2005

Frederic-Andre Engel (1908-2002)

Robert A. Benfer Jr.
University of Missouri, benferr@missouri.edu

Follow this and additional works at: https://digitalcommons.library.umaine.edu/andean_past
Part of the Archaeological Anthropology Commons, and the Biological and Physical Anthropology Commons

Recommended Citation
Available at: https://digitalcommons.library.umaine.edu/andean_past/vol7/iss1/4

This Obituaries is brought to you for free and open access by DigitalCommons@UMaine. It has been accepted for inclusion in Andean Past by an authorized administrator of DigitalCommons@UMaine. For more information, please contact um.library.technical.services@maine.edu.
Frédéric-André Engel was born on October 12, 1908, in Switzerland, to a family from Mulhouse, France. Frédéric received his B.A. from Cantonal Classic College in Lausanne, Switzerland and a Diploma in Anthropology from the University of Vienna, Austria. He also studied in Paris, at the Sorbonne, where he received a Master of Arts degree in Law. He earned another M.A. from the Diplomatic Section of the École des Sciences Politiques, Paris. His Sorbonne doctorate was in History, Geography, and Languages including English, Spanish, and German. As a student, he visited the Museum of Man (Musée de l’Homme) where he became fascinated with the Peruvian collections (Miró Quesada 2002). He studied anthropology there, as well as at the Institute of Human Paleontology (l’Institut de Paléontologie Humaine), also in Paris.

His first practical experience in archaeology occurred at age eighteen when he participated in excavations of Swiss and French Neolithic Lake Dweller villages. While still a student he also excavated in Egypt. This latter experience prepared him for a life’s work in the archaeology of deserts. However, his classroom training was not helpful for his later work in Peru because it focused on history and typology, rather than on ecology. Engel often sought the active cooperation of foreign archaeologists, because Peruvian excavators were not ecologically oriented when he began his career.

After completing his studies, Frédéric obtained employment with France’s Ministry of External Works. However, poor health caused him to spend three years in a Swiss sanitarium. At that time he saw the inevitability of another Great War in Eu-
rope, and he believed that air power would be critical. He took up aviation. In 1937 he participated in the Aéro Club de France’s race, the Grand Prix de l’Aviation. In 1938 he became the French national gliding champion. Still anticipating war, he received pilot training in England. Shot down over North Africa during World War II, he re-injured his back, which he had previously hurt skiing. When he was freed at the end of the war, the French government offered him a choice of positions: head of the Ministry of Education or Sub-prefect of Alsace, his home province. Engel refused both offers because, as he once wrote in a report, “his calling was prehistory and the world.” He sought and accepted instead a post with the French Ministry of Foreign Relations, which enabled him to travel beyond France. He first served two years in the French Embassy in Vienna. Later he was posted to the Caribbean, Poland, and finally, to Peru. There he eventually entered business, making loans to entrepreneurs. Because he had known Manuel Prado, the Peruvian president, earlier in Paris, in 1953 Engel was able to make the president personally aware of the urgent need to protect Peru’s prehistoric patrimony. Prado named Frédéric Treasurer of the Patronato Nacional de Arqueología. Prado also created the Centro Nacional de Prehistoria del Perú, with Frédéric as Secretary General. This was the critical beginning of Frédéric’s life-long attempts to save the rich archaeological resources of his adopted home.

President Prado also asked Frédéric to create a new district in Lima, La Molina, and he became its first mayor. La Molina is over the first range of the western Andean foothills. Frédéric often said that the real modern-day Peru, that of indigenous peoples, began there, away from the coast. Frédéric proudly guided the development of La Molina, creating infrastructure that included schools and hospitals. Although he often complained that Peruvians were converting all their arable land to paved cities, he did not see any inconsistency in helping to develop La Molina, the location of the National Agrarian University of Peru (Universidad Nacional Agraria de La Molina or UNALM) in prime agricultural lands.

Interested as he was in the origins of agriculture, UNALM was a good choice as his institutional base because of its specialist resources and the faculty and student interest in agrarian topics. At that time archaeological research was almost entirely conducted through San Marcos University (Universidad Nacional Mayor de San Marcos). Frédéric’s moderate-to-conservative political stance was not acceptable at that institution. There was also not much interest in environmental sciences. With the death of Julio C. Tello in 1947 and the retirement of Luis Valcárcel in 1961, Frédéric had sensed that it was time for a new approach to prehistory, one that combined the teaching and study of ancient civilizations with archaeological techniques new to Peru. He felt it was essential to combine archaeology with biology, geology, and climatology. Much of Peruvian archaeology has been driven by ethnohistory, but Frédéric’s primary interest was in the preceramic periods, which are clearly too ancient to be guided well by history or ethnohistory.

