440–461. Vol. 10 of Handbook of North American Indians, William Sturtevant, ed. Washington, DC: Smithsonian Institution.**

This article provides a concise overview of the anthropology and history of the Jicarilla Apache Tribe.

Tiller, Veronica E.

1992 The Jicarilla Apache Tribe: A History. Revised edition. Lincoln: University of Nebraska Press.

Tiller's book is a comprehensive history of the Jicarilla Apache people. Her discussion of the Jicarilla origin story is also useful in developing a landscape framework for the Apache. Although she does not discuss the Jicarilla occupation of the Valles Caldera, she illustrates the location of an undefined "permanent site" west of Los Alamos near the VCNP in a map titled "Aboriginal Sites and Early Settlements" (p. 15).

Torrez, Robert J.

1994 The Southern Ute Agency at Abiquiu and Tierra Amarilla, New Mexico. Research Paper 36. Guadalupita, NM: Center for Land Grant Studies.

Torrez focuses primarily on the Capote, and to a lesser degree, the Weeminuche, Ute bands and their occupation of northwest New Mexico between 1850 and 1876. During this time "these Southern Ute bands were slowly being driven from their traditional hunting grounds along New Mexico's northern frontier to the reservations they now occupy in southwest Colorado" (p. 2).

Torrez notes that before the arrival of the Spanish, the Capote and Weeminuche Utes spent their summers and falls in New Mexico's mountains. "They hunted deer, elk and small game and gathered berries and seeds to supplement their diet. Occasionally they planted corn,

beans, and squash, which they harvested before moving on to follow migrating game to warmer elevations at the onset of winter" (p. 2).

Torrez does not state whether the Utes used the Valles Caldera. He does, however, provide valuable background information and context for how Utes earned their livelihood in the surrounding territory. If mid-nineteenth-century Ute archaeological sites are positively identified in the VCNP, Torrez's article will prove valuable in assessing these assemblages within the regional settlement system and the prevailing social and political climates of the day.

Trigg, Heather Bethany

1999 The Economy of Early Colonial New Mexico, A.D. 1598–1680: An Investigation of Social Structure and Human Agency Using Archaeological and Documentary Data. Ph.D. dissertation. Department of Anthropology, University of Michigan. Ann Arbor.

Trigg identifies seven plant species recovered from Spanish colonial archaeological contexts that grow in the VCNP. Colonists used goosefoot (*Chenopodium* sp.) for food and medicine, and sedges (*Cyperus* sp.) for mats and roofing material. Trigg also reports that livestock also consumed sedges (p. 144). Hedgehog cactus (*Echinocereus* sp.) yields edible fruits. Filaree (*Erodium* sp.) was a traditional Hispanic medicine for treating gonorrhea and use as a diuretic. Moreover, the Jémez pounded filaree leaves and mixed resulting powder with watermelon seeds to prevent fungus during storage (p. 144).

Hispanic colonists used spurge (*Euphorbia* sp.) as a medicine to treat tonsillitis, rashes, and rattlesnake bites. They also used *Euphorbia* sp. as livestock feed to increase milk production in cows and goats (p. 144).

Like Native American groups, Hispanics used sunflower seeds (*Helianthus* sp.) and piñon pine (*Pinus edulis*) for food and medicine. Both were excellent oil sources. Ethnographic data indicate that the pine nuts frequently were roasted and lightly pounded to crack the shells. The nutmeats then were winnowed from the shells and ground to make a flour, which was shaped into balls, mixed with maize, or used in soups (p. 147).

Trimble, Stephen

1993 The People: Indians of the American Southwest. Santa Fe, NM: School of American Research Press.

Trimble's book is a highly readable, yet comprehensive, discussion of the Southwest's indigenous peoples. His chapters on the Pueblos (pp. 38–120) and the Apaches (pp. 245–296) provide much historical and ethnographic detail. Trimble's discussion of the Pueblos' conceptualization of their world is especially insightful.

Tucker, Edwin A., and George Fitzpatrick

1972 Men Who Matched the Mountains: The Forest Service in the Southwest. Albuquerque, NM: U.S. Department of Agriculture, Forest Service, Southwest Region.

The authors mention the capture of feral horses and burros, some on the Baca Location (p. 81). They also mention construction of the road through the Valle Grande from Los Alamos to Cuba by the Civilian Conservation Corps in 1935 (pp. 162–171).

Turney, J. F.

1948 An Analysis of Material Taken from a Section of Group M of the Cliffs, Frijoles Canyon, Bandelier National Monument, New Mexico. Masters thesis. Adams State College, Alamosa, CO.

Turney identifies several plant species that also grow in the VCNP in his study of pre-Columbian archaeological materials at Bandelier National Monument. Examples include Western red currant (*Ribes cereum*), which was used for food, and New Mexico locust (*Robinia neomexicana*), whose wood was employed in tool making.

Tyler, Hamilton A.

1979 Pueblo Birds and Myths. Norman: University of Oklahoma Press.

This volume does not mention the Valles Caldera. Nevertheless, this study is relevant to the land-use history of the VCNP because it examines how birds found in the Jémez Mountains, including hawks, robins, eagles, turkeys, magpies, wrens, and woodpeckers, among others, are integrated into all aspects of Pueblo community life.

Underhill, Ruth

1979 Pueblo Crafts. Palmer Lake, CO: Filter Press.

Underhill reports that the Zuni use bush mountainspray (*Holodiscus dumosu*), a species found in the VCNP, in their craft activities.

U.S. Congress, House

1860 H.R. Doc. No. 14, 36th Cong., 1st sess., 45.

New Mexico Surveyor General William Pelham, in a report dated December 18, 1850, finds both the Baca Grant and the Town of Las Vegas Grant to be good and valid, and recommends both for confirmation, leaving the adjustment of conflicting rights to the courts.

U.S. Congress, Senate. Committee on Private Land Claims

1860 Reports of the Surveyor General of the Territory of New Mexico, 36th Cong., 1st sess., Rept. 228.

This report, accompanying H.R. 195, deals with two reports covering various land grant claims. The second report includes two claims to the same tract of land: the Baca Grant, confirmed in February 1825 by the departmental assembly of New Mexico, and the Town of Las Vegas Grant of March 25, 1835. The surveyor general "having none but ministerial duties to perform" has recommended confirmation of both grants, "leaving to the respective claimants the right of adjusting their conflicting claims in the courts. But Congress…is bound to legislate in such a manner as to prevent, if possible, so disastrous a result as the plunging of an entire settlement of families into litigation, at the imminent hazard of being turned out of their homes…" The Baca claimants are willing to waive their claim "if allowed to enter an equivalent quantity of land elsewhere within the Territory." The Committee has prepared an amendment to this effect.

U.S. Department of Agriculture, Forest Service

1883–1913 Forest Homestead Records. Albuquerque, NM: Land Status Office, Southwest Region.

