

EDWIN NELSON FERDON, JR. (JUNE 14, 1913 - NOVEMBER 13, 2002)

Earl H. Lubensky
University of Missouri-Columbia

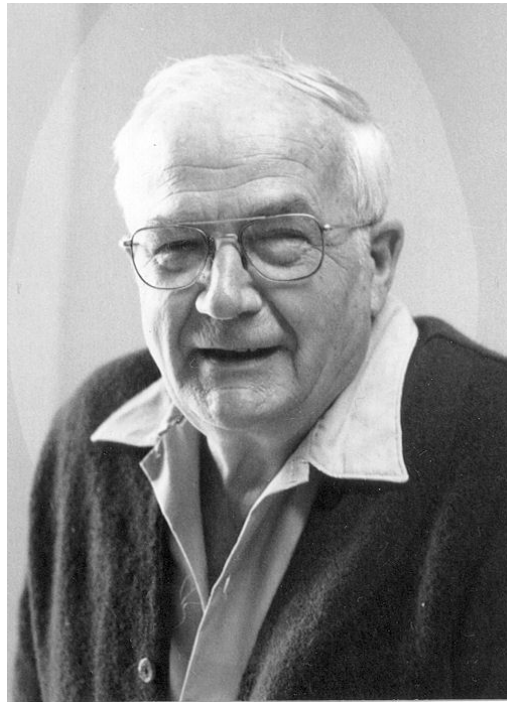


Photo courtesy of Vearl Ferdon

Edwin Nelson Ferdon, Jr. was born in St. Paul, Minnesota and grew up in Aurora, Illinois. When he was sixteen years old his father, Edwin Nelson Ferdon, Sr., took a job with the American Art Works and the family moved to Coshocton, Ohio.¹ His mother, Julie Omeyer Ferdon was proud of her Norwegian heritage. Her cousin, Thor Odegard, maintained Ed's

interest in Scandinavia by sending him books from that part of the world. Ed cherished his ties to the Norse countries throughout his life, but he considered himself first and foremost an archaeologist, as he indeed was, although he also made significant contributions to the related disciplines of geography and ethnography. Through his research he greatly increased our understanding of ancient Ecuador, Peru, Mexico, the American Southwest, and the South Pacific.

Ed's life may be divided into three periods: his early years (1913-1939); his Ecuadorian years (1939-1945); and his Southwestern years

¹ From the 1880s to the 1950s, Coshocton was an important production center for advertising art. Lithographs on tin and paper, signs, calendars, celluloid novelty objects, and trays were made for breweries, soft drink manufacturers, and ice cream factories, among other clients. The American Art Works made the now-famous Coca Cola trays, as well as glass objects, and calendars.

when he was resident in Santa Fe, New Mexico (1945-1961) and Tucson, Arizona (1961-2002). During his early years he became an archaeologist. He participated in archaeological projects in the United States Southwest and in Latin America. In his Ecuadorian years he conducted extensive survey and limited excavations. While living in New Mexico he continued to write about Ecuador and renewed his early fascination with the American Southwest and Mexico. He also became interested in the South Pacific and remained so for the rest of his life. By the time he moved to Arizona he had developed an expertise in folk museums. They became the subject of much of his work at the Arizona State Museum.

Several important scholars had a profound influence on Ed Ferdon. While still in his teens he moved into the circle of Edgar Lee Hewett, who founded the Museum of New Mexico and directed it until his death in 1946. This influence is reflected in Ferdon's biography of Hewett (Ferdon 1993a). The United States ambassador to Ecuador, Boaz Long, was another important figure in Ferdon's life. Long helped Ed in every possible way during his time in Ecuador. Long succeeded to the directorship of the Museum of New Mexico after Hewett's death, so their collegial relationship continued. Ed Ferdon also published a biography of Long (Ferdon 1956). Thor Heyerdahl interested Ferdon in the possible connections between pre-historic mainland South America and the South Pacific (Ferdon 1963, 1978). Heyerdahl was Norwegian, and no doubt their shared ethnicity helped bond Ed and Thor. Ferdon participated in Heyerdahl's Easter Island excavations and served as Heyerdahl's co-editor (Heyerdahl and Ferdon 1961, 1965).

This obituary concentrates on Ferdon's Ecuadorian years and the writing he did after he left that country, but it does not exclude the other phases of his life.

THE EARLY YEARS

Ed Ferdon's first experience in archaeology occurred about 1931 when he, accompanied by his younger brother and some friends, initiated an Eagle Scout excavation of a threatened Hopewell mound near his home (Ferdon 1998: 11; Thompson 2003a, 2003b).² Later that year, while a student at Marietta College (*ibid*:20), he attended the annual meeting of the Archaeological Institute of America. There he met Edgar Lee Hewett (*ibid*:23-24; Thompson 2003a). Hewett encouraged Ferdon to go to archaeological field school in New Mexico. In 1932 he participated in the University of New Mexico's Jemez Field School (Ferdon 1998:22-29; Gifford and Morris 1985:406 citing a personal communication from Ferdon), traveling there on his Harley Davidson. In 1933 he was once again working at the Jemez site (Ferdon 1998:29-33) and in 1934 was on the Chaco Canyon team (*ibid*:32-40). Under the direction of Reginald G. Fisher, Ferdon undertook a small stratigraphic excavation at the Jacal Site, five miles north of Chaco Canyon (Ferdon 1954a).

Ferdon traveled with Hewett to Peru and Bolivia in 1935, hiking over 200 miles (Ferdon 1998:40-53; Thompson 2003a, 2003b), to Central America in 1936, and to Guatemala and southern Mexico in 1937 (Ferdon 1998:55-57). During this latter expedition Ferdon took charge of a reconnaissance plane table survey of the ruins at Tonalá, Chiapas (Ferdon 1949, 1951a, 1953a). In 1948 he returned to Tonalá, staying until the next year. With aid from the Viking Fund he completed the survey (Ferdon 1998:106-108). In 1938 he returned to New

² Ferdon himself inspired an archaeologist-to-be through the Boy Scouts. As a scoutmaster, he led a group of New Mexican boys on a tour of Southwestern ruins. Ferdon influenced Tom Weaver, one of the participants and now an emeritus professor at the University of Arizona, to become an archaeologist and cultural anthropologist (Anonymous 2003; Thompson 2003b).

Mexican fieldwork, excavating at Hermit's Cave in the Guadalupe Mountains, under the overall direction of C.B. Schulz of the Nebraska State Museum (Ferdon 1946a; 1998:65-67). The project later formed the basis of his master's thesis (*ibid*:66). In the meantime, Ed had transferred to the University of New Mexico, earning a B.A. in anthropology and geology in 1937. He supported himself by serving as Hewett's chauffeur, traveling with him for more than 100,000 miles (Thompson 2003b).

Ferdon published an account of his 1935 experience with Hewett in Peru (Ferdon 1938). In this article he demonstrated his acute observational ability, accurately recording details of place names, road and bridge construction, differences in routes, and the rerouting of roads, as well as the historic connections between roads extant in the 1930s and ancient Inca ones, especially the road from Cusco to Ayacucho. Ferdon postulated the "existence of an early intercourse between the people of the Peruvian coast and those of the highlands well before the advent of the great Inca confederacy of Tawantinsuyu [*sic*]" (*ibid*:111) based on the influences present in the designs of coastal pottery from the two early highland cultures, Tiwanaku (Tiahuanaco) and Chavín. Ferdon concluded that "it may be possible that many of the later so-called 'Inca roads' are, in truth, early pre-Inca trade routes merely built and placed in a more serviceable form by the later Inca confederacy" (*ibid*:111-112), but this could not then be proven.

Ed Ferdon was a gifted storyteller. His account of the Peruvian highland trail preceded a number of other tales he delighted in telling, especially about times when he encountered almost unsurmountable difficulties. His storytelling related not only his early Peruvian experiences, but also his later adventures in Ecuador, in the American Southwest, in Mexico, and in the South Pacific Islands.

In 1939 Ferdon entered graduate school at the University of Southern California or USC (Ferdon 1998:65). However, before he could earn a degree the School of American Research posted him to Ecuador, where he completed his master's degree. This seems to have required the submission of a thesis and two or three research papers. His thesis is a report on the excavation of Hermit's Cave which was subsequently published (Ferdon 1946a).

The research papers submitted drew upon his Ecuadorian experience. One, preliminary in nature, was presented to the Geography Department of USC under the title "Notes to Accompany a Climatic Map of Ecuador". The second, presented to the Anthropology Department, is "Certain Functional Figurines from the Coast of Ecuador", a partial study of the Konanz collection. The third is "Prehistoric Burial Customs and their Distribution in Ecuador". This last paper was a preliminary plan that Ferdon hoped to develop with expanded distributional studies (Ferdon 1942c:3). He later plotted the distribution of Indian tribal units and Negro peoples in Ecuador (*ibid*, Ferdon 1947c; Ferdon 1950a:1-7). Ferdon received his M.A. degree *in absentia* in 1942.

Although Ferdon began work towards a Ph.D., he never attained it. In May 1942, presumably after all his Master's degree requirements were complete, Ferdon debated whether he should go to Lima to take the exams required for a doctorate, or whether he could have the exams administered in Ecuador by Jacinto Jijón y Caamaño, a well-respected scholar (Ferdon 1942c:1). In June 1942 he wrote that "Ambassador Long is very much interested in the arrangements made by [Hewett] at U.S.C. for the working out of certain of my Doctor's credits down here. . . He has been interested in working out some arrangement with Universities for the giving of credits to graduate students working in the Latin American field. . . Any arrangement

made by U.S.C. for my work would serve as a stepping stone for him" (Ferdon 1939-43, Report 31). Whether this proposed arrangement came to fruition is unclear. In 1953-54, after returning from South America, Ferdon undertook further graduate studies at the University of Michigan (Ferdon 1998:114-118). His "Studies in Ecuadorian Geography" (Ferdon 1950a) was probably a preliminary and partial draft of his proposed dissertation. According to James Griffin, who served as a member of Ferdon's Michigan committee, he would have been approved for the Ph.D. degree if he had been able to adhere to the timing requirements for examination (personal communication c. 1985).

In 1939 Ed married Constance Etz whom he met at Marietta College (Ferdon 1998:21, 65, 67-70). The couple went to Ecuador in December of that year. They worked together in South America, and together had three children: Richard Etz, born April 30, 1946, Derre, born April 21, 1949, and Julie, born December 25, 1950. Constance Etz Ferdon died in 1969. In 1972 Ferdon married Lola Vearl Galbraith, who survives him.

THE ECUADOR EXPERIENCE

Ferdon and Constance arrived in Ecuador in December 1939. His assignment was for five years. World War II intervened, however, and from 1943 to 1945 he was part of the *Misión Cinchona*, Quinine Mission, or Cinchona Mission (Ferdon 1998:88-93, 96-97).