Frédéric became a professor at UNALM where he taught for three years until a replacement was found to free him for fieldwork. He was also named Director of UNALM’s Centro de Investigaciones de Zonas Aridas (CIZA) laboratories. The university appointed Carlos López Ocaña, a plant physiologist and ecologist, as his co-director. Thus biology and archaeology became the two intertwined components of the center. From his CIZA base, Frédéric was able to help many foreign and Peruvian students and archaeologists. Although he only taught briefly at UNALM, his research career there is a source of great pride to the university. One of his students, Miriam Vallejos, taught anthropology at UNALM for many years and remains the director of the fine small museum that Frédéric established in its Santa Beatriz center, a building of the original campus of the Universidad Nacional Agraria which later became CIZA’s home. This museum has the best preceramic collections in Peru, holding more than 40,000 cataloged implements.

During the 1950s and 60s Frédéric defended his adopted country’s cultural patrimony by issuing a series of formal complaints against foreign archaeologists. These, he believed, were depriving Peruvians
of their collective heritage by exporting all artifacts recovered in excavations. In protesting this practice he took considerable political risks.

Early in his career Frédéric formulated the goal of developing a catalog of Peru’s archaeological resources. Under the presidency of Prado’s successor, Fernando Belaúnde, Frédéric began maps for the Gran Atlas del Perú, a project which was apparently never published. More than fifty years ago he introduced a plan to make an archaeological survey of the western flanks of the Andes from the south of Peru to Colombia. According to Frédéric, the survey became impossible due to subsequent administrative changes. I am reasonably certain that these were meant to remove him from a position of influence because of his politics. The changes resulted in the creation of the Instituto Nacional de Cultura (INC) to replace the Patronato Nacional de Arqueología.

In spite of this setback, Frédéric continued with self-financed research, a tradition known to many Andeanists. Because of practical considerations, including health and finance, he reduced the scope of the survey to elevations below 1,000 m.a.s.l., but he did direct several complete surveys in the central coastal region, from the beaches to the puna at 3,900 m.a.s.l. Throughout the survey, radiocarbon dating was critical for ordering sites chronologically because neither Engel’s typologies (Engel 1984b), nor the later studies by Eric White at the stratified Paloma site demonstrated useful changes in stone point styles over time. Peruvian publications often cite Engel’s dates without attribution.

Frédéric told some evocative stories about his work in the high Andes. One December he was conducting survey with the aid of sure-footed mountain horses. The rainy season would soon begin. Frédéric and his team had been following narrow paths along the edge of the mountains for days. One of the crew saw a deer and took out a rifle to shoot it for meat. The guide put his hand up and said, “No, don’t do that. If you make that noise you will annoy Chiqui Illapa who will bring rain down from the celestial river [the Milky Way].” “Nonsense”, Frédéric thought, and he waved for the animal to be brought down. The next two days were among the most miserable in his life. The incessant, cold rain made further progress impossible.

Engel began his coastal survey in 1954 almost single-handedly, with only workmen to perform some of the more arduous tasks. It was an exciting time for Frédéric and his wife, Elizabeth, who often accompanied him in the field and frequently visited his laboratory. Her support was clearly essential to Frédéric throughout his career. He tested a midden at Curayacu (Engel 1956), an enormous, well-stratified deposit of marine and plant remains at the fishing community and seaside resort of San Bartolo, on the north edge of the Chilca Valley. Tello had excavated there, as did Rosa Fung later (Fung 1976) and the site was central to Edward P. Lanning’s ideas on the development of ancient Peruvian culture (Richard L. Burger, personal communication, February 28, 2005).