The earliest homesteads between Redondo Creek and La Cueva were those of John Kelly and Polito Montoya. Both ranches were established in or before 1883. Subsequent homesteads around La Cueva included those of N. R. Darey, Angeline Eagle, J. S. Eagle, and S. D. Thompson.

U.S. Department of Agriculture, Forest Service

1915 Fire Map, Jemez National Forest, Santa Fe. Copy on file: Santa Fe: Angélico Chávez History Library, Palace of the Governors, Museum of New Mexico.

From 1911 to 1922 the U.S. Surveyor General in Santa Fe oversaw restorative surveys of the Baca Location at the request of the Redondo Development Company, with the object of clarifying the boundaries shared by the Baca Location, the Jémez National Forest, and the Ramón Vigil Land Grant. This survey showed that the Ramon Land and Lumber Company actually had cut about 100,000 board feet of timber from the Jémez National Forest, not the west side of the Rámon Vigil Grant as had been believed.

This restorative survey determined that Sulphur Springs was inside the Baca Location.

U.S. Department of Agriculture, Forest Service

1993 Report on the Study of the Baca Location No. 1. U.S. Department of Agriculture, Forest Service, Southwest Region, August 1993.

This study was issued pursuant to Public Law 101–556 (the full text appears as Appendix A; see entry for U.S. Public Law 101–556). The study is intended "to support informed and educated decisions regarding the Baca in the future" (p. 2); that is, to prepare for its acquisition by the federal government, although this is not stated in so many words because the private owners were not offering the Baca for sale at the time.

The study includes a short history of the Baca Location, a discussion of its current management, management options, and summaries of its resources including recreation, hunting, fishing, logging, grazing, and others, including Indian sacred areas. Included is a list of improvements and a section on the mineral estate, as well as a historical chronology.

The study notes that all logging ceased in the period 1972 to 1980, and then began again using "selected harvest methods," with cutting of only diseased and some mature trees allowed.

U.S. Geological Survey

1918–1925 (2006, June 30). Home page of U.S. Geological Survey Photographic Library, U.S. Department of the Interior. [Online]. Available: http://libraryphoto.cr.usgs.gov [2007, January 23].

The card index to the photograph collection is organized by state, county and photographer. Most photographs are of geological features, but most of the contributing photographers also took occasional images of other things, including camps, vegetation, group portraits, structures, towns and archeological sites.

The following photographs in the vicinity of the Baca Location are on file:

Mansfield, G. R. #420: "Pit J–5 in sulphur deposit 5 miles [8 km] above Jemez Springs. April 15, 1918."

Mansfield, G. R. #421: "Pit J–6, with Mexican boy, and view across sulphur deposit, same locality as No. 420." April 15, 1918.

Mansfield, G. R. #422. "View up Jemez Creek at sulphur deposit 5 miles [8 km] above Jemez Springs, showing exposure of sulphur-bearing rocks." April 15, 1918.

Mansfield, G. R. #423. "Pit J–5 (test pit) and Mexican boy. View N.E. across sulphur deposit at same locality as No. 420." April 15, 1918.

Mansfield, G. R. #424. "View up small ravine across the sulphur deposit 5 miles [8 km] above Jemez Springs in Jemez Canyon." April 15, 1918.

Mansfield, G. R. #425. "View down stream along same bluff shown in No. 422." April 15, 1918.

The following photographs within the Baca Location are on file:

Mansfield, G. R. 426. "Hotel and bath houses at Sulphur Springs, Sulphur Canyon, 14 miles [22.4 km] above Jemez Springs. The little ravine has numerous vents emitting hot sulphurous vapors and waters." April 16, 1918.

Mansfield, G. R. #427. "Bath houses and main sulphur deposit at Sulphur Springs. Nearer view of ravine shown in No. 426." April 16, 1918.

Mansfield, G. R. #428. "Old sulphur mill at Sulphur Springs hills built 1902. From 1902–1904, 200,000 lbs. [101,605 kg] of sulphur were produced here. Same locality as No. 426." April 16, 1918.

Mansfield, G. R. #429. "Main sulphur deposit at Sulphur Springs, Baca Location. (Same locality as Nos. 426–428.)" April 16, 1918.

Lee, W. T. #2704. "Aspen grove on Valle Grande, N.M." N.d., ca. 1925.

Lee, W. T. #2705. "Aspen grove at top of Valle Grande, N.M." N.d., ca. 1925.

Lee, W. T. #2706. "Side of crater of Valle Grande, N.M." N.d., ca. 1925.

Lee, W. T. #2706a. "Same as 2706." N.d., ca. 1925.

Lee, W. T. #2708. "Road to Valle Grande, N.M." N.d., ca. 1925.

U.S. Public Law 167

1860 An Act to Confirm Certain Private Land Claims in the Territory of New Mexico. 36 th. Cong., 1st sess., June 21, 1860.

This act confirms various land grants in New Mexico. Section 6 states:

> *. . . it shall be lawful for the heirs of Luis María Baca, who make claim to the same tract of land as is claimed by the town of Las Vegas, to select instead of the land claimed by them, an equal quantity of vacant land, not mineral, in the Territory of New Mexico, to be located by them in square bodies, not exceeding five in number. And it shall be the duty of the surveyor-general of New Mexico, to make survey and location of the lands so selected by said heirs of Baca when thereunto required by them: Provided, however, That the right hereby granted to said heirs of Baca shall continue on force during three years from the passage of this act, and no longer.*

U.S. Public Law 101–556.

1990 An Act to Authorize the Secretary of Agriculture to Acquire and Study Certain Lands in the State of New Mexico, and for Other Purposes. 101st Cong., November 15, 1990.

The stated purpose of the Act is to acquire two parcels totaling approximately 36 acres (14.6 ha) from the private owner (Dunigan Enterprises), to pay damages in the amount of $1,633,527 to Dunigan Enterprises to compensate for an earlier exchange (1966: 2,456.14 acres [993.95 ha] known as the "Cochiti Properties"), and to authorize the Secretary of Agriculture to study the Baca Location to determine its "scenic, geologic, recreational, timber, mineral, grazing, and other multiple use attributes," and to study options for federal acquisition of the property, in whole or in part.

Van Ness, John R.

1979 Hispanic Village Organization in Northern New Mexico: Corporate Community Structure in Historical and Comparative Perspective. ***In*** **The Survival of Spanish American Villages. Paul Kutsche, ed. Pp. 21–44. The Colorado College Studies, 15. Colorado Springs: Research Committee, Colorado College.**

Van Ness describes this paper as an examination of the social organization of northern New Mexico's Nuevomexicano villages, with an emphasis on the nature of their corporate organization (p. 21). He begins by considering the structure and functioning of Spain's corporate communities, which were subsequently introduced into Latin America.