In various articles, published mainly in *El Palacio*, the Museum of New Mexico's journal, Ferdon related details of his assignment to Ecuador by the School of American Research in conjunction with Ecuador's Academia Nacional de Historia and USC (Anon. 1939, 1940, 1945; Ferdon 1939-43, Report 31, 1940a, 1940b, 1940c, 1941a, 1941b, 1941c, 1942c, 1998). In the absence of clear instructions from Hewett,

Ferdon's research design evolved over time. His initial mission was "an archaeological survey of the old northern Inca province with an excavation of a selected site" (Anon. 1945:127). In his article, "The Ecuadorian Research Project," he stated the project had as its primary goal "an archaeological reconnaissance of the Ecuadorian highlands and coast" (Ferdon 1945a:12) with a "secondary objective the compiling of an ethnological map of the same area" (*ibid*). A third project was the stratigraphical excavation of an ancient fishing village near La Libertad. He characterized the purpose of the survey as "to locate and record as many of the principal historic sites in the prescribed area as was feasible" (*ibid*:13).

Ferdon's activities in Ecuador were followed closely by the School of American Research in the reports of its annual meetings. In the 1943 report Ferdon's "stimulation of museum development in the principal cities" (School of American Research 1943:33) was mentioned, as was the suspension of his archaeological work "to make his services available to our government for an important piece of research in connection with war activities" (*ibid*:33-34). Ferdon's work with the Cinchona Mission was not to be made public at that time. The 1944 report mentioned that "Mr. Ferdon has been engaged in special war work for the government and has been granted an additional six months' leave to continue in that service" (School of American Research 1944:6).

Through his surveys of the published literature Ferdon identified the areas of Ecuador not yet covered by archaeological investigation, principally the coastal area with a "large part of Ecuador . . . only lightly glossed over" (Ferdon 1940a:141). These gaps inspired Ferdon's work of surface collection mainly throughout the coast, but also in the sierra. He recognized the potential value of potsherds in determining "the identification of ancient culture areas within

[Ecuador's] bounds, the historical development of each, and the relationship of these cultures one with the other and to neighboring cultures beyond the Ecuadorian boundaries" (*ibid*). He described his methodology in detail and stated his hope to "publish the results in some practical form" (*ibid*:144). He was not able to fulfill his hope, but added that "we must depend on future Ecuadorian archaeologists to carry the work forward, adding to whatever start we may make" (*ibid*).

La Tolita

In 1940 Ed Ferdon, his colleague John M. Corbett, and their wives, journeyed to the northern and central coast of Esmeraldas Province with financing from the Ecuadorian Department of Mines, a part of the Ministry of Agriculture (Ferdon and Corbett 1941). They concentrated their efforts on the site of La Tolita or Pampa de Oro, even then famous, or infamous, as a large, ancient Indian ruin, or a functioning gold mine, depending on who might be thinking or talking about it. The Ferdons and Corbetts had the primary purpose "of securing a report on certain gold mining operations being carried on at the site" (Ferdon 1940c:257). It was owned by Donato Yannuzzelli, described unflatteringly to Dr. Hewett as a "squat, slightly bald, mustached little Italian" (School of American Research 1941:3), whereas the published report "Reconnaissance in Esmeraldas" (in every other respect identical to the monthly reports) simply says he "proved to be a hospitable Italian" (Ferdon 1940c:260). Ferdon described the culture of the people of the area. Recounting the journey to La Tolita by boat, horse, and foot, the report is an entertaining travelogue as well as skilled ethnographic reporting. It includes descriptions of about 25 sites that Ferdon surveyed and recorded during the trip.

What is clear from this report, as well as from a report in Spanish on the mission to La

Tolita submitted to the Ecuadorian Department of Mines, was that Yannuzzelli was indeed mining gold from the site, mainly in the form of ancient gold artifacts and gold extracted by a washing process from crushed ceramic artifacts, especially figurines. These objects were certainly archaeological, and as such valuable, but gold nuggets or drops, according to the report, may have been either the result of pulverization of artifacts or may have been natural gold.

Ferdon and Corbett reported that Yannuzzelli employed 24 men who hauled 960 carts of artifacts and dirt a week to the machine to wash and extract gold. Although Ferdon believed that the report to the Department of Mines resulted in "the government stopping [Yannuzzelli's] destruction of the site," (personal communication) nothing was ever done. The pillage of La Tolita is one of the most egregious cases of archaeological destruction in modern history. Even today inhabitants of the nearby village of La Tolita consider the site to be their special reserve for the exploitation of ancient pottery and other artifacts, including gold. Recently village people received visitors with the curse "down with the Banco Central!" (*vidi*), which was trying to declare La Tolita to be a national historic site and park and to relocate the local inhabitants.

Archaeological survey

In his report on "The Work in South America" (Ferdon 1942a) Ferdon told of his odyssey with David Basile from Quito to Ibarra, then westward on a circuitous and torturous route to the land of the Cayapas, along the coast by burro, by sail canoe, by truck, and by foot, through Jama and Coaque, surveying archaeological sites when they could. It is truly a story to read for excitement and vicarious pleasure.

During his archaeological work in Ecuador, Ferdon drafted reports with detailed maps of the

118 sites he surveyed in all, 99 in the coastal area and 19 in the sierra. Ferdon collected artifacts from the surface, or from man-made or erosion cuts, at 62 sites, both on the coast and in the mountain provinces (Lubensky 2000/2001:376-377). Ferdon's reports, copies of which are in my possession, show the meticulous and clear notes that he made on forms he specifically devised. Guayas Province was most heavily covered, but not to the extent that Ferdon wished (Ferdon 1941e:38). There, 41 sites were surveyed and collections were made from 27. Ferdon developed a site identification system with "E" for Ecuador, followed by the site number, and finally a lower case initial representing the province. For instance, La Libertad was designated E-1-g or site number 1 in Guayas province. He also received donated collections from four additional sites in the coastal area and the eastern jungle or *Oriente*.

Geographical schema

Among Ferdon's contributions to the geography of Ecuador is a systematic division of the major geographical regions of that country's coastal areas (Ferdon 1950a:9-34). Shell Oil Company and Standard Oil Company were exploring and systematizing the geography of Ecuador's *oriente* or eastern selva regions and it seemed best to concentrate in areas not covered by those corporations. In "Notes on the Cultural Geography of Coastal Ecuador", Ferdon divided the coast from the Colombian border to the mouth of the Guayas River into eight discrete sections, each differing from the others in climate, topography, and agro-economic potential. These are I. the Río Santiago Basin, II. The Delta Region of Northern Esmeraldas, III. The Esmeraldas Coastal Fringe, IV. The Developing Coast of Northern Manabí, V. The Manabí Savanna, VI. The Hills of Colonche and Paján, VII. The Santa Elena Peninsula, and VIII. The Guayas Savanna and the Monsoon Crescent.

The third section of Ferdon's "Studies in Ecuadorian Geography", written with the collaboration of Malcolm H. Bissell, covers "The Climates of Ecuador", and contains detailed charts of rainfall, temperature, and wind patterns, with monthly wind roses, for several regions of the country. The data were taken from the *Boletín Meteorológico* of the National Observatory in Quito for the years 1930-34 and 1936-37.

Figurines

Ed Ferdon became a close friend of Max Konanz of Guayaquil. According to Ferdon, Konanz was the owner of the finest collection of Esmeraldas archaeological material in Ecuador. Konanz generously placed his entire collection at Ferdon's disposal, allowing a rather thorough study to be made (Ferdon 1945b:221).

Ferdon developed a figurine typology based broadly on four groups: (1) human, (2) anthropomorphic, (3) animal, and (4) bird. Under each group he discerned a number of types, totaling 17 for the entire collection, each with descriptions of attributes so detailed that ordinary observers could not be expected to apprehend them. Ferdon carefully cross-checked his analysis of figurines with Max Uhle's descriptions, mainly of those from La Tolita (Uhle 1927:22-30) and from examples in the collections of the School of American Research. Ferdon described the method of figurine manufacture, noting if they were mold-made or hand-modeled, or both (Ferdon 1945a:223-242).

Ferdon seems to have been influenced by Max Uhle's theory that important aspects of ancient Ecuadorian culture had diffused from the Maya area (1927:34-39). Ferdon concluded that mold-made figurines first appeared in the Valley of Mexico at Teotihuacan and in the Petén Maya region about A.D. 900. Assuming that the use of the mold for figurine manufac-

ture spread southward from the Maya region Ferdon believed that its arrival on the Ecuadorian coast must have been after A.D. 900, and possibly as late as A.D. 1100. (Ferdon 1945a:223). On the basis of information encoded in figurines, Ferdon produced a highly detailed description of clothing and other cultural practices that should provide a basis for further analysis of these figurines. Ferdon later became aware that Uhle's Mesoamerican diffusion model had not stood the test of time. In a note to me sent with a copy of one of the reports, Ferdon wrote, "if I recall correctly, it was Gordon Willey, who rather chastised me for suggesting that [the] mould diffused from Meso-America." Although Uhle's Maya diffusion model has been out of favor for decades, parallels between Ecuadorian and Mexican traits are now well established (Cubillos 1955; Ferdon 1945b:223; Hosler 1994:15-17, 86-124; Lubensky 1991:293; Meggers and Evans 1966 and references therein; Paulsen 1977).

La Carolina and La Libertad site

Ferdon's assignment to excavate a selected site was carried out at the western edge of the town of La Libertad on the Santa Elena Peninsula, at a site called La Carolina (E-2-g; Ferdon 1939-43, Reports 12, 14, 16-20, 1940a, 1940b, 1940c). A report on the excavation was made by Michael Patrick Simmons in the form of a Ph.D. dissertation submitted to the University of Arizona (Simmons 1970). Simmons' examination of the collections from this site showed occupation by only the earliest Ecuadorian ceramic cultures, that is, by Formative and early Regional Development Period occupations including Valdivia, Machalilla, Chorrera or Engoroy, and Guangala. Simmons extended extraordinary praise to Ferdon, a member of his Final Examination Committee, for his assistance. Ferdon emphasized to me that Simmons' work encompassed, however, only ceramic vessel sherds, and that all the other materials

recovered from that excavation, including, metal, shell, botanical remains, and bone have yet to be analyzed. La Carolina contrasts with the nearby site of La Libertad itself (E-1-g) within the town of La Libertad. This site was mainly occupied in the much later Manteño Phase (Ferdon 1941d:35-38, 1942b:77; Wagner and Hale 1994).

Ferdon published a series of accounts of the La Libertad excavation (Ferdon 1941d:35-38, 1941g:204-210, 1942b:75-81), briefly describing objects of flaked and smoothed stone, clay artifacts such as figurines, spindle whorls, beads, and worked sherds, shell objects such as fish hooks, earrings, nose rings, lip plugs, beads, and buttons, as well as bone, wood, and metal objects.