In 1958 Engel began his first large-scale excavations, at the preceramic site of Asia, Unit 1, in the Asia Valley (Engel 1963a). After work at the village of Asia, Engel began to investigate several preceramic sites on the Paracas Peninsula that Tello had missed. He discovered “fishing camps” with calibrated dates in excess of 11,000 years B.P. at the Paracas site of Santo Domingo (Engel 1981a) and in the lower Chilca valley at the site of La Quipa (Engel 1982, 1984c, 1987b). It was these sites on the Paracas Peninsula that riveted Frédéric’s attention to the preceramic periods and led to his boldest interpretations. His team excavated at Paracas between 1964 and 1968, and he summarized major findings in a book (Engel 1966c) as well as in a series of articles (Engel 1957a, 1957b, 1960a, 1963a, 1963b, 1964, 1981c). These results first came to the attention of many North Americans with his publication of some of the Paracas dates in Current Anthropology (1969g, 1970a).

In the meantime, cultural ecological currents were developing within the New Archaeology movement as well as within cultural anthropology. North American archaeologists including Edward P. Lanning (Lanning 1967) and Thomas C. Patterson (Patterson 1966; Patterson and Lanning 1964) also
emphasized the natural environment in their broad cultural reconstructions. Lanning, who worked as Engel’s paid assistant from 1956 to 1957, was the first archaeologist to state that climate change was a crucial part of understanding maritime adaptations (1963). Later work by Richardson (1969, 1973) and Llagostera (1979) and Sandweiss and colleagues (Sandweiss 1996a, 1996b; Sandweiss et al. 1983, 1989, 1999a, 1999b, 2001, 2004) stressed the importance of climate and early coastal adaptations. However, Engel anticipated or paralleled these views in his reports on Santo Domingo and on La Quipa. Both sites lie at 40 meters or less elevation m.a.s.l. and are located less than 2 kilometers from the beach. One of the early radiocarbon dates from La Quipa has been supported by re-excavation and dating of a wooden house pole (Benfer and Duncan 2003). The significance of the earlier dates for understanding the effect of the rise of sea level in an area of ongoing uplift was little noticed by investigators interested in this problem, even those who studied other early sites first reported by Engel.

Engel could see that cotton nets would expand food gathering abilities enormously and that the maritime component of the human diet supported Andean civilization. He began to write of the “Cotton Preceramic,” and some archaeologists, for instance Edward Lanning, Michael Moseley, and Rosa Fung (Fung 1972), came to accept the concept that growing cotton would be important for making the large nets needed to harvest much of the fauna available off shore. Others responded directly to Moseley’s formulation of the Maritime Hypothesis (Moseley 1968, 1975, 1992a, 1992b). For example, Alan Osborn (1977), Scott Raymond (1981), and David Wilson (1981), all argued that an agricultural food base is necessary for a society to erect monumental architecture.

Frédéric appreciated the overwhelming impact of the ecology of the coastal Peruvian habitat. The availability of water in the few perennial streams, in subsurface accumulations, and in fog oases was a persistent theme in his discussions of settlement patterns and subsistence (Ojeda 1978; Benfer, Ojeda, and Weir 1987). Perhaps Engel’s interest dated to the time in the 1960s when his excavation headquarters at Paracas lay under more than a meter of ocean water that surged over it. At Paracas he also noticed a drained lagoon filled with shells. He suggested the abandonment of the Paracas Peninsula sites at about 2,200 years ago due to lowered levels of near-surface water. He recognized the strong effects of prehistoric climate on the settlement of the coastal areas. Fairbridge (1976a, 1976b) established that sea levels rose and fell during the Holocene, which prompted Frédéric to realize that sea level determined the lower extent of the fog oases. On that basis, he was able to reinterpret settlement patterns near the coast. Although Richardson (1969, 1973) and Paulsen (1976) had recognized the importance of climatic changes, Frédéric (Engel 1981c) was not directly influenced by them, or subsequent work work in pollen or malacology.

In 1966, Engel reported on what was perhaps his most astonishing discovery, one that validated his previous theory of the importance of the Cotton Preceramic Period (Engel 1966d). That year, he identified and reconstructed the three-story, dressed-
stone temple at the Cotton Preceramic complex of El Paraíso. The original field goals had not included restoration of such a large structure, but merely to learn the maximum height of one of its walls. When that wall collapsed, Engel and his long-time field collaborator, Bernardino Ojeda, developed a new plan. They decided to raise all of the walls simultaneously. Thus began 18 months of work that culminated in a spectacular reconstruction. Alas, today it is collapsing where looters have dug into it, and the walls that remain are covered with graffiti. Engel had arranged funding for a guard at a small residence he built at the site. He felt that the site could be protected by turning it into a national park that would attract tourists, given its importance and proximity to the Lima airport. Dramatic changes in the government thwarted Engel's attempts. Today, the little house stands empty, and there is no guard to protect the site from depredations.