He observes that the pueblo (an inclusive term referring to all small, rural Spanish communities) historically was the primary social and political unit of Iberian society, especially within mountainous settings (p. 25). Among Spanish people, the term *pueblo* traditionally means a land-based social community. This idea also helps define an individual's identity throughout life, by defining his or her place of birth. Because people, society, and places all are integrated into the concept of pueblo, it is not surprising that Iberian land-use traditions, land occupation, and landscape-making revolve around the economic, social, and political organization of corporate ownership (p. 25). Van Ness notes further, "As in Latin America and Spain, strong sentiments and spiritual values were attached to the community land. The merging of individual identity, community, and physical place has a good deal to do with this value orientation" (p. 42).

Van Valkenburgh, Richard F.

1940 Sacred Places and Shrines of the Navajo. Part II: Navajo Rock and Twig Piles, Called Tsenadjihih. Museum of Northern Arizona Museum Notes 11(3):29–34.

Van Valkenburgh reports that *tsenadjihih* means "picking up and putting on stones" (p. 6). Although *tsenadjihih* are not as dynamic as shrines on the holy mountains or *kethan* (prayer stick) depositories, the Navajo revere these features and account for their origin in Blessingway mythology.

One Navajo authority, Dagach'ibikis from Tohatchi, told Van Valkenburgh that *tsenadjihih* "offerings were made of turquoise and other sacred stones" (p. 9). Another tradition keeper, Maríano Chávez of Torreon, stated, "There once was a man who ran from the Chuska Mountains to the Jemez Mountains. He picked up rocks and started a number of *tsenadjihih*. One is on the old Navajo trail by Jemez Hot Springs, and another is near Cabezon" (p. 9).

Van Valkenburgh adds that Navajo made *tsenadjihih* and made prayers for success and luck "while passing over a trail to some destination where he or she considers luck is needed" (p. 9).

> *Turquoise and other sacred stones make the prayer effective, but an improvised prayer and offering will also work. Burned rocks are never placed on a tsenadjihih. Warriors used Yucca baccata leaves with the points directed toward their enemies. If the wind is blowing, a rock is placed over the twig to hold it on the pile. Nothing that has been stuck by lightning, whirlwinds, or touched by snakes or bears should be placed on a tsenadjihih. It would bring misfortune. (p. 9; emphasis in the original)*

Van Valkenburgh, Richard F., and Scotty Begay

1938 Sacred Places and Shrines of the Navajo. Part I: The Sacred Mountains. Museum of Northern Arizona Museum Notes 11(3):29–34.

The authors provide excerpts from a previously unpublished Navajo origin story that provides a condensed account of the ceremonial creation of the Holy Mountains of Direction:

The Holy people took earth from the mountains of the Second World and placed it in the east. This mountain was made of white shell in the shape of a divine being. It was adorned with all different types of animals, trees, plants, and all living creatures including water animals as well as the water itself. Everything that decorated this mountain was of white shell. Since the mountain had been made in the shape of First Man, this mountain was given the sacred name of Sisnaadjinii, and it was to be equally as holy as the sacred mountain of the east in the Yellow World below…

After all these four mountains had been made, the people were told that as they were sacred, that on these offerings might be made, and favors which might be desired might be obtained from them by offerings and prayer." (pp. 30–31; emphasis in the original)

Van Valkenburgh and Begay describe the construction of mountaintop shrines and the kinds of offerings typically found within them:

Many types of shrines exist. Some are simple, while others are elaborate. Among the various types of shrines are stone cists or boxes, sealed enclosures, walled or unwalled springs, cienegas or pools, natural concavities and peculiarities in rock formations, caves, and rock shelters, in rooms of prehistoric Pueblo ruins, and simple monuments of rough stone…

In many shrines are found objects which have been either transported to or are natural parts of the shrine and become a part of the shrine itself. In some instances these act as altars or receptacles for altar paraphernalia. Some of these are boulders with natural or worked concavities, incised or painted images or carved or uncarved wood or stone. Occasionally anthropomorphic or geometric figures are found on the walls or boulders of the shrine.

Offerings made to these shrines may be practically anything: Prayer sticks of assorted types, semi-precious stones such as turquoise, malachite, lignite, or native jet, beads of these stones, native red and yellow garnets, obsidian and chert flakes, flaked implements, smooth banded stones, petrified wood, fossils, arrowshafts, lengths of reed and wood, stone and semiprecious stone fetishes, both painted and unpainted, metal objects, whole pottery vessels (sometimes as a stationary part of the shrine) and sherds, and very often simple monuments of rocks, twigs and branches of trees. (p. 29–30)

Vestal, Paul A.

1952 Ethnobotany of the Ramah Navajo. Papers of the Peabody Museum of American Archaeology and Ethnology 40(4). Cambridge, MA: Harvard University.

In this study, Vestal identifies Navajo uses of more than two dozen plants that grow in the VCNP. Foods include kittentails (*Bessya plantaginea*), Western tansy mustard (*Descurainia pinnata*), native strawberry (*Fragaria* sp.), Bush mountainspray (*Holodiscus dumosus*), one-seed juniper (*Juniperus monosperma*), coneflower (*Ratibida* sp.), dropseed (*Sporobolus* sp.), and American brooklime (*Veronica americana*). Medicines include aster (*Aster* sp.), Parry's bellflower (*Campanula parryi*), dayflower (*Commelina dianthifolia*), spikerush (*Eleocharis* sp.), Western throughwort (*Eupatorium herbaceum*), Apache plume (*Fallugia paradoxa*), cudweed (*Gnaphalium* sp.), native lettuce (*Lactuca* sp.), dropseed (*Sporobolus* sp.), mustard (*Thelypodium* sp.), cattail (*Typha* sp.), American vetch (*Vicia americana*), goldeneye (*Vicia* sp.), and cliff fern (*Woodsia* sp.). Vestal also notes that the Navajo use Apache plume (*Fallugia paradoxa*) in tool making and cattail (*Typha* sp.) for padding.

Weigle, Marta, ed.

1975 Hispanic Villages of Northern New Mexico. Santa Fe, NM: Lightning Tree.

This is a reprint of Volume II of the 1935 *Tewa Basin Study,* with additions by Weigle. The Indian Land Research Unit of the Office of Indian Affairs conducted the study and carried out the fieldwork from March to July 1935. The unit was made up of economists, rural sociologists, cultural anthropologists, and technical personnel, including surveyors and draftsmen. They investigated relationships between the people of the study areas and their land and resource bases. The Depression and the New Deal were the background for the Roosevelt administration's efforts to analyze problems of rural life, poverty, and subsistence. The authors of the study called it "the first applied anthropological work in the United States." The study was followed by extensive fieldwork in various parts of the United States, carried out by the Applied Anthropology Unit of the Bureau of Indian Affairs, the Soil Conservation Service, and other federal agencies, principally within the Department of Agriculture.

The description of the town of Española (pp. 118–123) emphasizes that the arrival of the Denver and Río Grande Railroad and the establishment of a New Mexico terminal in 1881 created a modern labor market and introduced cash into what had been a barter economy.