Ethnographic research

Both Ferdon and his wife were intensely interested in the living cultures of the indigenous peoples of Ecuador. While he pursued his archaeological assignment and his quinine mission, they visited the places where these people lived, they made notes of their observations, and they reported information about the people and their environment. Constance Etz Ferdon published an article entitled "Market Day at Otavalo, Ecuador" (Ferdon 1940) based on a visit there in 1940. She described in colorful detail what many tourists saw then and until recently when the Otavalo market became more of a tourist attraction than a place where Indians traded for everyday necessities.

Ferdon arranged for a collection of ethnographic artifacts to be donated by Karl T. Goldschmid to the Museum of New Mexico. These arrived in Santa Fe after the Second World War, and were described by Ferdon, along with notes about the Jívaros or Shuar as they are now called (Ferdon 1947b). Goldschmid had previously worked for the Shell Oil

Company of Ecuador, which was helpful to Ed on his several trips to the eastern jungle region.

Ferdon collated information which Shell and the Standard Oil Company had accumulated on Ecuadorian ethnic groups, Shell in the *Oriente* and Standard Oil in the coastal region. Ferdon used these data to produce an ethnic map of Ecuador, and published "Notes to Accompany a Present Day Ethnic Map of Ecuador" (Ferdon 1947c). These notes then formed the first section of Ferdon's "Studies in Ecuadorian Geography" (Ferdon 1950a:35-76).

Soon after his return to the United States, Ferdon (1945c) put together, from his notes of a field trip in 1942, the story of a "Mountain Colony in Ecuador" named Buenos Aires, on the western slopes of the Andes in Imbabura Province. This was a newly formed Negro community that had desperate needs requiring immediate attention. Ferdon's story is about a *minga* formed to help settle those problems. The people of the entire province were called upon to participate in this native Ecuadorian custom, a communal work project to aid and improve the economic and social position of a local group. Ferdon left no one who read his story in doubt about the details of an Ecuadorian *minga*, which he compared to a North American barn-raising.

Cinchona Mission

After the Second World War had ended, Ferdon was able to publish an account of his first trip to the eastern slope of the Andes from Riobamba to the town of Macas for the *Cinchona* Mission (Ferdon 1952a). He traveled through an almost impenetrable part of Jívaro country in tropical eastern Ecuador. The Jívaros were then thought to be headhunters and makers of tzantzas, but Ferdon found them quite amiable. The trip was grueling and required overcoming what appeared to be impossible

hazards and hurdles. His mission was to find the type of *Cinchona* tree with the best bark for production of quinine, a quest that had been going on since the mid-eighteenth century (<http://diderot.alembert.free.fr/Q.html> ; consulted 7 December 2006). With the help of a native of the area, and after several failures, appropriate trees were discovered in an almost inaccessible spot. Only a certain type of specially trained horse, it was said, would allow its owner even to mention the Río Upano. Ferdon was accompanied by his friend, Danish businessman Olaf Holm,³ who later developed a career in Ecuadorian archaeology. On such trips Ferdon never failed to keep his eyes and ears open for information about possible archaeological sites. At least five were found and recorded on this trip, several reached only by sliding down a steep wet slope with arms thrashing the air until they could find a root or vine to hold onto (Ferdon 1952a:241).

In a letters to me dated April 4, 1988, Ferdon summarized the physical difficulties in Ecuador during the early 1940s "never have I worked under such frustrating conditions." The frustrations were caused by "money, time, biases about . . . work, and limitation on transport capabilities . . . with no burros available."

Nevertheless, Ferdon surmounted these problems to a considerable extent and established good relationships with his Ecuadorian colleagues. The head of the Quinine Mission,

³ Olaf Holm (1915-1996) was born in Denmark and first came to Ecuador in 1940 to manage a cacao plantation. He resided in Ecuador from then until his death. For many years he directed the Museo Antropológico del Banco Central in Guayaquil. He was the polymath author of over 100 scholarly publications and the editor (1951-74) of *Cuadernos de Arqueología e Historia* published by the Guayas Casa de la Cultura. Olaf Holm is remembered for the international support he attracted for Ecuadorian archaeology and for his personal kindness to many (Astudillo 1992; Guemaraes 1997; Stothert 2001).

Froelich Rainey,⁴ told in *National Geographic* magazine of his recruitment of Ferdon and several others, characterizing them as men who “were willing to quit their own work to help in the war emergency” (Rainey 1946:342). Rainey described the farewell dinner given when the time came for the North Americans to return to the United States as a “spontaneous expression of the mutual consideration developed between men of two nations who had learned to understand one another” (*ibid*:363).

Book reviews and engagement with issues in Ecuadorian archaeology

After leaving Ecuador, Ferdon always kept his interest in work being done there. His ideas can be followed in a series of book reviews he published. John Collier and Anibal Buitrón's *The Awakening Valley*, a photographic story of the Otavalo Indians, brought Ferdon's highest praise (Ferdon 1950b). Ferdon summarized in a very useful manner much of the artifact description in Geoffrey H. S. Bushnell's monumental work *The Archaeology of the Santa Elena Peninsula in Southwest Ecuador*. He seemed to agree with Bushnell about parallels with Costa Rican materials (Ferdon 1953b), but missed Bushnell's mistake in attributing a Valdivia site to the post-conquest period.

In 1958 Ferdon reviewed *Tumaco (Notas arqueológicas)* by Julio César Cubillos (Ferdon 1958a). The book covers an area in Colombia, just across the border from, and closely related to northwest Ecuador. Its precolumbian culture is variously called the Atacames, Tumaco, La Tolita, or Esmeraldas. Ferdon took careful note of Cubillos' contentions about relations with Mesoamerica. He brought up a number of considerations relevant to Ecuador and the Amazon, and reached the conclusion, as he usually did when thinking about alternatives to any thesis presented, that solutions may be found with further careful excavations.

Ferdon carefully reviewed the thesis presented by Betty J. Meggers *et al.* (1965:158-171) about a possible correlation between Valdivia ceramics and Japan's Jomon pottery. Ferdon expressed the hope that more field work in Colombia and Ecuador “will also lead to more thorough distributional studies and to attempts to clarify the nature and potential results of random transoceanic contacts by peoples with different cultural traditions” (Ferdon 1966b: 1732). He questioned the hypothesis that storm-swept Jomon fishermen landed and settled in an already existing nonceramic Ecuadorian Indian fishing culture, by pointing out that there was “not one fragment of evidence in any of the Valdivia Phase sites excavated indicates that pottery was superimposed on an underlying non-ceramic culture” (*ibid*).

⁴ Froelich Rainey (1907-1992) conducted archaeological research in Haiti and in Eskimo territory. He was the first anthropology professor at the University of Alaska, Fairbanks (1935-1942). During the Second World War he was a member of the U.S. Board of Economic Warfare. After the war he became director of the University Museum of the University of Pennsylvania. While at Penn he initiated or led approximately 230 archaeological expeditions intended to support the model of people first entering the New World via the Bering Strait. He established *Expedition* magazine and, during the 1950s, was a popular quiz show host (www.mnsu.edu/emuseum/information/biography/pqrst/rainey_froelich.html ; consulted 11 December 2006; Chávez 2005:281).

This was not the only time Ferdon criticized Betty J. Meggers' theoretical positions. In her influential article “Environmental Limitation on the Development of Culture” she stated that “the level to which a culture can develop is dependent upon the agricultural potentiality of the environment it occupies” (Meggers 1954: 815). Ferdon pointed out that Meggers did not differentiate between natural agricultural potential and the potential that a culture could create through its knowledge, agricultural techniques,

and tools. Ferdon believed that the impact of cultural factors on an environment could allow for sufficient productivity to support high culture (Ferdon 1959). Thus Ferdon anticipated the more detailed observations, excavations, and reconstructions of Robert Carneiro (1960, 1961, 1979, 1987), William Denevan (1966), Clark Erickson (Balée and Erickson 2006), Michael J. Heckenberger *et al.* (2003), Donald Lathrap (1970), Anna Roosevelt *et al.* (1991), and William I. Woods and colleagues (Glaser and Woods 2004; Lehmann *et al.* 2003) among others.

Ferdon developed his own system of rating agricultural potential. He concluded that “there is very little, if any, correlation between potential ratings and cultural achievement, certainly none in the Americas if we concern ourselves with prehistoric peoples” (1959:12). “High cultural development has come about in areas considerably less than perfect for agriculture under natural conditions, the most startling in this respect are the region around Cuzco, the west coast of Peru, and the Middle Gila valley of Arizona” (*ibid.*). As Ferdon saw it “it is not so much the natural environment as related to agriculture that controls the limits to which a culture might achieve, but rather the cultural environment” (*ibid.*:14).

In a further extension of his Ecuadorian interest, Ferdon (1981a) published a critique of a study by malacologist and physician Akkaraju Sarma (1974). Sarma contended that increased presence in Santa Elena Peninsula excavations of a hydrophytic mangrove-specific mollusc, *Anadara tuberculosa*, which is dependent on the flow of brackish water from interior sources that nourishes the mangroves, indicated periods of wetter climate. Such times, according to Sarma, were more propitious for human settlement than intervening periods of exceptionally dry climate, which resulted in abandonment of the area. Ferdon concluded that such factors as the

independently fluctuating El Niño current, uncertainties about the nature of mangrove propagation, coastal uplift from tectonic forces, a misunderstanding of the displacement of the Intertropical Front, and purely cultural forces such as independent over-exploitation, may have been factors in the ebb and flow of occupation of the Santa Elena Peninsula. Ferdon considered his idea probabilistic, capable of being confirmed or negated by “nothing greater than a localized geological, soil, and palynological study of the Peninsula with emphasis on Holocene sediments” (Ferdon 1981a:625).

My encounters with Ed Ferdon and work on his collections

Many of Ed Ferdon’s fellow archaeologists, who had worked with him during his stay in Ecuador, still remembered him when I was United States Consul General in Guayaquil in 1971. They told me about his site survey throughout Ecuador and the collections he amassed. Principal among these colleagues were Olaf Holm, Miguel Wagner,⁵ and Carlos Zevallos Menéndez.⁶ Others, including Ernesto

⁵ Miguel Wagner Velasco was a Guayaquil florist, art collector, amateur archaeologist, and naturalist who had a serious interest in orchid research. He also studied cloud forest bats and their place in native coastal mythologies. As a young man he accompanied Ed Ferdon on many of his coastal surveys. Ferdon stayed at his family’s hacienda on the Río Taura and Wagner joined Ferdon’s expeditions to Babahoyo and Colimes (Ferdon 1941c:3). Wagner was a friend of Emilio Estrada, Olaf Holm, Carlos Zevallos, and Presley Norton. Wagner participated in the excavation of several sites, including El Cangrejito on the southwest coast of Guayas province.