In happier times, Engel invited the entire Lima archaeological community to a special presentation at the site. Ojeda told me that there had been much complaining from the guests, despite the fine food and drink available at the event. Why, the guests wondered, had they been invited to this small site? When Frédéric stood before them and announced that the temple they were viewing was preceramic in age, he was greeted by incredulity. More than 3,600 years old, this site remains the most ancient dressed stone structure known in the western hemisphere. El Paraíso is located a few kilometers from the coast at a point close to where water wells up from the Chillón River that runs underground for some distance up-valley (Bernardino Ojeda, personal communication 2000). On a grand scale the architectural complex is U-shaped and faces the river. Extensive cotton and gourd remains were uncovered during the reconstruction, and Frédéric quickly recognized the importance of a dual economy in the Chillón Valley. The agricultural plants supported marine subsistence. This concept, well-synthesized thirty years later by Moseley (1992a), still drives my research today (Duncan et al. 2003).

Later Terence Grieder and his colleagues (1988) located a highland equivalent of preceramic monumental architecture at the site of La Galgada. Some years later, Frédéric made another great discovery in recognizing the enormous middle valley site of Chupacigarro in the Supe Valley as being from the Cotton Preceramic. Engel correctly interpreted Chupacigarro as the largest, (Engel 1982, 1987a), and one of the oldest (Sandweiss et al. 2001), Cotton Preceramic sites known to date, despite the paucity of local resources. He suspected that there was a Cotton Preceramic polity reaching from the Supe Valley as far south as the Otuma Valley.

Chupacigarro brings us to a persistent problem in Andean archaeology, that of changing well-established site names. Ruth Shady and her colleagues (Shady et al. 2001) renamed the site as Carál, despite its first publication as Chupacigarro by Paul Kosok (1965) and its earlier mapping by Ojeda and identification as a Cotton Preceramic site by Engel (1982, 1987a). Carál is the name of a modern town on the Pan American highway. Engel, too, sometimes renamed a site he had mentioned earlier under another name. For example, he renamed “Los Frisos” as Buena Vista, also the name of a local community, perhaps because he found no friezes there, just niches. In another important case, El Paraíso had formerly been called Chuqitanta, for the ejido of that name. In his own writing, Engel was sometimes unclear about which of the Paracas Peninsula sites he meant. Nevertheless, he provided numbers or names for over a thousand sites, and located them accurately on the sheets of Peru’s official map, the 1:50,000 series of the Carta Nacional. He published more Peruvian site locations than any other archaeologist. Locations of additional sites are available in the CIZA Archives.

During the late 1960s, Frédéric returned to the coast to direct intensive survey and testing in a single fog oasis, that of the Lomas de Iguanil, north of Lima. Previously most of his work had been conducted to the south of that city. He published the Iguanil work in Spanish (Engel 1970b) and French (Engel 1973b). During the same project, Engel made important maps of Las Haldas.

A source of considerable pride to Engel was the building of the Paracas museum in 1968 with a grant from the National Center for Scientific Research in
France (CNRS). He provided excavated materials for display and materials for further research at CIZA. He named this institution El Museo de Paracas Julio C. Tello in recognition of Tello’s pioneering work on the peninsula. In accordance with Engel’s wishes, his ashes are interred there.

In 1969, Peru’s leftist government had begun to seize large houses, turning many into elementary schools. One across the street from CIZA, for example, was expropriated and turned into a free elementary school. Today it is a private preparatory school for children of the elite. In the early 1970s, Frédéric was concerned that his home also might be confiscated, and so he sold it and moved into the former servant’s quarters where he and his wife, Elizabeth, lived for some years until he built another relatively modest residence further up into the foothills of the Andes, in the La Molina district.