> *Among the gentlemen opening stores were Scott and Whitehead, who in partnership had the commissary contract with the railroad company…Early in 1883 the railroad company changed its mind and decided to extend its line into Santa Fe and to build its roundhouse in Alamosa. This left the storekeepers in Española faced with the prospect of another dead railroad town…In what must have been a minor panic, all the merchants sold out. Two young brothers, George W. and Frank Bond, were working for Scott and Whitehead, and these men decided to buy out the stock and the tent of Scott and Whitehead…The Bonds, shrewder than the rest, saw the folly of depending for long-range growth upon the railroad. If they were to grow rich in this country they must do so on the one product that could be sold elsewhere for cash. Their commercial operations, therefore, led inevitably to livestock. In 1883 they had bought up 40 acres [16.2 ha] of land adjacent to the railroad depot for $200 and proceeded to build the facilities for shipping stock. Soon after that they began extending credit on livestock mortgages, and their herds began to be built up. At first they concentrated on cattle, but these proved to be less profitable than sheep. The grazing land open for free use at that time appeared limited, as did the prospects in the grazing industry. The Bond herd increased, and soon they entered into the system of renting out sheep on a sharecropper basis. The partidario, or sharecropper, system, under which most of the sheep industry is carried on in New Mexico today, is as old as Spanish colonization and may have been originally an outgrowth of the Spanish colonial encomienda system, whereby the labor of Indians was given to certain grantees, together with grants of land…The Bonds apparently found this system profitable, and their growth since 1883 has been phenomenal. Today this corporation has extended its operations until it covers a good portion of northern New Mexico and controls a good share of the sheep industry. The growth of Española has paralleled the growth of the Bond Co… (pp. 119–121)*

Case History No. III describes the *partido* arrangement under which Lázaro Salazar grazes sheep on the Baca Location.

> *Lazaro Salazar has been renting Bond's sheep since 1924. He has 300 of Bond's sheep and 900 of his own. Lazaro rents Bond's sheep only to have the right to use the Baca Location (owned by Bond) to graze his sheep at $.25 per head. Lazaro is an exceptional sheep heerder and has been able to stay clear of debt. This he attributed to the fact that only one-fourth of his sheep holdings belong to Bond. When, as is the case with all of the herders, it is necessary to borrow from Bond to finance the herding operations, a contract is made calling for the sale of lambs and wool to the Bond Company at a price to be set by them. In 1934 Lazaro was limited by Bond in grazing privileges on the Baca location to 1,200 sheep. He feels that because of the fact that the ratio of his own sheep to Bond's sheep is too great he will be crowded off the Baca location. (p. 219)*

Wentworth, Edward Norris

1948 America's Sheep Trails. Ames: Iowa State College Press.

This general history of the development of t he sheep industry in the United States is a standard reference for any study of the subject. Wentworth discusses all of New Mexico's major dealers in sheep and wool, including the Bond brothers (pp. 241, 607), noting their many partnerships and associations with other sheep men.

Weslowski, Lois Vermilya

1981 Native American Land Use along Redondo Creek. *In* High-Altitude Adaptations along Redondo Creek: The Baca Geothermal Anthropological Project. Craig Baker and Joseph C. Winter, eds. Pp. 105–127. Albuquerque: Office of Contract Archeology, University of New Mexico.

This article documents the results of an ethnographic analysis to develop a "representative model of Native American land use of the project and study areas" (p. 105). A further objective of her work "was to recover oral history and written documentation pertaining to Native American land use patterns. Although numerous Indian communities, including Río Grande Valley Pueblos, Navajos, Jicarilla Apaches, and Utes are known to have frequented the locality, Weslowski states that she selected Jémez Pueblo for study because (1) the community is closely associated geographically to the project area, (2) Redondo Creek lies within Jémez Pueblo's traditional land use area, and (3) the study's funding and time constraints did not allow for broader study.

Weslowski's report is a comprehensive and well-considered discussion of Jémez Pueblo's continuing associations with the Valles Caldera in general and the Redondo Creek area in particular. Her underlying thesis is "that in order to fully understand the native uses of the project area, it is necessary to recognize the conceptual foundations of these traditional activities" (p. 105). She examines Jémez concepts of land and landownership and finds that this system of ideas is organized and given meaning by a comprehensive system of cosmological belief. "These spiritual precepts dictate not only how the location should be correctly utilized, but also what this utilization symbolically means" (p. 105). In addition, Weslowski shows that the symbolic understandings that underlie the Jémez concepts of land and land use provide meaning to particular features of the broader study area (p. 105). She shows that the Redondo Creek locale is significant to Jémez Pueblo not only because it is a gathering area, but more importantly because Jémez Pueblo values the resources found there as components of traditional community knowledge (p. 106). According to Weslowski, the framework of ideas that organize and motivate an activity are as significant as the practice itself.

Weslowski richly reviews Jémez Pueblo ancestry, world view, social organization, and occupation of its traditional lands. She next documents how Jémez people use the Redondo Creek consistent with traditional ceremonial requirements. Weslowski offers a symbolic analysis of the fundamental cosmological belief systems that inform the Pueblo's uses of the locale and discusses the conceptual frameworks that are linked to the particular features within the broader geographic area, of which Redondo Creek is but a small part.

Wheelwright, Mary C.

1946 Hail Chant and Water Chant. Navajo Religion Series 2. Santa Fe, NM: Museum of Ceremonial Art.

In retelling the Mountainway origin story, Wheelwright (pp. 78–79) has it that the Jémez Mountains (but not Redondo Peak specifically) are the place where the Youth, who has become a medicine man, visits the Kisahni (a Pueblo group that Wheelwright identifies as the Hopi in a sidebar). Here he finds two individuals, who learn the Tohe ceremony that he performed during his visit.

> *The medicine man said to these two that they must have ceremonies given over them before they could be medicine men, and have the Jish or medicine pouch. They said they would have these ceremonies up on Tsilth Klizhin, the Dark Mountain (Jemez Mountain). So all the Kisahni People left their homes to go to this place, and there they built a hogahn with twelve upright posts. It was a very big hogahn called Taytah-haskahni. After this was finished they built another hogahn for the cooking of food during the ceremony, and sent someone out to collect herbs and everything needed for the Wohltrahd, and wood to make the Tse-panse hoops; so now they were prepared to start the ceremony that night. (p. 79)*

The Jémez Mountains are also the place from which two Akananillis (Meal Sprinklers), the messengers who go out to summon the people to the corral dance on the ninth (and last) night of the Mountainway ceremony, departed in the origin story. Moreover, the runner who goes to the west to the White Mountain Apaches was Asheen Tsiskai, whose name derives from the fact that "he was a racer on the plains and valleys, running from the Dark Mountain down the valley to the south, and then north to Debehentsah before the sun rose in the morning" (p. 80). The other runner, Kah-jes-tyinee (Sleeps to Noon), who ran to the east to the Jicarilla Apache, was believed by all Navajos other than his grandmother to be a lazy youth, but was transformed into a perfect young man by his being named as a Meal Sprinkler. Kah-jes-tyinee returns to his people at Dark Mountain just before Asheen Tsiskai (p. 81).