⁶ Archaeologist and historian Carlos Zevallos Menéndez (1909-1981) is principally known for his work on the Ecuadorian Formative, and on ancient Ecuadorian art and metalwork in general. His excavations revealed that Valdivians at the San Pablo site were maize farmers (Raymond and Burger 2003:2). In 1945 he founded the Casa de la Cultura Ecuatoriana “Benjamín Carrión”, Núcleo del Guayas and became its first president, a post

Luis Piana,⁷ Jorge Marcos Pino,⁸ Julio Enrique Estrada Ycaza,⁹ and Presley Norton¹⁰ still talked about him. I became interested in Ferdon's work and set about to discover where he and his collections had gone. One of the sites Ferdon surveyed was on the Hacienda Ayalan, where I

he retained until 1962. Its museum is named for him.

⁷ Chemical engineer Luis Piana Bruno (b. 1939) is the son of Italian immigrants. He ran the family business while developing his interests as an avocational archaeologist. Between 1966-1968 he worked with Carlos Zevallos. He excavated on Puná Island and maintained a private archaeology lab. From 1970 he supported the archeological fieldwork of Hans Marotzke, forming a museum collection that was totally destroyed by fire in 1991. After this disaster, Piana discontinued his archaeological involvement.

⁸ Jorge Marcos Pino (b. 1932) was a student of Carlos Zevallos Menéndez and Donald Lathrap. Since the late 1960s he has made important contributions to the archaeology of Guayas province and has helped to elucidate the role of Ecuador in the larger context of the prehistory of the Americas. He is the discoverer of the important Valdivia site of Real Alto and has written about the relationship between the Huancavilcas ethnic group and the Incas, and most recently, about the water reservoirs (*albarradas*) of the Guayas coast.

⁹ Julio Enrique Estrada Ycaza (1917-1993) was an economist, historian, civic activist, and journalist who focused his attention on his native city of Guayaquil and its surrounding region. He was president of Guayaquil's Junta Cívica (Municipal Council) and Director of the Archivo Histórico del Guayas (now part of the Banco Central del Ecuador). Through his study of primary sources he corrected many popular misunderstandings related to the history of Ecuador.

¹⁰ Anglo-Ecuadorian archaeologist Presley Norton (1932-1993) was the discoverer and excavator of the Valdivian site of Loma Alta (Raymond and Burger 2003:3-4) and the co-excavator of the Salango site. He also worked on the Isla de la Plata. Norton amassed a large collection of Ecuadorian artifacts which formed the basis of a pioneering traveling exhibition (Lathrap *et al.* 1975). Norton's artifacts eventually became part of the collections of the Banco Pacífico and later of the new Banco Central museum in Guayaquil.

excavated on weekends in 1972-73 (Lubensky 1974, 2000/2001:374-375).

Most of Ferdon's Ecuadorian collections were in the Museum of New Mexico in Santa Fe, but he was living in Tucson, Arizona. When I attended the 1978 meeting of the Society for American Archaeology there I visited him at the Arizona State Museum where he worked. We had already been in correspondence since 1973. Through our mutual friend Miguel Wagner I had learned about Ferdon's excavation near La Libertad on the Santa Elena Peninsula.

From 1973 until shortly before his death, Ferdon and I communicated frequently by phone and by letter. I sent 33 letters to Ed and he wrote 29 to me. Ferdon's letters were frequently extensive and discussed many aspects of Ecuadorian and South Pacific archaeology.

In 1983 I spent a week in the Museum of New Mexico studying the Ferdon collections. I had already received copies of all of Ferdon's notes on his surface collections. I made copies of the museum inventory cards related to Ferdon's material. I also photographed the entire collection of whole vessels that Ferdon had acquired in Ecuador as gifts (mainly from the owner of the Hacienda La Tolita) and as purchases authorized by the School of American Research. I arranged for a loan from the Museum of New Mexico to the Anthropology Museum of the University of Missouri-Columbia of the Ferdon surface collections stored in the Museum of New Mexico. Later, additional collections were discovered in the Museum's cellar and sent to Columbia to augment the loan. As work progressed my late wife Anita and I traveled to Tucson and Ed and his wife Vearl visited Columbia, Missouri twice to discuss his collections and my work on them face-to-face. Recently, the Ferdon collections have been transferred to the Maxwell Museum at the University of New Mexico in Albuquerque for permanent curation.

I developed a computerized attributes approach for analysis and classification of the sherds (see Chávez 1977 for an earlier approach). In frequent consultation with Ferdon, who responded with sincere interest and help, I wrote my doctoral dissertation for the University of Missouri on 35 sites in Esmeraldas Province that Ferdon surveyed, and from collections he made at six of those sites (Lubensky 1991). Ferdon said, "Heaven forbid that I should ever have to work with the complicated sherd classification that you have developed—it scares me just to look at all those sheets you sent me" (personal communication, 29 February 1990).

Since 1983 I have further analyzed Ferdon's entire Ecuadorian surface collection, presenting a series of conference papers (Lubensky 1992a, 1992b, 1993, 1994). After completing my doctorate, I was appointed Adjunct Research Associate in Anthropology at the University of Missouri. In that capacity I utilized Ferdon's collections to instruct students in archaeological research, providing them at the same time an interesting introduction to ancient Ecuadorian ceramics.

Two students, Julie Wagner and Pamela Hale, presented a paper based on their analysis of Ferdon's La Libertad collection at the 1994 Midwest Conference on Andean and Amazonian Archaeology and Ethnohistory and published it (Wagner and Hale 1995). Other students, including Steve Velasquez and Jessica Coats, prepared unpublished papers on aspects of Ferdon's work and collections. In my opinion such student papers may be suitable for publication.

In late 1993 Ed wrote me that one of the "most difficult decisions I must make with advancing age is what to do with all of those wonderful books I picked up over the years in my effort of developing a worthwhile research library". He stated that his Ecuador collection

was not great, "only about three feet of shelf space, and consists of material published prior to 1945". It included such difficult-to-find and valuable items as the major works by Jijón y Caamaño and Verneau and Rivet plus early issues of the *Boletín de la Academia Nacional de Historia de Quito* and Max Uhle's work *Tomebamba*. The Ellis Library at the University of Missouri, Colombia accepted about half of Ed Ferdon's Ecuadorian library. I have the remainder in my personal possession, mainly prints, papers, and miscellaneous documents. I would like to find an institution that would accept them. On February 21, 1997, Ed sent me "just a note to let you know that I like the arrangement you have made regarding my Ecuadorian library 'loan'. I am happy that the volumes are being used and are available to students."

THE AMERICAN SOUTHWEST AND MEXICO

Upon his return from Ecuador in May 1945 Ferdon resumed the position of Research Associate in Charge, Hispanic Studies, at the Museum of New Mexico and was also associated with the School of American Research in Santa Fe. In 1957 he became Acting Associate Director of the Museum of International Folk Art, a unit of the Museum of New Mexico. In this capacity he visited Scandinavian museums (Ferdon 1998:136-140). The following year he was promoted to Associate Director in Charge (*ibid*:136; Thompson 2006a). He held this position until 1960 when he became Coordinator of Interpretation for the Division of Anthropology at the Museum of New Mexico.

During his New Mexico years Ferdon turned his interests back to the American Southwest and Mexico, taking up a strand that began during his pre-Second World War years with Hewett. In 1961 he moved to Tucson, Arizona, becoming the Associate Director of the Arizona State Museum. Ferdon's success in pulling the Museum of International Folk Art out of a

slump had influenced Emil Haury to invite Ed to take up that position. Ed Ferdon devoted much of his time at Arizona to educational and public activities (Raymond H. Thompson, personal communication 23 October 2006). In 1978, when the State of Arizona ruled that no one could hold an administrative post beyond age 65, he became an ethnologist at the Museum, a position he held until his retirement in 1983 (Thompson, personal communication, June 24, 2003).

Excavations in New Mexico and Reconnaissance in Chihuahua and Durango

During his years at Santa Fe Ferdon did field work at several sites. One is a pit-house near Belén, New Mexico called the Olguin site (Ferdon and Reed 1950). Two others are the Quarai and the Abo State Monuments near Mountainair, New Mexico (Ferdon 1952b). At the Olguin site, Ferdon and his team recovered only surface sherds. They assigned the site to the Cañada Cruz phase of the Río Abajo Branch, equivalent roughly to Pueblo III of c. A.D. 1200.

Ferdon worked on a site near Apache Creek, New Mexico, which was under threat of destruction by highway construction (Peckham *et al.* 1956). There he discovered a pit house of the Three Circle Phase, estimated to date between A.D. 900 and A.D. 1000. Ferdon recorded over 300 sherds, the bulk of them of the Alma type, as well as manos and metates. Ferdon watched the heavy earth moving equipment come in, strip the surface of the site, and begin removal of the hill which was, presumably, obliterated. His work is a prime example of the mitigation of the destruction of a cultural resource. Ferdon's experience at the Apache Creek site initiated his interest in salvage archaeology.

In 1955, Ferdon conducted archaeological reconnaissance of the Sierra Madre Occidental

in Mexico's Chihuahua and Durango states under the sponsorship of the School of American Research.

Comparative and critical studies

Ferdon made two major contributions to comparative studies of ancient Southwestern and Mexican cultures. Somewhat ahead of his time, in 1955 Ferdon published a study of the many architectural parallels between prehistoric Mexico and the American Southwest (Ferdon 1955). He compared rectilinear, contiguous-roomed buildings constructed on the ground surface with subterranean houses, and contrasted the Mexican tendency to orient buildings in the cardinal directions with the Puebloan practice of haphazard layout and room size. He discussed presumed religious structures, especially kivas, ball courts, and large platform mounds. He pointed out that in the U.S. Southwest cremation had been the most common means of disposal of the dead, but inhumation appeared acceptable as an alternate method. He made pottery comparisons, noting the introduction of Gila Polychrome.

Points of similarity also existed with agricultural practices, especially irrigation. Hohokam water management systems reached dramatic proportions both in the size of main canals and the extent of land under irrigation. Ferdon concluded that "all factors point to the invasion, not necessarily by force of arms, of the Hohokam by a people of alien culture" during the Classic Period (*ibid*:27). Ferdon believed that Puebloan peoples from Mexico were likely invaders, but they lived side-by-side with the Hohokam for around one hundred and fifty years, keeping their identity separate. This is an exceedingly rare phenomenon in the history of cultural contacts. Ferdon noted also that there was little evidence of linguistic differences, or of the production by the Hohokam of Mexican-like arts and crafts. Ferdon speculated on

the several ways that foreign traits could have come to the American Southwest. For instance, trading groups could have invaded from Mexico. Alternately, after the fall of Tula II in A.D. 68 according to Eric Thompson's Scheme B (Eric Thompson 1941:103 cited by Ferdon 1955:23) the exodus of "various governmental and military leaders from their homeland" (*ibid*:30) could have accounted for the proposed invasion. Ferdon concluded that it seemed reasonably certain that "Mexican architectural influences are present in the prehistoric cultures of the Southwest" (*ibid*:31). Ferdon pointed out that there had been little in the way of up-to-date archaeological explorations upon which to base comparisons, and that the source, time, and method of intrusion from Mexico into the Southwest could be better determined only after a sustained study of the area between the Valley of Mexico and the Southwest had been undertaken.