Prior to the revolution, two hundred families had owned most of the highly productive arable land in Peru, which they managed so efficiently that, unlike today, the country was a net exporter of food. However, workers were treated almost as serfs. Most of these landlord families did not really live in Peru, but rather commuted back and forth from Europe (as did Frédéric). His view was that the revolution was absolutely necessary, that land had to be redistributed. He nonetheless suffered the consequences of continuing to associate with these families, with whom he differed profoundly on political issues but nonetheless counted as his friends. Frédéric felt that this association caused some in the Peruvian archaeological community to ostracize him until late in his life. Engel’s research lab, CIZA, was somewhat protected from criticism by its formal association with UNALM. It stayed in the same Santa Beatría building that Instituto de Agricultura Protohistorica (IAP), the precursor to CIZA, had occupied, the original campus of the Universidad Nacional Agraria in the Jesús María district of Lima, with its former fields turned into lovely public parks.

In the early 1970s Ojeda continued with coastal surveys, while Engel devoted himself to laboratory work and publication. In 1975 he began an important new phase of research at Paloma. That site was brought to Engel’s attention 1964 by a geologist, and Frédéric tested it that same year. A 6-x-6-meter pit on the edge of the site revealed unusually good stratigraphy for a preceramic site, as well as over a meter of deposit. Paloma provided the focus of my most intense collaboration with Frédéric over a period of more than 30 years. Of all his major projects, it came the closest to fulfilling Frédéric’s vision of a well-funded, multi-disciplinary investigation.

In the 1975 field season, Engel and Ojeda placed intersecting 6-meter-wide trenches in Paloma’s largest low shell mound, identified as Unit I. They made test excavations in another adjacent low shell mound, Unit II. After five months of fieldwork, Ojeda and Engel had established the presence of a series of stratified villages with well-preserved organic remains, numerous domestic structures and many human burials associated with particular houses. Subsequent work at Paloma by the multidisciplinary team that I assembled involved intensive excavation and extensive laboratory analysis of materials (Benfer 1990, 1999), its materials being used in more than 40 publications and 25 theses.

During the 1970s, encouraged by Carlos López Ocaña, Frédéric’s interests became ever more focused on plant and animal remains. On the basis of his midden excavations, Frédéric begun to contemplate what economic foundation would have been necessary to support the populations represented by those sites. He began to regard shellfish as more important in the diet (Engel 1978a) than is perhaps warranted by biomass studies published later, after much more intensive analysis by Elizabeth Reitz (2003). We eventually completed the studies of population size that Frédéric had had in mind early on (Benfer 1990; Vradenburg et al. 1997). His desire to understand the paleodemography of Paloma is perhaps one reason why he invited me, a bioarchaeologist, to collaborate with him in 1976. He thought that I might find funding for expanded excavations and more ecological methods of analysis, and indeed my first three NSF awards for Paloma had “Human/Environment Interactions” in their titles. In the end, I am not sure whether Frédéric really believed that chemical analyses of human bone, studies of
activity levels preserved in bone, or paleodemography from skeletons would provide as much useful information as the studies of plant and animal remains. On the other hand, he wholeheartedly approved of the involvement of zooarchaeologist Elizabeth Reitz, and the archaeobotanist, Glendon Weir. In 1987 Weir left his successful career in archaeology. Fortunately, Reitz, who visited the Paloma Project in 1976, completed extremely useful studies of the faunal materials (Reitz 1986, 1988, 2003). Weir and his student Philip Dering published several small reports (Dering and Weir 1982; Weir and Dering 1986), but they never finished the vital paleobotanical synthesis. Fortunately, Deborah Pearsall has taken up this work. Alas, this study, which interested Frédéric the most, will appear in print only after his death.

Frédéric began to look for association with an American university in the mid-1970s. At his own expense he undertook visits to colleagues and institutions in New York City and spent time at Cornell University in Ithaca, New York (Thomas F. Lynch, personal communication, 24 February 2005). An appointment would have been offered at Missouri, where he would have been comfortable, but I believe that his wife preferred a city. From 1976 to the early 1980s he taught at the University of Pittsburgh where, in 1977, he was named a Research Associate in the Anthropology Department. At Pitt he worked with colleagues, including James B. Richardson III and Magnus Morner (James B. Richardson III, personal communication, August 18, 2005), but, unfortunately, supervised no graduate students. In the early 1980s Engel was an Adjunct Professor of Anthropology at Hunter College, part of the City University of New York. By the 1990s he was no longer mounting field expeditions in Peru, but he continued with laboratory work.