White, Leslie A.

1935 The Pueblo of Santo Domingo, New Mexico. Memoirs 43. Menasha, WI: American Anthropological Association.

Like White's other now-classic ethnological reports about New Mexico's Keresan Pueblo communities, this volume presents a relatively straightforward descriptive account of the culture and history of the people of Santa Domingo Pueblo. Representative of its time in the development of American anthropology, major sections include discussions of social organization, an individual's life cycle, ceremonialism, and myths and tales.

White reports encountering many practical difficulties, including the people's distrust of anthropologists and desire to maintain their privacy. Consequently, he offers no substantive

information about the people's associations with caves, volcanoes, lava flows, or shrines, which might be useful in interpreting specific cultural or physiographic features within the VCNP.

On the other hand, White gives a summary of Santo Domingo cosmology, tracing the emergence of people onto the present world and the movement of the Santo Domingo Pueblo's ancestors to the Río Grande Valley from White House farther north. He presents a diagram of the mythological landscape and provides partial discussion of cardinal mountain, color, and animal associations. Of particular interest is White's mention of the many witches and giants that inhabited the world and plagued the people, as well as of the Warrior Twins, Masewi and Oyoyewi, who killed these enemies before eventually leaving the people and making their homes on Sandia Mountain. Although White does confirm these associations, as documented at other Pueblo communities as well as among the Navajo, the Warrior Twins' slaying of the terrible giants is associated with caves and volcanism.

White, Leslie A.

1942 The Pueblo of Santa Ana, New Mexico. Memoirs 60. Menasha, WI: American Anthropological Association.

White describes the culture and history of the people of Santa Ana Pueblo. Major sections include discussions of social organization, government and social life, corn and the cosmos, hunting, war, sickness and witchcraft, and paraphernalia and ritual.

Once again reflecting the Pueblo people's extreme mistrust of anthropologists and their desire to maintain privacy about their religious practices and beliefs, White does not provide useful information about the peoples' associations with petroglyphs, caves, volcanoes, lava flows, or shrines. His consideration of Santa Ana hunting ritual and belief, however, is important as an illustration of the pervasiveness of the precepts of spiritual ecology and the environmental underpinnings of the people's world view and their senses of time and place as ongoing processes.

Through a liberal use of footnotes, White gives a comparative review of the Keresans' conceptual structure of their world, including major mountain, color, and animal cardinal associations (pp. 80–91). By the time of this study, White had come to recognize that the Keresans represent the world as a square and emphasize places at corners. (White even points out his error in his Santo Domingo monograph where he portrayed the Keresan world as a sphere.)

White also identifies the Santa Ana Pueblo food uses of Gambel oak (*Quercus gambelii*) and nightshade (*Solanum* sp.), both of which grow in the VCNP.

White, Leslie A.

1960 The World of the Keresan Pueblo Indians. *In* Culture in History: Essays in Honor of Paul Radin. Stanley Diamond, ed. Pp. 53–64. New York: Published for Brandeis University by Columbia University Press.

In this, his near final statement of Keresan Pueblo world view and religion based on his ethnographic work with the San Felipe (1932), Ácoma, Santo Domingo (1935), Santa Ana (1942), and Zía (1962) Pueblo communities, White summarizes the major points of these peoples' common cosmology. He describes the Keresan view of the world as square, flat, and consisting of four layers (after White 1942). In his review, White traces the Keresan Pueblos' history from the beginning of known time, when people occupied the lowest world deep inside the earth through their ascent and emergence into the present-day fourth world. He provides color associations and retells the story whereby the Warrior Twins, Masewi and Oyoyewi, killed a giant and eventually left the people to make their home on Sandia Mountain.

White, Leslie A.

1962 The Pueblo of Sia, New Mexico. Bulletin 15. Bureau of American Ethnology. Washington, DC: U.S. Government Printing Office.

As in his previous ethnographic studies of Keresan Pueblo communities, White offers a traditional account of the culture and history of the people of Zía Pueblo. Major sections include discussions of history, setting and background, Christianity, economy, cosmology, social organization, an individual's life cycle, ceremonialism, sickness, and hunting. White describes the Keresan view of the world and recounts the people's history from creation and emergence.

Whiting, Alfred F.

1939 Ethnobotany of the Hopi. Bulletin 15. Flagstaff: Museum of Northern Arizona.

This book is an essential ethnobotanical resource. Whiting identifies approximately two dozen taxa that grow in the VCNP. Food plants include sagebrush (*Artemisia* sp.), Indian paintbrush (*Castilleja* sp.), thistle (*Cirsium* sp.), piñon (*Pinus edulis*), quaking aspen (*Populus tremuloides*), globemallow (*Sphaeralcea* sp.), and cattail (*Typha* sp.). Whiting also notes the use of bee balm (*Monarda* sp.) as a seasoning. Medicinal plants include milkweed (*Asclepias* sp.), barberry (*Berberis* sp.), goldenrod (*Solidago* sp.), spurge (*Euphorbia* sp.), stoneseed (*Lithospermum* sp.), tansy-aster (*Machaeranthera* sp.), primrose (*Oenothera* sp.), native dock or sorrel (*Rumex* sp.), and goldenrod (*Solidago* sp.). Woody species used in tool making and/or construction include barberry (*Berberis* sp.), Apache plume (*Fallugia* sp.), piñon (*Pinus edulis*), and quaking aspen (*Populus tremuloides*). Western red currant (*Ribes cereum*) provides wood for tool manufacture and pigment.

Whitney v. Otero

1893 *Joel Parker Whitney v. Mariano S. Otero et al.* Civil Case No. 3632. Records of the U.S. Territorial and New Mexico District Courts for Bernalillo County. Accession No. 1959–124. Santa Fe: New Mexico State Records Center and Archives.

Joel Parker Whitney, a resident of Rocklin, Placer County, California, petitioned for partition of the Baca Location in 1893. The named defendants were Maríano Sabine Otero and his wife, Thomas B. Catron, Pedro Perea, José L. Perea, Jesus M. Castillo and his wife, and Justo Armijo and his wife. In a response filed in December 1894, they stated that they were the owners in fee of all of the land, that they were not prepared to "fully set out and exhibit the particular undivided interest of each of the said defendants in said tract of land" (p. 1), and that Joel Parker Whitney did not own any interest in the Baca Location.

Whitney claimed that after the death of Luis María Cabeza de Baca, Baca's grandson Tomás appeared before the Surveyor General at the request of all the Baca heirs to pursue their land claims, and that his efforts led to the Congressional act of 1860 authorizing the five Baca locations. Whitney claimed that the heirs paid Tomás with a one-third interest in the Las Vegas Grant, the Ojo del Espiritu Santo Grant, and any other grants he might locate. They accomplished this action in an agreement dated May 2, 1857.