Twelve years later Ferdon continued to question conventional wisdom and search for alternative answers to cultural questions. In "The Hohokam 'Ball Court': An Alternate View of its Function" he showed that Pimian speaking peoples, the apparent descendants of the Hohokam, utilized structures similar to the supposed Hohokam ball courts as ceremonial dance courts. This might reflect similar use of analogous structures for dance ceremonies by the Hohokam, an alternative interpretation to the ball game introduced from Mexico (Ferdon 1967:9-11).

In Southwestern and Mexican archaeology, ethnography, and geology, as in the field of Ecuadorian studies, Ferdon used the book review format to express his critical opinions. He appears to have agreed with Alberto Ruz Lhuillier and Jorge Acosta that the site of Tula de Hidalgo was the real Toltec center, not Teotihuacan (Ferdon 1945d). Mazapán pottery, typical of the earliest levels of Tula, also appears

in late Teotihuacan contexts and links the two sites. In the 1970s Tula was excavated by a team from the University of Missouri who demonstrated that the site was indeed the ancient Toltec center (Diehl 1974; Healan 1988).

In his review of *Design Motifs of Ancient Mexico* by Jorge Enciso (Ferdon 1954b), Ferdon points out that only a few paragraphs are devoted to the subject of designs on stamps. These are sufficient for the person primarily interested in design as such and only casually interested in the history of motifs, or the functions of the objects that carried them. Because most of the stamps known up to this point were in private collections, they lacked detailed proveniences. Ferdon discerned that a serpent design illustrated in Enciso's book is almost identical to one from Esmeraldas Province Ecuador that was in the Konanz collection (*ibid*:277).

Even at 82 Ferdon could not refrain from questioning "long held and tacitly unproven concepts" (Ferdon 1995:11). As part of an introduction to a volume on the Grand Chichimeca he reviewed the history of his involvement in Southwestern archaeology. He stated that his 1955 paper on Mexican-Southwestern architectural parallels "seemed to have served as an opening to legitimize . . . the introduction of much needed research to ascertain the nature and degree of possible influence of prehistoric Mexican cultures upon the ancient peoples of the American Southwest" (*ibid*:8). He reiterated his belief that "some form of direct person-to-person contact between prehistoric Mexican peoples to the south and those of southwestern cultures to the north had taken place" (*ibid*:9) a position that ran "into a near solid wall of stolidly accepted traditional theory" (*ibid*:10) that southwestern cultures had developed independent of influential contact from Mexico (*ibid*), "a dictum that had been expressed back in 1945 by Emil Haury and was still alive and well" (*ibid*:11). He praised one of

his colleagues, Charles Di Peso, who, after excavating the great prehistoric site of Casas Grandes, Chihuahua, Mexico on the rim of the area of potential contact between Mexico and the American Southwest, published a report (Di Peso 1974) which revived interest in the Mexico-Southwest contact issue, making it “unquestionably clear that a strong Mexican influence had prevailed during the Casas Grandes prehistoric past” (Ferdon 1995:11). Charles Di Peso, Ferdon asserted, was one of those “few creative souls who are so strongly dedicated to advancing the boundaries of knowledge that they are willing to accept the professional risks involved” (*ibid*:12).

Ferdon could have been talking about himself. Only people with his courage and imagination combined with extensive practical experience in the survey and excavation of Southwestern, Mexican, Central American, and Andean sites, and a broad and deep knowledge of archaeological literature were equipped to see the similarities and differences in the archaeological record of those regions. In the days before jet travel and the internet distribution of books, there were few such people.

SOUTH PACIFIC

The South Pacific phase of Ferdon's life began when he met Thor Heyerdahl in 1949 (Ferdon 1998:110-112). Ferdon and Heyerdahl forged a close and life-long friendship. In 1953 Heyerdahl invited Ed to take part in the 1953 Norwegian Archaeological Expedition to the Galapagos, led by Heyerdahl with participation by Arne Skjölsvold, William Mulloy, Carlyle Smith, and Eric Reed, the latter of the U.S. National Park Service. Ed was taking graduate courses at the University of Michigan at the time, and so was unable to accept (*ibid*:115). This expedition led to confirmation that Ecuadorian Indians reached the Galapagos in pre-columbian times although they did not establish

permanent settlements (Heyerdahl and Skjölsvold 1956). The concept of transpacific contacts was a driving force for all of Heyerdahl's South Pacific expeditions. When Heyerdahl invited Ferdon to participate in the 1955-56 Easter Island expedition Ed accepted, in spite of the required absence from his family for many months (Ferdon 1998:118-121, 130). It was the great adventure of his life, cementing his interest in the South Pacific, the peopling of its many islands, and the cultures of their inhabitants, past and present.

Ferdon thought long and hard about his work on the South Pacific. He was aware of the great value of ethnography to the study of Southwestern archaeology. However, during Ed's lifetime Southwestern specialists recognized that there have been four hundred years of change from the Spanish contact to the present. It became clear that it was an error to combine all the facts from that four hundred year period to create a generic picture of Southwestern people for use as an ethnographic analogy. However, this was exactly what Pacific scholars were still doing. Ed recognized that this approach was just as much a problem for Oceania as it had been for the Southwest. He addressed the issue by producing four books on contact period ethnography of the four major Polynesian centers. Realizing that acculturation had proceeded very rapidly once Western ships began to visit the islands, Ed drew his ethnographic syntheses only on the basis of the earliest European accounts. His visits to the Pacific islands familiarized him with the current situation there, as well as with the details of their geography, but did not include any new ethnographic research.

Ferdon's Easter Island archaeological reports are cited frequently. His most extensive excavations were at the ceremonial site of Orongo. At all the sites he excavated his concentration seems to have been on their structures (Ferdon

1961a, 1961b, 1961c, 1961d, 1961e, 1961f, 1961g, 1965a 1965b, 1965c). He analyzed their architecture in detail and described associated sculpture, pictographs, painting, and motifs. He noted bird motifs, the use of dance paddles decorated with a stylized face with the weeping eye motif, and depiction of several styles of boats. Ferdon spoke of the worship of two gods, Makemake and Haua, depicted in architectural designs, and their roles in the bird cults of Easter Island.

Ferdon's excavation at Orongo caused him to ponder the massive fires that once burned at the pan-island ceremonial center. It seemed clear that fire was closely associated with ritual on this eastern outpost of Polynesia. The native custom of welcoming approaching visitors with bonfires was observed by various European explorers to New Zealand, the Chatham Islands, the Cook Islands, and other places in the Pacific. It had been thought to be a warning to other islanders of the arrival of foreigners. However, Ferdon concluded, after careful study of the accounts, that the fires must have been "designed to abrogate what appeared to be potential danger," being "some form of ritualistic protection" (Ferdon 1986:472); in other words, a way of putting aside their fear about the approach of foreigners. Ferdon lamented that the use of such ceremonial fires declined in later years and disappeared by 1830, "well before the full significance of their various manifestations could be studied at first hand" (*ibid*).

In his summary of Easter Island house types, Ferdon described in detail the structure and design of the boat-shaped thatch houses which he likened to overturned canoes (Ferdon 1961e:333). He speculated on the origin and rationale of this unique design. Later Ferdon formulated the idea that the design may have been inspired by the unique superstructure, sails, and rigging on ancient double canoes from the Tuamotu Islands, which Ferdon believed to

have been the original home of at least one group of Polynesians to settle on Easter Island sometime in the distant past (Ferdon 1981c:3).

Significant, especially for Andeanists, is Ferdon's comparison of Easter Island culture traits, as determined from excavations, with the possible origin, or origins, of those traits (Ferdon 1961b:255). "We can no longer limit ourselves to a search of other Polynesian islands for the direction, or directions, from which cultural stimuli and trait migration came. . . The voyage of the Kon-Tiki raft and finding of Peruvian [and Ecuadorian] sherds on the Galapagos Islands have clearly opened up the western regions of the New World as a possible source of Polynesian objects, ideas, and people" (Ferdon 1961g:533). Ferdon admitted that there is a substantial group of traits and complexes in the Easter Island culture which have wide distribution in Polynesia, but "archaeological excavations in Polynesia have not advanced efficiently as yet to determine when and from which island these traits came" (*ibid*). There are some traits, however, that are not characteristic of Polynesia, or are completely absent there but appear on Easter Island. On the other hand, there are apparent counterparts to some Easter Island traits on the western mainland of South America. Though not many, they are "sufficient in number to make it difficult to reason that they are all the result of separate, independent inventions" (Ferdon 1961g:533) and the "apparent American parallels should be noted and their possible evidence of diffusion to Easter Island seriously considered" (*ibid*). These include the prepared plaza with ceremonial structures on two or more sides, precisely fitted stone structures, the corbel-vaulted roof, solar observation devices, the bird-man cult, cremations, reed water-crafts, the weeping eye motif, ear spools, and the sweet potato.

Ferdon argued that taro, a common Polynesian root crop, was the dominant precolumbian

domesticate of northern New Zealand. Some scholars believed that there had been a precolumbian introduction of the sweet potato from South America into that area (Ferdon 1988a; O'Brien 1972). Ferdon analyzed the history, biology, and cultural usages of both the taro and the sweet potato, concluding that, without doubt, the sweet potato was a postcolumbian introduction to New Zealand "but then adapted to the New Zealand environment by applying the field and storage techniques already developed by the Maori for taro" (Ferdon 1988a:1).

In addition to his article on Easter Island house types (Ferdon 1961a, 1961e), Ferdon published "Notes on Present-Day Easter Islanders" (1957), then a report on Easter Island exchange systems (1958b), one on Orongo "Sun Stones" (1988b), and another on stone chicken coops (2000). These articles recorded his ethnological observations.

After finishing their work on Easter Island, Heyerdahl and his team went west to Pitcairn Island, to Rapa Iti in the Morotiri Group, to Tahiti in the Society Islands, to Raiatea, and then to Hiva Oa in the Marquesas (Heyerdahl 1958:360). These visits provided Ferdon with inspiration for other studies about the settlement, migrations, and the peoples of the Pacific.

Ferdon wrote an article on the status of the descendants of the Bounty mutineers who helped settle Pitcairn Island (1958c). Of great interest to Ferdon was the biological mixing of the original Pitcairn settlers, nine British sailors who had left their fellow seamen in Tahiti, six Tahitian men, and eleven Tahitian women.