Frédéric Engel’s lifetime achievements were recognized by several important awards. He was made a knight of the Peruvian order of Merit for Distinguished Services (Al Mérito por Servicios Distinguidos) when he was given the highly prestigious decoration, “El Sol del Perú”, in 1968. He also held France’s National Order of Merit, as well as the Silver Medal of the France’s National Center of Scientific Research (CNRS). In 1973 he won the History Prize of the French Academy, for his book Le monde précolombine des Andes published the previous year. His native country awarded him its Legion of Honor in 1998.

Throughout his career, Frédéric enjoyed the collaboration of many talented colleagues. He had tremendous respect for Julio C. Tello, and it was from Tello that he obtained one of his most important field crew members, Alejandro “Tio” Guanillo. This man began life as a subsistence fisherman and pot hunter. After working with Tello, he entered Engel’s employ. Although he lacked a formal education, Tio was a most careful and useful field crew member. We all learned volumes from him about how to recognize both small and large features in preceramic sites. His stories and explanations of fishermen’s attitudes toward various aspects of the environment, and access to and use of resources, were ethnographic lessons of a lifetime, never to be forgotten. To one of my students he presented his grandmother’s prized shoulder bag, a priceless gift of incomparable meaning. Tio was indicative of the kind of person that Frédéric found to make up his intimate research team, and of the loyalty that he engendered among team members.

In late 1963, Frédéric recruited Bernardino Ojeda, then a student in Cuzco, to take the place of Christopher Donnan for a multi-year survey of the coast of Peru. As Engel’s director of field work, Ojeda went on to locate, map, and excavate many newly discovered and important sites. Bernardino has become one of the best and most respected field archaeologists in Peru. Many other scholars associated with Engel later went on to make major contributions. Among them are Henning Bischof, the late Edward Lanning, Jeffrey Quilter, and the late Gary Vescelius. The latter, unfortunately left less of a publication record that would have been desired (Burger and Lynch 1987).

UNALM students working with CIZA on plants and animals of the lomas were also productive. Juan Torres Guevara and Dora Velásquez Milla wrote master’s theses that were later published (Sánchez and Velásquez 1982; Torres and López Ocaña 1981,
Torres took up the directorship of CIZA after López Ocaña.

Frédéric Engel’s long career is well reflected in his publications. He is listed as editor, but was really the writer, of the series *Prehistoric Andean Ecology* which appeared between 1980 and 1992 (Engel 1980a, 1980b, 1980c, 1981a, 1983a, 1984b, 1987b, 1988a, 1988b, 1988c, 1992) and which was based on studies undertaken at CIZA. The first five volumes are in English, and the last four are in Spanish. In producing these Engel had assistance from the Swiss Foundation for Arid Zones (FEPTA), from UNESCO, Hunter College of the City University of New York and from other institutions based in France and in the United States. Engel is also the writer/editor of *Episodios* (Engel n.d. a), a series of small books intended for Peruvian secondary schools, representing the prehistory and history of the world. These text books are complete but, for lack of funding, remain unpublished as of 2005. Frédéric’s most important book, *De las begonias al maíz* (1987a), records his finest insights.

Over the years, Engel’s work has come to be highly respected by Peruvian archaeologists. Rogger Ravines, an archaeologist who disagrees with much of Frédéric’s theoretical framework, nonetheless wrote in a review (1988) that Engel’s pioneering research merits an inestimable homage. Such a review was especially appreciated by Frédéric, because he always viewed his role as that of a pioneer. He hoped to attract other archaeologists and specialists from allied disciplines to help him fill in the details of the broad patterns that he had begun see in coastal Peruvian prehistory. In a more recent review of the development of modern archaeology in Peru, at a conference in Lima during 2000, Federico Kaufmann-Doig discussed two major threads in the development of modern Peruvian archaeology. One was the development of the Instituto Nacional de Cultura, and the other was the research of Frédéric Engel’s team at the Centro de Investigaciones de Zonas Aridas. This appraisal was accepted by the Peruvian archaeologists present, many of whom had been mentored by Engel. Frédéric was instrumental in the creation of the Patronato Nacional de Arqueología that became the INC, and so was essential to both developments.