Whitney presented a copy of this agreement to the court. Whitney said that the nine heirs who had signed this document acted as representatives of all the other heirs. Whitney did not know under what authority these heirs had acted, nor did he have any written evidence. Whitney asserted that in this way Tomás Baca obtained a one-third interest in the Baca Location.

No agreement of May 2, 1857, appears in the court papers, but a transcript in Spanish of a document dated May 1, 1857, is among these papers. The transcript states that Tomás Baca is authorized to represent the heirs and that he will subsequently be paid in money or in "a portion of the lands satisfactory to him" (p. 1). The document lists the 14 heirs or living children of heirs, but does not mention any particular grant.

Tomás Baca died in 1881 and left all his interest in the Baca Location to his wife, María Gertrudis Lucero de Baca. She sold this interest to James G. Whitney on August 17, 1881. Whitney and his wife, Octavia J. Whitney, subsequently conveyed this interest to Whitney's brother Joel P. Whitney. The date of this conveyance is left blank in the complaint, but a separate indenture in these court papers gives the date May 17, 1884.

Joel Whitney paid $17,000 for all his brother's right, title, and interest in the Cañada de Cochití Grant, the Baca Location, and the Ojo del Borrego Grant. James and Octavia Whitney were in Santa Fe at this time, and Joel Whitney was a resident of Boston, Massachusetts.

The court found that Whitney did own an interest in the grant, although it was smaller than he had claimed. On October 4, 1898, the court appointed commissioners (Major R. H. Whiting, W. F. Powers, and Charles T. Bonsall) to determine the practicability of partition of the Baca Location in kind; they reported that partition was not feasible. The court issued a decree on January 27, 1899, ordering the Baca Location to be sold to the highest bidder and the proceeds distributed to the claimants.

William D. Lee, an associate justice of the territorial Supreme Court and a judge of the District Court, was the special master appointed by the court. Lee sold Location to Frank W. Clancy for $16,548.21 on March 13, 1899. Clancy was Whitney's attorney of record (and

was also, according to a court decree dated November 20, 1894, the attorney of record for the Valles Land Company).

Lee reported that the costs of the suit were $1,299.77. The court directed him to pay the remainder to each of the parties according the proportionate share of each party. Lee paid out the money less $667.80 that he returned to the court. Lee paid Whitney $2,966.24 after charging him $253.04 as his share of expenses. He paid Maríano Sabine Otero $5,330.86 after charging him $454.75 as his share of expenses. He paid lesser amounts to 46 parties (44 individuals and 2 groups of heirs). Among these was Thomas B. Catron, who received $1,742.06 after a charge of $147.52 as his share of expenses. Presiding Judge J. W. Crumpacker approved Lee's report.

On March 18, 1899, just five days after he bought it, Clancy sold the entire Location to the Valles Land Company.

This file contains a sketch map of the Baca Location drawn by U.S. Deputy Surveyor Walter G. Marmon, as well as the 1876 map of the Location by Sawyer and McBroom. Marmon located Old Fort in unsurveyed Section 20, Township 19 North, Range 5 East, below the Cerro el Medio and on the north side of East Jémez Creek, in the bend of the "Cañada de Cochití Road" or "Old Road." The Sawyer and McBroom map similarly places it on the north side of East Jémez Creek just below the creek's point of rising.

Williams-Dean, Glenna

1986 Pollen Analysis of Human Coprolites. *In* **Archaeological Investigations at Antelope House. Don P. Morris, ed. Pp. 189–205. Washington, DC: U.S. Department of the Interior, National Park Service.**

Williams-Dean identifies the pre-Columbian Pueblo food use of narrowleaf cottonwood (*Populus angustifolia*), which grows in the VCNP.

Windes, Thomas C., and Dabney Ford

1996 The Chaco Wood Project: The Chronometric Reappraisal of Pueblo Bonito. American Antiquity 61:295–310.

The authors report on the pre-Columbian Pueblo uses of two woody species that also grow in the VCNP: white fir (*Abies concolor*) and spruce (*Picea* sp.).

Winter, Joseph C.

1981 Energy and Power along Redondo Creek: II—A Cultural Framework. *In* **High Altitude Adaptations along Redondo Creek: The Baca Geothermal Anthropological Project. Craig Baker and Joseph C. Winter, eds. Pp. 173–190. Albuquerque: Office of Contract Archeology, University of New Mexico.**

This chapter represents an interpretive summary of the archaeological, historical, and ethnographic research completed for the Baca Geothermal Anthropological Project. In preparing this review, Winter sometimes offers some useful new information not included previously in the report. His discussion of obsidian procurement and distribution, however, is problematical (**see entry for Winter 1983 below).**

Winter, Joseph C.

1983 Jemez Mountain Obsidian Exchange: A View From Redondo Valley. *In* **High-Altitude Adaptations in the Southwest. Joseph C. Winter, ed. Pp. 91–107. Cultural Resources Management Report 2. Albuquerque, NM: U.S. Department of Agriculture, Forest Service, Southwest Region.**

This study reports the interpretive findings from 21 obsidian lithic sites in the Redondo Valley and at numerous other sites in the San Juan Basin. Winter asserts that this information demonstrates the existence of exchange networks for obsidian from Paleo-Indian to Historic period Pueblo times. This study, although useful in presenting summary information throughout the region, is problematical for several reasons, including Winter's unsupported characterization of the Redondo Valley lithic sites as *workshops*, a term that implies, among other things, a high level of craft specialization with overarching control imposed by social and political authorities.

With regard to the Historic period, which is relevant to this examination of the VCNP land-use history, Winter states,

> *The procurement and use of Jemez obsidian declined dramatically after the collapse of the Chaco Anasazi culture and the emergence of the ancestral Río Grande and*

related Pueblo groups. It was still used in the 14th century, as shown by hydration dates from several Redondo Valley sites, but by historic Jemez Pueblo times its use had been relegated to societal and ritual activities. Thus the historic Pueblo obsidian exchange systems was poorly developed and of little consequence, despite the fact that Redondo peak and the associated valleys of the Valle Caldera were (and are) important hunting, gathering, grazing, and religious locations. (p. 107)

Witherspoon, Gary

Language and Art in the Navajo Universe. Ann Arbor, MI: University of Michigan Press.

1983 Language and Reality in Navajo World View. *In* **Southwest. Alfonso Ortiz, ed. Pp. 570–578. Vol. 10 of Handbook of North American Indians, William Sturtevant, ed. Washington, DC: Smithsonian Institution.**

These publications provide important information about Navajo world view. They are essential to a discussion of how the *Diné* construct and understand their landscape, presumably including the Valles Caldera. However, Witherspoon does not mention the Valles.

Woods, Betty

1942 The Blonds of Vallecito. New Mexico Magazine 20(10):10, 30.

Writing for *New Mexico Magazine*, Woods reported,

every day during the piñon season they [the Jémez] pass through [Vallecito de los Indios] on their way to the mesa tops, for they, too, are great nut hunters.