Ferdon published a paper on Polynesian Origins (Ferdon 1963), subsequently reprinted. In 1949 Ferdon had attended the XXIX International Congress of Americanists in New York City. Two presentations made there had a kind

of shock value for him. The first was W.F. Libby's exposition of the radiocarbon dating method (Stubbs and Ferdon 1949:293). The second was Gordon Ekholm's exhibit emphasizing similarities in objects and art forms from American Indian, Pacific Island, and southeast Asian cultures. Ferdon thought this formidable array of material substantiated "the thesis of psychic unity of mankind" (*ibid*:294). Once Ferdon became involved in South Pacific archaeology he was able to apply his extensive knowledge of ancient New World cultures to the problem of transpacific migrations and contacts. In all his work in the South Pacific he searched for evidence related to Heyerdahl's belief that Indians traveled from South America in their own vessels and settled in the islands of the Pacific. A cautious diffusionist, Ferdon concluded that he saw no solid evidence that American Indians first settled Polynesia. However, he accepted the possibility that American Indians may have made exploratory contacts in the Pacific. He demonstrated through an analysis of wind, wave, and current patterns that the settlement and cultural development of the islands of the Pacific most likely involved a melange of successive influences with settlements succeeding or dying out, and with people constantly and repeatedly moving from and to all parts of the Pacific, including the west coast of South America. He argued that Polynesians did not have a single origin point.

Ferdon's general synthetic books on South Pacific islands and island groups include *Early Tahiti as the Explorers Saw It, 1767-1797*, (Ferdon 1981b) and *Early Tonga as the Explorers Saw It, 1615-1810* (Ferdon 1987). Ferdon also prepared an article on Tahiti for the *Encyclopedia of World Cultures* (Ferdon 1991).

Ferdon had the opportunity in 1990 to revisit the Marquesas as guest lecturer on the Wind Star cruise ship. These visits plus the recorded observations of two men, William

Pascoe Crook¹¹ and Edward Robarts¹² provided Ferdon with the basis for his book on *Early Observations of Marquesan Culture, 1595-1813*, (Ferdon 1993b). At the time of his death, Ferdon was at work on a book about early Hawaii.

CONCLUSION

Ed Ferdon was able to see a broad picture, while still controlling small details. In his article "Why Archaeology?" he wrote that it should make us humble to realize "that we alone have not built the world around us" (Ferdon 1947a:18). He strove to show that archaeology brings "knowledge and ways of life of those people in the dim past who had much to offer, but never quite got around to learning how to put it down in writing" (*ibid*). It's no small accomplishment to do this for one part of the world, or one period of time. However, Ferdon, during the course of his long life, acquired expertise in the geography and ancient and contemporary cultures of several major regions. He expanded our archaeological knowledge of Ecuador, Mexico, the U.S. Southwest and the South Pacific. He was an astute, even a prescient critic, and an accomplished synthesizer. He was also a very engaging man who is missed by many friends, colleagues, and family members, including Amanda Ferdon, James Warren, and David Warren, his three grandchildren and his great grandchild Lily Petterson, who hon-

ored him by establishing the Edwin N. Ferdon Scholarship Fund at the University of Arizona. He is buried in the East Lawn Palms Cemetery, Tucson (Anonymous 2002).

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References Cited

Note: This bibliography includes as many publications by Edwin Nelson Ferdon, Jr. as the author was able to identify. It also includes obituaries of Ferdon. Works not cited in this paper are indicated by an asterisk (*).

Printed sources

Anonymous

- 1939 School to Inaugurate Ecuador Work. *El Palacio* 46(9):219.
- 1940 Ferdon Arrives in Ecuador. *El Palacio* 47(1):17.
- 1945 Ferdon's Work in Ecuador. *El Palacio* 52(6):127-128.
- 2002 Edwin Nelson Ferdon, 89. *Honolulu Daily Advertiser*, 26 November 2002.
<http://w2.byuh.edu/library/Obituaries/2002/F.htm> (consulted 22 August 2006).
- 2003 Funeral Notices. *Arizona Daily Star*, November 16, 2003, Final Edition, Tucson/Region Section, p. B4.

Astudillo de Parra, Lucia

- 1992 A "Museum Viking" in Ecuador. *Museum* 173, volume 44(1):17-19 (Paris: UNESCO).

Balée, William and Clark Erickson, editors

- 2006 *Time and Complexity in Historical Ecology: Studies in the Neotropical Lowlands*. New York: Columbia University Press.

Carneiro, Robert L.

- 1960 Slash-and-Burn Agriculture: A Closer Look at Its Implications for Settlement Patterns. In *Men and Cultures*, edited by Anthony F. C. Wallace, pp. 229-234. Philadelphia: University of Pennsylvania Press.
- 1961 Slash-and-Burn Cultivation among the Kuikuru and Its Implications for Cultural Development in the Amazon Basin. In *The Evolution of Horticultural Systems in Native South America: Causes*

¹¹ William Pascoe Crook (1775-1846) was a Congregational missionary and schoolmaster. He took up residence in the Marquesas in June 1797 and remained there until 1799. He and the Reverend Samuel Greatheed compiled a dictionary of a Polynesian language and an account of the Marquesas. In 1803 he rejoined the South Seas mission, working in Australia, where he established a school, and in Tahiti.

¹² Englishman Edward Robarts deserted his post as cook on a whaling ship and lived in the Marquesas. He published an account of his time there (1798-1806) (Robarts 1974).

- and Consequences; a Symposium, edited by Johannes Wilbert, pp. 47-67. *Antropológica, Suplemento Publicación 2*, Sociedad de Ciencias Naturales La Salle (Caracas, Venezuela).
- 1979 Factors Favoring the Development of Political Leadership in Amazonia. *El Dorado* 4:86-94 (Greeley, Colorado).
- 1987 Further Reflections on Resource Concentration and its Role in the Rise of the State. In *Studies in the Neolithic and Urban Revolutions: The V. Gordon Childe Colloquium*, edited by Linda Manzanilla, pp. 245-260. Oxford: BAR International Series 349.
- Chávez, Karen L. Mohr
- 1977 *Marcavalle: The Ceramics from an Early Horizon Site in the Valley of Cusco, Peru, and Implications for South Highland Socioeconomic Interaction*. Ph.D. dissertation, University of Pennsylvania, Philadelphia.
- 2005 Alfred Kidder II in the Development of American Archaeology: A Biographical and Contextual View. *Andean Past* 7:251-309.
- Cubillos, Julio César
- 1955 *Tumaco: Notas arqueológicas*. Bogotá: Editorial Minerva.
- Dart, Allen
- 2002* Ed Ferdon. *Glyphs: The Monthly Newsletter of the Arizona Archaeological and Historical Society. An Affiliate of the Arizona State Museum, University of Arizona* 53(6):7.
- Denevan, William
- 1966 *The Aboriginal Cultural Geography of the Llanos de Mojos of Bolivia*. Berkeley: University of California Press.
- Diehl, Richard A., editor
- 1974 *Studies of Ancient Tollan: A Report of the University of Missouri Tula Archaeological Project*. Columbia: University of Missouri-Columbia, Department of Anthropology.
- Di Peso, Charles
- 1974 *Casas Grandes: A Fallen Trading Center of the Grand Chichimeca*, Volume 1. Flagstaff, Arizona: Northland Press.
- Ferdon, Constance
- 1940 Market Day at Otavalo, Ecuador. *El Palacio* 47(8):165-171.
- Ferdon, Edwin Nelson, Jr.
- 1938 A Peruvian Highland Trail. *El Palacio* 44(16-18):111-130.
- 1939-43 Monthly Reports of the School of American Research, Archaeology Survey of Ecuador to Dr. Hewett, numbers 1-44, December 1939-July 1943. On file in the archives of *Andean Past*.
- 1940a The Archaeological Survey of Ecuador. *El Palacio* 47(6):137-144.
- 1940b Investigación arqueológica en el Ecuador. *Boletín de la Academia Nacional de Historia* 19(55):103-108 (a translation of Ferdon 1940a).
- 1940c Reconnaissance in Esmeraldas (Part 1). *El Palacio* 47(12):257-272. (Reprinted, with minor revisions, as Exploration in Esmeraldas Basin, Taken from an Extract from Ferdon's Monthly Reports of the School of American Research, Archaeological Survey of Ecuador, Numbers 8, 9, 10, & 11, July, August, September, October 1940, pages 1-9. Appendix 1(1). *Thirty-fourth Annual Report of the Schools of American Research of the Archaeological Institute of America* 33-34 (1941). (Santa Fe, New Mexico).
- 1941a Reconnaissance in Esmeraldas Concluded from the December Number. *El Palacio* 48(1):7-15. (Taken from an extract from Ferdon's Monthly Reports Numbers 8, 9, 10, & 11, July, August, September, October 1940, of the School of American Research, Archaeological Survey of Ecuador, pp. 9-15. (Santa Fe, New Mexico).
- 1941b Exploration in Esmeraldas Basin. *Thirty-fourth Annual Report of The School of American Research of the Archaeological Institute of America*, pp. 33-35. (Santa Fe, New Mexico).
- 1941c Exploration in the Guayas Basin. (Taken from an extract from Ferdon's Monthly Report of the School of American Research, Archaeological Survey of Ecuador, Number 22, September 1941.) *Thirty-fourth Annual Report of the School of American Research of the Archaeological Institute of America*, pp. 38-41 (Santa Fe, New Mexico).
- 1941d The Excavation at La Libertad. *El Palacio* 48(2):38-42. (Reprinted in *Thirty-fourth Annual Report of the Schools of American Research of the Archaeological Institute of America*, Minutes of the Annual Meeting 1941, Appendix 1(2):35-38, 40-42. (Santa Fe, New Mexico).
- 1941e Exploration in the Guayas Basin. (Taken from an extract from Ferdon's Monthly Report of the School of American Research, Anthropological Survey of Ecuador. Number 22, September, 1941. Appendix 1, III. *Thirty-fourth Annual Report of the School of American Research of the Archaeological Institute of America: Minutes of the Annual Meeting*, pp. 38-41. (Santa Fe: New Mexico).
- 1941g Preliminary Notes on Artifacts from La Libertad, Ecuador. *El Palacio* 48(9):204-210.
- 1942a The Work in South America. *Thirty-fifth Annual Report of the School of American Research of the Archaeological Institute of America: Minutes of the Annual Meeting*, pp. 20-25. (Santa Fe, New Mexico).