Outside of Peru, Engel’s work is perhaps less well known and appreciated. In part, this situation may derive from his extreme generosity to students and colleagues. Some significant findings were, to Frédéric, but small pieces of his overall research design. To give just one example, the house at Chilca I, widely referenced and illustrated in many texts (Donnan 1964), was discovered intact because of what many Americans saw as the unusually large excavation units that Frédéric had perfected, being grounded in similar Old World techniques. Proper credit was acknowledged by then-graduate student assistant, Chistopher Donnan, who excavated and published the structure. However, Frédéric’s role as sponsor and overall director of research was not as well associated with the substantive finds as it should have been.

Frédéric’s accomplishments will, over time, be recognized not only in France and Peru but also internationally. He should primarily be recalled, as he wished to be remembered, as a pioneer, the one who sketched the interesting questions presented by the Peruvian preceramic periods, especially those seen on the Pacific shore. His early demonstration that fishing sites on the Pacific coast were 10,000 years old stimulated the work of a number of archaeologists. His finding of early cultigens in the caves of Tres Ventanas, and at the open sites of Paloma, Chilca I, and Asia, among others, established an unexpected antiquity for experience with domestic plants by peoples who continued to focus most of their subsistence on the rich marine resources or on other terrestrial sources of food. His publications provide the basic data for a rare case in which maritime products fueled the early demographic rise and associated social complexity, which Boserup (1965) would argue, led inevitably to technological and social advances—towards what we came to know as Andean civilizations. Frédéric’s early insistence on the influence of climate was not well-received at the time but has proved prescient as more paleoclimatological data have accumulated, from studies of ice and lake cores and from archaeological sources. His early (1963e) series of...
radiocarbon-dated sites, which was expanded over the
course of his investigations, still permits investi-
gators, such as John Rick (1987), to move quickly to
higher-level questions than were possible for Engel to
address with his small team. Nonetheless, he was
thinking about such questions. His last important
and stunning find, like the earlier one of El Paraíso,
made absolutely clear the importance of the Cotton
Preceramic period in Peruvian prehistory. This was
his discovery in the 1980s of the preceramic com-
ponents of the large Chupacigarro site. His published
work and presentations to the Lima community of
archaeologists may, like those of Carlos Williams,
have stimulated Shady to organize further work
there, helped by the published CIZA maps and
copies of the originals furnished by Ojeda on behalf
of CIZA. Reaching similar conclusions to Engel, her
team added substantiating radiometric determina-
tions and more detailed maps. It is unfortunate that
her articles (e.g., Shady et al. 2001) do not credit
Engel’s published work.

Frédéric’s field methods involved excavating
sublevels with a brush. He perfected these methods
with Ojeda, and they are essential for doing Peruvian
coastal archaeology. Very few archaeologists have
been able to establish a stratigraphy for a series of
villages in a preceramic site, but an extensive list of
29 radiocarbon determinations as well as a discri-
minant function study of matrix content and charac-
ter and of trace element concentration of human
bones (Benfer 1999) has established that at Paloma,
as at other sites excavated by Engel and Ojeda, the
stratigraphy was very tightly controlled.

Theoretical questions and approaches ebb and
flow. In the long term, the data-heavy nine volumes
in the Prehistoric Andean Ecology series, plus other
monographs and publications, will form the heart of
Frédéric’s legacy. Difficult to use because of the
publishers’ poor presentation of the maps, with the
key to the first set published in the second volume,
the Ecology series monographs merit the effort
nonetheless because they are essential sources for
field work in coastal Peru.

As John Greer has written with this obituary in
mind, “Engel’s work was broad in extent, broad in
scope, and looked at broader questions and explana-
tions than were . . . common at the time. In addi-
tion, he covered more ground than most people,
both at the Paloma site and across Peru . . . Engel
helped form, and certainly influenced, many of the
approaches behind the kinds of massive excavations
now being done. He had an inherent grasp of the
kinds of questions that would be meaningful regard-
ing how people lived, and when, who were their
contacts, what those contacts could have meant,
how people and cultures and exploitation patterns
changed, or could have changed, through time and
space, and why, and what other ramifications those
changes could have had. With his large excavation
areas he was able to see a broader picture on his
sites. He was able to recognize features that smaller
excavations would have missed. He was able to
have a better feel for what was going on at the site,
what the site was all about. There is no question
that I got more out of my association with Engel,
and my continual re-appraisal of his work, than I
have from any other archeologist. As part of that
canvas has come the realization, which I got early
on, that nearly all archeology must be done in the
laboratory. One needs only the necessary data.
Engel realized that also, and it was an integral part of
his work – direct field observations gave him the
main framework, while archeological specimens and
laboratory analysis provided his overviews with
details necessary for broader explanations” (John
Greer, personal communication, 2001).