The country above Vallecito is dense with tall, yellow pine while lower down are the vivid cliffs and canyons where medicine men go to gather herbs and mix their wonder-working potions…we can suppose that ancient Indian medicine men came to the same canyons for their healing herbs and went to the caves for ceremonial making of medicine. Indian customs changes very little. (p. 30, emphasis in the original)

Wright, Cathy

2000 Traditional Cosmology, Ecology and Language of the Ute Indians, from an Interview with James A. Goth. *In* **Ute Indian Arts and Culture: From Prehistory to the New Millennium. William Wroth, ed. Pp. 27–52. Colorado Springs: Taylor Museum of the Colorado Springs Fine Arts Center.**

This accessible, reflective essay is a transcription of a 1999 interview that Wright conducted with James Goth, an anthropologist who worked with the Ute for nearly four decades on issues related to their language. Goth reveals that he ascribes to the Sapir-Whorf school when he states, "I always looked at learning the language as a beginning place for understanding people's traditions, the way they thought, and what they believe" (p. 27).

This essay is valuable because Goth addresses how the Ute construct their landscape traditions through language (see especially pp. 33–37). He also discusses Ute storytelling traditions (pp. 37–42), ecological adaptations (pp. 42–44), selected ritual (pp. 44–47), and color symbolism (pp. 47–49), all of which are organized and motivated by language and underlie the people's landscape constructions. He emphasizes the place of mountains within the Ute's landscape understandings.

This article is an unannotated transcription of an interview. Wright does not provide references.

Wroth, William

2000 Ute Indian Civilization in Prehistory and the Spanish Colonial Period. *In* **Ute Indian Arts and Culture: From Prehistory to the New Millennium. William Wroth, ed. Pp. 53–72. Colorado Springs: Taylor Museum of the Colorado Springs Fine Arts Center.**

Wroth gives a traditional scholarly summary of Ute culture history. Although he does not say that the Utes have used the Valles Caldera, he discusses Jémez Pueblo's familiarity with these Numic hunter-gatherers (pp. 56–58). He also reports on a Ute party, which consisted of more than 100 tipis, that visited San Juan Pueblo in 1752 to trade pelts (p. 58), and outlines the northern New Mexican Spanish settlers' similar dependence on Ute trade at this time (pp. 62–63). Clearly the Ute were common visitors in the region surrounding the Valles Caldera. In the final part of his essay, Wroth considers selected aspects of Ute cosmology and symbolism that complements the discussion offered previously by James Goth (see entry for Wright 2000).

Wyman, Leland C.

1962 The Windways of the Navajo. Colorado Springs: Taylor Museum of the Colorado Springs Fine Arts Center.

In opening his discussion of the geography of the Navajo Windway myths (pp. 78–80), Wyman emphasizes the underlying importance of locality and the even greater significance of the movement of characters in Navajo oral traditions:

> *In his [a Navajo tradition keeper's] speech, movement is described in great detail; he lives conceptually and linguistically in a "universe in motion." In his myths the heroes and supernaturals restlessly undertake long journeys during which many place names are mentioned, even spots merely passed by, and stopping at a spring for a drink of water is an occasion for giving the place a name…The myth of Navajo Windway is no exception; in Black Mustache's narration, fifty-three place names are mentioned, thirty-four in the Journey for Knowledge and Power and fourteen in the episode of Where His Mind and Speech were Stolen, and others throughout the myth. (p. 78)*

The identifiable localities include the four mountains of cardinal direction, including Black Belted Mountain (a.k.a. Horizontal Black Belt). Wyman acknowledges that the identification of the Holy Mountain of the East is uncertain. He reports that the location of the Holy Mountain of the East ranges from Sierra Blanca Peak in southern Colorado to, more commonly, Redondo Peak in the VCNP (p. 70).

Wyman provides a map showing the path, as demarcated by a broken line symbol, of the mythic travel that Black Mustache described in his account of the Journey of Knowledge and Power. Included along this pathway are Redondo Peak, which he co-labels as "Horizontal Black Belt," and the Jémez Mountains, which he co-annotates as "Black Range."

Wyman further identifies the Black Range as the place where the Windway myth hero visits two groups of supernatural beings, the Thunder People and the Black Ant People (table 6). The Thunder People offer the hero a prayerstick on his return journey, while the Black Ant People made him a jewelry payment.

In table 7 Wyman lists (1) the localities where the major events of the Windway myth occurred, (2) the places mentioned as the homes of certain supernaturals who participated in these events, and (3) the places given as the homes of supernatural beings before whom a magical cotton cord was placed "in vain attempts to discover the whereabouts of the hero's stolen mind and speech" (p. 80). In this effort Wyman reports that Horizontal Black Belt (possibly Redondo Peak) was the home of a Talking God, while the Black Range (Jémez Mountains) was shattered by Thunder and also was the home of the Black Ant People. In reference to the part of the myth concerning cotton chord divination, Wyman notes that Horizontal Black Belt was one of the homes of the Small Bird People.

Wyman, Leland C.

1965 The Red Antway of the Navajo. Navajo Religion Series 5. Santa Fe, NM: Museum of Ceremonial Art.

Wyman reports that Navajo narrators who maintain the corpus of traditional myths "usually take advantage of the movement of the actors in them, their journeys to visit the supernaturals, and so on, to give free rein to one of their chief interests, motion within a wealth of geographical detail" (p. 104; see also entry for Wyman 1962). Despite this general propensity, only two of the seven Red Antway myths, Rounded Man and Gun Shooter, possess this characteristic. Of interest to the VCNP, the Rounded Man story tells that the Ant People first lived in the Jémez Mountains (p. 104).

Wyman, Leland C.

1970 Blessingway, with Three Versions of the Myth Recorded and Translated from the Navajo People by Father Berard Haile, O.F.M. Tucson: University of Arizona Press.

Wyman revisits the issue of the identification of the Navajo Holy Mountain of the East (pp. 17–18) and reviews the various accounts that variously identify Pelado Peak (see entry for Matthews 1897), Abiquiú Peak, Pedernal Peak, Wheeler Peak, Mount Wilson near Taos, and Sierra Blanca Peak in the Sangre de Cristo Mountains in southern Colorado (see entry for Haile 1938 above). Wyman, citing Haile (1938) and testimony offered in 1952 by Albert Sandoval, Haile's Navajo translator, concludes that the Holy Mountain of the East is Blanca Peak and notes also that "Navajo public opinion [in the Leupp, Arizona area] seems to have accepted it as their eastern peak" (p. 18).