- 1942b Excavaciones arqueológicas cerca de La Libertad, Provincia del Guayas. *Boletín de la Academia Nacional de Historia* 22(59):77-81 (A translation of Ferdon 1941d).
- 1942c Year 1942 Summary Report of the School of American Research Archaeological Survey of Ecuador. On file in the archives of *Andean Past*.
- 1945a The Ecuadorian Research Project. *Thirty-eighth Annual Report of the School of American Research of the Archaeological Institute of America: Minutes of the Annual Meeting*, pp. 12-17. (Santa Fe, New Mexico).
- 1945b Characteristic Figurines from Esmeraldas. *El Palacio* 52(11):221-245. (Reprinted in *Papers of the School of American Research* 40:1-25 (1945). (Santa Fe, New Mexico).
- 1945c A Mountain Colony in Ecuador. *El Palacio* 52(7):129-137.
- 1945d Review of The Excavation of Ancient Tula in *Guía Arqueológica de Tula* by Alberto Ruz Lhuiller. *El Palacio* 52(7):145-147.
- 1946a *An Excavation of Hermit's Cave, New Mexico*. Monographs of the School of American Research 10. (Santa Fe, New Mexico).
- 1946b* Millionth Map of Hispanic America Completed. *El Palacio* 53(4):90-92.
- 1947a Why Archaeology? *El Palacio* 54(1):16-18.
- 1947b Jívoro Collection Arrives. *El Palacio* 54(1):22-24.
- 1947c Notes to Accompany a Present Day Ethnic Map of Ecuador. *El Palacio* 54(7):155-169.
- 1949 Survey of the Ruin of Tonalá, Chiapas, Mexico. *El Palacio* 56(8):227-229.
- 1950a *Studies in Ecuadorian Geography*. Monographs of the School of American Research 15 (Santa Fe, New Mexico).
- 1950b Review of *The Awakening Valley* by John Collier, Jr. and Anibal Buitrón. *El Palacio* 57(4):121-123.
- 1951a The Granite Ruin of Tonalá. *Archaeology* 4(2):83-88.
- 1951b* Article on Photographic Methods Recommended for Archaeologists. *El Palacio* 58(3):96.
- 1952a Exploring Ecuador's Rio Upano, *El Palacio* 59(8):223-250.
- 1952b Treasure Hunt at Abo and Quarai. *El Palacio* 59(9):288-290.
- 1952c* Review of *Landscape: Human Geography of the Southwest*, edited by J[ohn] B[rinkerhoff] Jackson, 1(1-2; 1951). *El Palacio* 59(2):64-67.
- 1953a *Tonalá, Mexico: An Archaeological Study*. Monograph of the School of American Research 16. (Santa Fe, New Mexico).
- 1953b Review of *The Archaeology of the Santa Elena Peninsula in South-West Ecuador* by Geoffrey H.S. Bushnell. *American Antiquity* 19(1):98-99.
- 1954a A Surface Jacal Site in the Chaco Basin. *El Palacio* 61(2):35-42.
- 1954b Review of *Design Motifs in Ancient Mexico* by Jorge Enciso. *El Palacio* 61(8):276-278.
- 1955 *A Trial Survey of Mexican-Southwestern Architectural Parallels*. Monograph of the School of American Research 21. (Santa Fe, New Mexico).
- 1956 Long-Long Ago and Today. *El Palacio* 63(11-12):324-331.
- 1957 Notes on Present-day Easter Islanders. *Southwest Journal of Anthropology* 13(3):223-238.
- 1958a Review of *Tumaco (Notas arqueológicas)* by Julio César Cubillos. *American Antiquity* 23(3):327-328.
- 1958b Easter Island Exchange Systems. *Southwestern Journal of Anthropology* 14(2):136-151.
- 1958c Pitcairn Island, 1956. *Geographic Review* 48(1):69-85.
- 1959 Agricultural Potential and the Development of Cultures. *Southwestern Journal of Anthropology* 15(1):1-19. Reprinted in the Bobbs-Merrill Reprint Series in the Social Sciences A-64 (1960). Indianapolis: Bobbs-Merrill.
- 1961a Easter Island House Types. *El Palacio* 68(1):28-46. Also in Heyerdahl and Ferdon 1961, Report 13, pp. 329-336.
- 1961b The Ceremonial site of Orongo. In Heyerdahl and Ferdon 1961, Report 3, pp. 221-255.
- 1961c Sites E-4 and E-5. In Heyerdahl and Ferdon 1961, Report 10, pp. 305-311.
- 1961d Stone Houses in the Terraces of Site E-21. In Heyerdahl and Ferdon 1961, Report 11, pp. 313-321.
- 1961e Easter Island House Types. In Heyerdahl and Ferdon 1961, Report 13, pp. 329-336.
- 1961f Site E-6, and Easter Island Hare Moa. In Heyerdahl and Ferdon 1961 Report 15, pp. 381-383. (Santa Fe, New Mexico).
- 1961g A Summary of the Excavated Record of Easter Island Prehistory. In Heyerdahl and Ferdon 1961, pp. 527-535.
- 1963 Polynesian Origins. *Science* 141:499-505. Reprinted in *New Roads to Yesterday: Essays in Archaeology; Articles from Science*, edited by Joseph R. Caldwell, pp. 231-246 (1966). New York: Basic Books. Also reprinted in *Peoples and Cultures of the Pacific: An Anthropological Reader*, edited by Andrew P. Vayda, pp. 95-111 (1968). Garden City, New Jersey: Natural History Press.
- 1965a A Reconnaissance Survey of Three Fortified Hilltop Sites. In Thor Heyerdahl and Ferdon 1965, Report 2, pp. 9-21.

- 1965b A Summary of Rapa Iti Fortified Villages. In Heyerdahl and Ferdon 1965, Report 4, pp. 69-75.
- 1965c Surface Architecture of the Site of Paeke, Taipi Valley, Nukuhiva. In Heyerdahl and Ferdon 1965, Report 9, pp. 117-122.
- 1966a* *One Man's Log*. London: Allen and Unwin.
- 1966b The Prehistoric Culture of Ecuador, a review of *Early Formative Period of Coastal Ecuador: The Valdivia and Machalilla Phases* by Betty J. Meggers, Clifford Evans, and Emilio Estrada. *Science* 152:1731-1732.
- 1966c* *Our Cultural Heritage and Arizona Highways*. Tucson: Arizona State Museum.
- 1967 The Hohokam "Ball Court": An Alternative View of Its Function. *Kiva* 33(1):1-14.
- 1978 Thor Heyerdahl and the Polynesian Question. *Research in Norway* 1978:59-64. (Oslo: Forskningsnytt).
- 1981a Holocene Mangrove Formations on the Santa Elena Peninsula, Ecuador: Pluvial Indicators or Ecological Response to Physiographic Changes? *American Antiquity* 46(3):619-626.
- 1981b *Early Tahiti as the Explorers Saw It, 1767-1797*. Tucson: University of Arizona Press.
- 1981c A Possible Origin of the Easter Island Boat-shaped House. *Asian Perspectives* 22(1):1-8.
- 1984* *In the Shelter of Caves: Caves as Human Habitations: Their Nature and Importance to Archaeologists*. Tucson: Arizona State Museum.
- 1986 Ethnohistoric Evidence for the Use of Ritual Fire as a Protective Mechanism in Polynesia. *Journal of the Polynesian Society* 95(4):468-474.
- 1987 *Early Tonga as the Explorers Saw it, 1615-1810*. Tucson: University of Arizona Press.
- 1988a A Case for Taro Preceding Kumara as the Dominant Domesticated in Ancient New Zealand. *Journal of Ethnobiology* 8(1):1-5.
- 1988b In Defense of Orongo "Sun Stones". *Journal of the Polynesian Society* 97(1):73-77.
- 1991 Tahiti. In *Encyclopedia of World Cultures*, volume 2, *Oceania*, edited by Terence E. Hays, pp. 305-307. Boston: G.K. Hall.
- 1993a Introduction: Edgar L. Hewett: The Nature of the Man. In *Ancient Communities in the American Desert* by Edgar L. Hewett, edited by Albert H. Schroeder, pp. 11-19. Monograph Series 1. Albuquerque: Archaeological Society of New Mexico.
- 1993b *Early Observations of Marquesan Culture, 1595-1813*. Tucson: University of Arizona Press.
- 1995 The Early Setting. In *The Grand Chichimeca: Essays on the Archaeology and Ethnohistory of Northern Mesoamerica*, edited by Jonathan E. Reyman, pp. 8-12. Worldwide Archaeology Series 12. Aldershot, England: Avebury Press.
- 2000 Stone Chicken Coops on Easter Island. In *Essays in Honor of Arne Skjølsvold: Seventy-five Years*, edited by Paul Wallin and Helene Martinsson-Wallin, pp. 37-43. The Kon-Tiki Museum Occasional Papers 5. Oslo: Kon-Tiki Museum Institute for Pacific Archaeology and Culture History.
- Ferdon, Edwin Nelson, Jr. and John M. Corbett
1941 Depósitos arqueológicos de la Tolita. *Boletín de la Academia Nacional de Historia* 21(57):5-15. (Translation from English of report to the Ecuadorian Department of Mines entitled Archaeological Investigation of La Tolita [1941]).
- Ferdon, Edwin Nelson, Jr. and Emma M. Cappeluzzo
1966* A Double Duty Docent Program. *Museum News* 33(1):1-14.
- Ferdon, Edwin Nelson, Jr. and Erik K. Reed
1950 A Pit-House Site near Belén, New Mexico. *El Palacio* 57(2):40-41.
- Ferdon, Julie
1998 Oral History Interview: Edwin Nelson Ferdon, Jr., November-December, Tucson, Arizona. Copy on file in the archives of *Andean Past*.
- Gifford, Clark A. and Elizabeth A. Morris
1985 Digging for Credit: Early Archaeological Field Schools in the American Southwest. *American Antiquity* 50(2):395-411.
- Glaser, Bruno and William I. Woods
2004 *Amazonian Dark Earths: Explorations in Space and Time*. Berlin: Springer-Verlag.
- Guemaraes, Susana
1997 Olaf Holm (1915-1996). *Journal de la Société des Americanistes* 83:316-320.
- Healan, Dan M., editor
1988 *Tula of the Toltecs: Excavations and Survey*. Iowa City: University of Iowa Press.
- Heckenberger, Michael J., Afukaka Kuikuro, Urissapá Tabata Kuikuro, J. Christian Russell, Morgan Schmidt, Carlos Fausto, and Bruna Franchetto
2003 Amazonia 1492: Pristine Forest or Cultural Parkland? *Science* 301:1710-1714.
- Heyerdahl, Thor
1958 *Aku-Aku: The Secret of Easter Island*. Chicago: Rand McNally.
- Heyerdahl, Thor and Edwin N. Ferdon, Jr., editors
1961 *Reports of the Norwegian Archaeological Expedition to Easter Island and the East Pacific, 1955-1956*, volume 1, *Archaeology of Easter Island*. Monographs of the School of American Research and the Museum of New Mexico 24(1) (Santa Fe).
- 1965 *Reports of the Norwegian Archaeological Expedition to Easter Island and the East Pacific, 1955-1956*, volume 2, *Miscellaneous Papers*. Monographs of the School of American Research and the Kon-Tiki Museum 24(2) (Santa Fe).