Wyman explains the meaning of Black Belted Mountain:

> *In the myth of the Blessingway this mountain is referred to as White-tipped Mountain (mountain white streaked above, or the summit runs into white), an interesting coincidence with the Spanish name, Sierra Blanca…Its other name, Black Belted Mountain, is preferred, however, and is based on the yucca bast belt or sash around the waist of its inner form person which accounted for his name, "black belt around." This mountain is the "heart" of him who became the inner form of the earth. (p. 18)*

Wyman adds that Old Mustache of Ramah, a well-known Blessingway singer, "was told by his father, Many Beads, that [Shootingway or Blessingway] singers [from Ramah and Cañoncito] used to stop at a spring known to the Navajos as 'wild spring place' to mix the water with mountain soils" (p. 20) from the Holy Mountains of the South and East.

In Slim Curly's story, "About the Origins of Other People" (pp. 327–334), which serves as an appendix to his version of the Blessingway myth, the bear is associated with the Jémez Mountains:

> *"You also are my grandchild," he said to the bear. "You may leave, although we were much attached to one another, in the days to come you will always watch over us, we will say prayers to you. By means of pollen below you it is blessed, above you it is blessed, by means of pollen all around you it is blessed. By means of pollen your speech is blessed. You will depart for mountain interiors, everywhere you will be found, although Jemez Range will be your chief (home); go ahead now, he said to it. Dark Mountain, wherever that place is called, into the interior of that he (bear) left. (p. 330)*

Frank Mitchell's version of the Blessingway myth similarly associates the bear with Black Mountain (Jémez Mountains) (see p. 456).

In his version of the Blessingway myth, River Junction Curly refers to a place called "the Hollow Gap at the upper end of Black Mountain (Jemez Range)" (p. 554) when telling of Monster Slayer's destruction of the monsters that plagued the people. Based on this description, "Hollow Gap" might refer to the Valle Grande.

Later in his account, River Junction Curly tells about Monster Slayer and the Twelve Roaming Antelopes, which were terrible beasts that killed people, at Dark Mountain (the Jémez Mountains) (pp. 569–571). Monster Slayer gave chase to the Twelve Roaming Antelopes and was going to destroy them to rid the world of their evil. He spared them after receiving their word that they would become peaceful game animals that humans could hunt for food.

> *Then he approached them there. "I'm going to kill all of you now, don't say anything about pity," he told them. "Nevertheless, let us live, please!" they said as they pleaded. "Just the same I will kill you, that is settled, since your disposition is wicked. You kill people, that accounts for it." "Do not say that! You see we are pleading with you. In spite of all, let us live. Whatever command you may give us, that will direct our conduct," they told him. "Still, I have decided to kill you, of what use can you be?" "Do not say that! In spite of all, let us live, please! You see, we are pleading with you!" they told him. Thus it seems this had happened four times. So it seems this time (he agreed), "Go ahead then since you are pleading. As days go by in the future, earth surface people, when they have come into being, will make use of you." "All right, just so we will be," they said. "By no means must you ever begin to think in a wicked manner! Should you ever again think wickedly I will yet kill you," he told them. "Particularly killing people, this you must never do! Beautiful flowers will now be your food, on the strength of which you will travel. Now go roundabout hunting food. This in particular, that you should live together in one place, must not be!" he told them as he drove them out into the valley. Therefore to this day people eat them, they say." (pp. 570–571)*

Wyman, Leland C.

1975 The Mountainway of the Navajo, with a Myth of the Female Branch Recorded and Translated by Father Berard Haile, O.F.M. Tucson: University of Arizona Press.

Wyman's recorded version of the Mountainway story (see pp. 237–244) tells of the origin of the prototype Mountainway ceremony involving two meal sprinklers who travel north and south across the landscape summoning people of outlying settlements, especially masked dancers and magicians, to perform on the last night of the observance. The meal sprinklers are "He-who-lies-underneath-it (a Mountain)," a name which other authors translate as "Sleeps to Noon" (e.g., see entry for Wheelwright 1946), "Lazy Boy," or "Valley Boy."

Wyman identifies the Meal Sprinklers' starting point as "behind Black Mountain" (p. 238). This place-name is a likely reference to the Jémez Mountains in general and, possibly, refers more specifically to the Valle Grande, which is "behind" the Jémez Mountains.

Recounting the details of his journey, Valley Boy, who ran the north course of the race, tells of his visits to the Pueblos of Santo Domingo and Zía to obtain these communities' pledges to arrive before the close of the Mountainway ceremonial. On the last leg of his journey, Valley Boy ran from Zía Pueblo up into the Jémez Mountains, climbed its summit (possibly Redondo Peak), and visited a supernatural being before returning to the race's starting point.

> *Next he set out towards the Black Mountain range again, and required much time before he arrived at its base. He went up to the summit, where he found a narrow canyon and came to a waterfall. Suddenly the Ye'i granduncle gave his call. He descended down into the canyon and there called to him with his whistle.*

He (Valley Boy) entered his (the Ye'i's) home… (p. 240)

Wyman, Leland C.

1983 Navajo Ceremonial System. ***In*** **Southwest. Alfonso Ortiz, ed. Pp. 536–557. Vol. 10 of Handbook of North American Indians, William Sturtevant, ed. Washington, DC: Smithsonian Institution.**

Wyman provides an invaluable overview of the complex system of Navajo beliefs about the dynamics of the universe and the actions with which the people attempt to influence these processes through the orderly demonstration of traditional knowledge in ritual when other rational means fail. Wyman establishes the organizational relationships of the many Navajo ceremonial observances upon which the people rely for sustaining their world.

Wyman, Leland C., and Stuart K. Harris

1941 Navajo Indian Medical Ethnobotany. University of New Mexico Bulletin, Anthropological Series 3(5). Albuquerque: University of New Mexico Press.

In their discussion of Navajo plant medicines, Wyman and Harris identify several useful plants that grow in the VCNP. The medical plants include peavine (*Lathyrus* sp.), lupine (*Lupinus* sp.), Fendler's meadow rue (*Thalictrum fendleri*), and stinging nettle (*Urtica* sp.). They also note that peavine and lupine are food plants.

Wyman, Leland C., and Stuart K. Harris

1951 The Ethnobotany of the Kayenta Navajo: An Analysis of the John and Louisa Wetherill Ethnobotanical Collection. University of New Mexico Publications in Biology 5:1–66. Albuquerque: University of New Mexico Press.

In this study Wyman and Harris contribute additional Navajo ethnobotanical information about plants found in the VCNP. Food plants include native lettuce (*Mimulus* sp.), broomrape (*Orobanche* sp.), mock-orange (*Philadelphus microphyllus*), and deathcamus (*Zigadenus* sp.). Medicinal plants include columbine (*Aquilegia* sp.), hemlock parsley (*Conioselinum scopulorum*), spotted coral root (*Corallorhiza maculate*), western tansy mustard (*Descurainia pinnata*), willowherb (*Epilobium* sp.), buckwheat (*Eriogonum* sp.), filaree (*Erodium* sp.), green wintergreen (*Pyrola chlorantha*), and snowberry (*Symphoricarpo*s sp.). They also report the use of the native currant (*Ribes* sp.) in tool manufacture.