- Heyerdahl, Thor and Arne Skjølsvold
1956 *Archaeological Evidence of Pre-Spanish Visits to the Galapagos Islands*. Memoirs of the Society for American Archaeology 12, supplement to *American Antiquity* 22(2), part 3.
- Hosler, Dorothy
1994 *The Sounds and Colors of Power: The Sacred Metallurgical Technology of Ancient West Mexico*. Cambridge, Massachusetts and London: MIT Press.
- Lathrap, Donald W.
1970 *The Upper Amazon*. London: Praeger.
- Lathrap, Donald W., Donald Collier, and Helen Chandra
1975 *Ancient Ecuador: Culture, Clay and Creativity; 3000-300 B.C.* Chicago: Field Museum of Natural History.
- Lehmann, Johannes, Dirse C. Kern, Bruno Glaser, and William I. Woods
2003 *Amazonian Dark Earths: Origin, Properties and Management*. Dordrecht, The Netherlands: Kluwer Academic Publishers.
- Lubensky, Earl H.
1974 Los cementerios de Anllulla: Informe preliminar sobre una excavación arqueológica. *Boletín de la Academia Nacional de Historia* 58(123):16-23.
- 1991 *The Ferdon Collections of Prehistoric Ceramic Vessels and Sherds from Esmeraldas Province, Ecuador*. Ph.D. dissertation, University of Missouri, Columbia.
- 1992a Update on Analysis of the Ferdon Ceramic Collections from Esmeraldas Province, Ecuador. Paper presented at the Midwest Conference on Andean and Amazonian Archaeology and Ethnohistory, University of Illinois at Urbana-Champaign, March 1, 1992. On file in the archives of *Andean Past*.
- 1992b The Ferdon Prehistoric Ceramic Collections from Ecuador: An Exercise in Ceramic Classification and Analysis. Paper presented at the Northeast Conference on Andean and Amazonian Archaeology and Ethnohistory, Colgate University, Hamilton, New York, November 11, 1992. On file in the archives of *Andean Past*.
- 1993 The Ferdon Archaeological Site Survey in Ecuador: An Exercise in Ceramic Classification and Analysis. Paper presented at the 33rd Annual Meeting of the Institute of Andean Studies, Berkeley, California, January 8, 1993. On file in the archives of *Andean Past*.
- 1994 Color Classification System for Use with PARADOX and Designed for Ecuadorian Ceramics. Paper presented at the Twenty-Second Annual Midwest Conference on Andean and Amazonian Archaeology and Ethnohistory, University of Michigan, Ann Arbor, February 26, 1994. On file in the archives of *Andean Past*.
- 2000/2001 Report, Current Research. *Andean Past* 6:372-373.
- Meggers, Betty Jane
1954 Environmental Limitation on the Development of Culture. *American Anthropologist* 56:810-824.
- Meggers, Betty Jane and Clifford Evans, Jr.
1966 *Mesoamerica and Ecuador in Handbook of Middle American Indians*, volume 4 Archaeological Frontiers and External Connections, edited by Gordon Ekholm and Gordon Willey, pp. 243-264. Austin: University of Texas Press.
- Meggers, Betty J., Clifford Evans, and Emilio Estrada
1965 *Early Formative Period of Coastal Ecuador: The Valdivia and Machalilla Phases*. Smithsonian Contributions to Anthropology 1 (Washington, D.C.).
- O'Brien, Patricia
1972 The Sweet Potato: Its Origin and Dispersal. *American Anthropologist* 74:342-365.
- Paulsen, Allison C.
1977 Patterns of Maritime Trade Between South Coastal Ecuador and Western Mesoamerica: 1500 B.C. - A.D. 600. In *The Sea and the Pre-Columbian World*, edited by Elizabeth P. Benson, pp. 141-160. Washington, D.C.: Dumbarton Oaks.
- Peckham, Stewart, Fred Wendorf, and Edwin N. Ferdon, Jr.
1956 Excavations Near Apache Creek, New Mexico. *Highway Salvage Archaeology* 2(8):17-86.
- Rainey, Froelich
1946 Quinine Hunters in Ecuador. *The National Geographic Magazine* 89(3):341-363.
- Raymond, J. Scott and Richard L. Burger
2003 Introduction. In *Archaeology of Formative Ecuador: A Symposium at Dumbarton Oaks 7 and 8 October 1995*, edited by J. Scott Raymond, Richard L. Burger, and Jeffrey Quilter. Washington, D.C.: Dumbarton. Posted on line at www.doaks.org/Ecuador/Ecuador00.pdf.
- Robarts, Edward
1974 *The Marquesan Journal of Edward Robarts, 1797-1824*, edited by Greg Denning. Canberra: Australian National University Press.
- Roosevelt, A. C., R. A. Housley, M. Imazio da Silveira, S. Maranca, and R. Johnson
1991 Eighth Millennium Pottery from a Prehistoric Shell Midden in the Brazilian Amazon. *Science* 254:1621-1624.
- Sarma, Akkaraju
1974 Holocene Paleoecology of South Coastal Ecuador. *Proceedings of the American Philosophical Society* 118:93-134.

School of American Research of the Archaeological Institute of America

1941 *Thirty-fourth Annual Report of the School of American Research of the Archaeological Institute of America*. Santa Fe, New Mexico.

1943 *Thirty-sixth Annual Report of the School of American Research of the Archaeological Institute of America*. Santa Fe, New Mexico.

1944 *Thirty-seventh Annual Report of the School of American Research of the Archaeological Institute of America*. Santa Fe, New Mexico.

Simmons, Michael Patrick

1970 *The Ceramic Sequence from La Carolina, Santa Elena Peninsula, Ecuador*. Ph.D. dissertation, University of Arizona, Tuscon.

Stoother, Karen, editor

2001 *Contribuciones de Olaf Holm al estudio del pasado del Ecuador 1*. Guayaquil, Ecuador: Banco Central del Ecuador and Museo Antropológico y de Arte Contemporáneo.

Stubbs, Stanley A. and Edwin Nelson, Ferdon Jr.

1949 International Congress of Americanists Reviewed. *El Palacio* 56(1):292-294. Thompson, J. Eric S.

1941 A Coordination of the History of Chichen Itza with Ceramic Sequences in Central America. *Revista Mexicana de Estudios Antropológicos* 5(2-3):97-111.

Thompson, Raymond H.

2003a Edwin Nelson Ferdon, Jr. *Anthropology News* 44(4)unpaginated in on line edition.
<http://members.aaanet.org/an/0304/rp-ob.cfm>

2003b Edwin Nelson Ferdon, Jr. 1913-2002. *Archaeological Record* 3(5):34.

Uhle, Max

1927 Estudios Esmeraldeños. *Anales de la Universidad Central* 39(262):1-61.

Wagner, Julie and Pamela Hale

1995 Lost Legacy of La Libertad. *PUMA: Papers of the University of Missouri Anthropologists* 1(1)42-50.

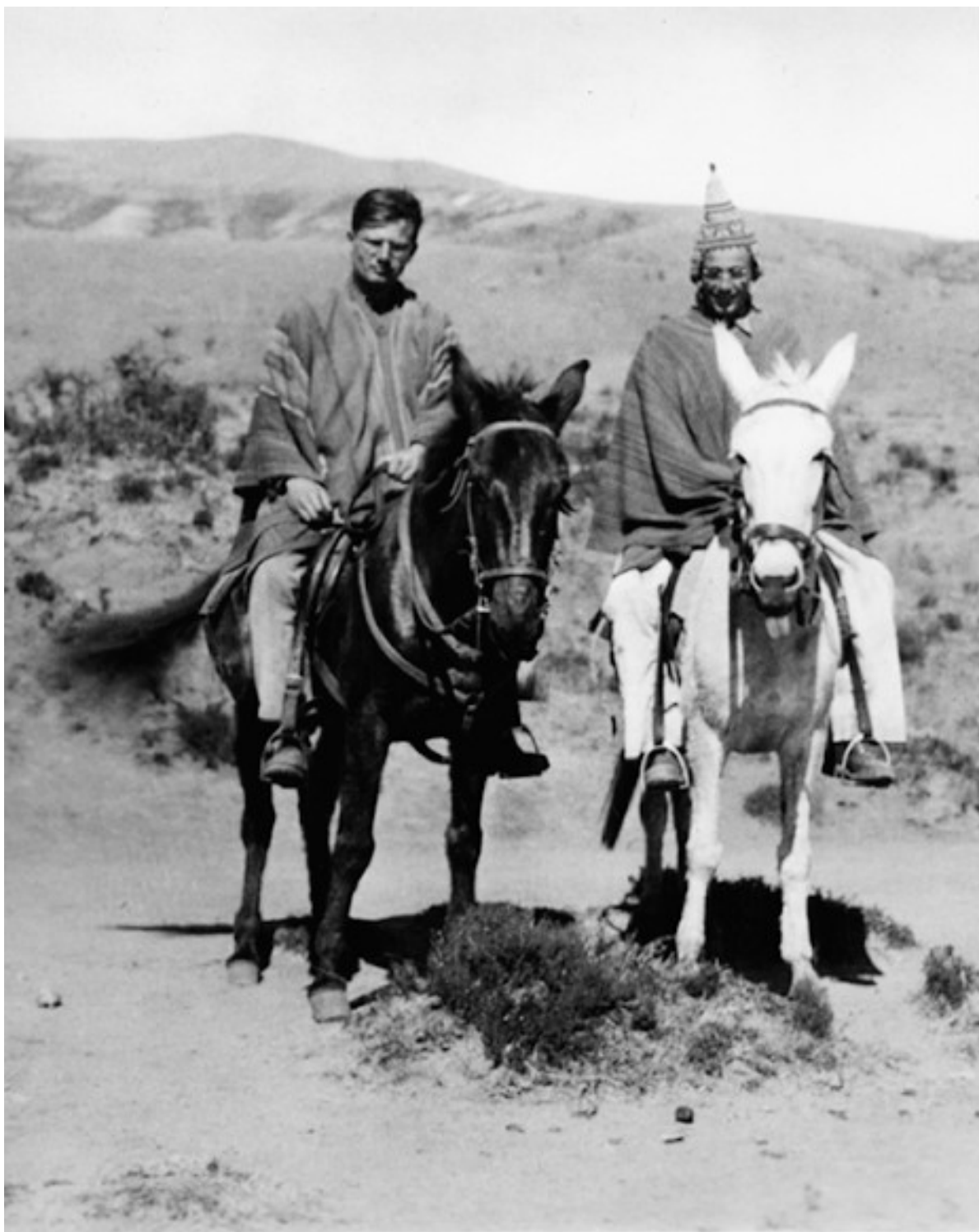
Websites

www.mnsu.edu/emuseum/information/biography/pqrst/raineey_froelich.html

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Edwin Nelson Ferdon (viewer's left) and Al Ely (viewer's right) on the trail from Cusco to Ayacucho, 1935 (photograph courtesy of the School of American Research).