Perhaps it was Frédéric himself who best summa-
rized his own philosophy in his choice of a quotation
from Leonardo da Vinci as the CIZA motto. In
English it reads, “Study the past to understand the
present and plan the future.” This dictum accompa-
nied all Engel’s major works.

Hugo Ludeña offers these words, ones that
provide some comfort to those of us of the older
generation: “Durante sus últimos años, el Dr. Engel
se dedicó a revisar sus materiales. Su cuerpo estaba cansado pero su mente estaba lúcida" (Ludeña n.d.1)

Let each of us hope that our minds may remain half so sharp half so long as did Frédéric’s. We can be certain that the results of this man’s work will be important to Peruvian archaeology for many years to come. If Tello was Peru’s first archaeological pioneer, Frédéric extended his explorations from the more recent into the more distant past of Peruvian prehistory. His influence persists.

ACKNOWLEDGEMENTS

This obituary has benefited from the helpful comments and anecdotes of many people, among them Alice N. Benfer, Christopher B. Donnan, Louanna Furbee, John Greer, Hugo Ludeña, Terri Nicho, Bernardino Ojeda, Thomas Patterson, James B. Richardson III, Juan Torres Guevarra, Miriam Vallejos, Pilar Valverde, and Gloria Villarreal.

REFERENCES CITED

Note: This bibliography includes as many publications by Frédéric-André Engel as the author has been able to identify. Works not cited in this paper are indicated by an asterisk (*).

Benfer, Robert A. Jr.

Benfer, Robert A. Jr., and Neil A. Duncan

Benfer, Robert A. Jr., Bernardino Ojeda R., and Glendon H. Weir

Boserup, Ester

Burger, Richard L. and Thomas F. Lynch

Dering, Philip and Glendon H. Weir

Donnan, Christopher B.

Duncan, Neil A., Robert A. Benfer, and Bernardino Ojeda R.

Engel, Frédéric-André
n.d.a Episodios. [Unpublished series of children’s books on the prehistory and history of the world].

*1958a Algunos datos con referencia a los sitios precerámicos de la costa peruana. Arqueológicas 3, Museo Nacional de Antropología y Arqueología, Lima.
*1958b Tejidos y cestería de la agricultura incipiente en la costa Peruana. Presented to the Mesa Redonda de Ciencias Antropológicas, Universidad Nacional Mayor de San Marcos, mimeographed.


1963a A preceramic settlement on the central coast of Peru: Asia, Unit I. Transactions of the American Philosophical Society 53(3).


1In his last years, Dr. Engel dedicated himself to the reevaluation of his materials. His body flagged, but his mind remained lucid.


*1983d La arqueología prehispanica y sus aportes en materia de datación de los asentamientos: Texto en homenaje a Augusto Cardich, MS.


1987a De las begonias al maíz: vida y producción en el Perú antiguo. Lima: Centro de Investigaciones de Zonas Áridas, Universidad Nacional Agraria, La Molina.


Fairbridge, R.W.


Fung Pineda, Rosa


Grieder, Terrence, Alberto Bueno-Mendoza, C. Earle Smith, Jr., and Robert M. Malina

Kosok, Paul

Lanning, Edward P.


Llagostera, M. A.

Ludeña R., Hugo

Miró Quesada Cantuarias, Francisco
2002 Frédéric Engel: amor por el Perú. Expreso (Martes 22 de Enero), Lima.

Moseley, Michael E.


Ojeda, Bernardino

Osborne, A. J.

Patterson, Thomas Carl
1964 Changing Settlement Patterns on the Central Peruvian Coast. *Naota Pacha* 2:113-123.

Patterson, Thomas Carl and Edward P. Lanning

Paulsen, Allison

Quilter, Jeffery

Ravines, Rogger

Raymond, J. Scott

Reitz, Elizabeth J.


Sánchez, Edgar, and Dora Velásquez O.

Sandweiss, Daniel H.


Sandweiss, Daniel H., Asunción Cano, Bernardino Ojeda and José Roque

Sandweiss, Daniel H., Kirk A. Maasch, and David G. Anderson
Sandweiss, Daniel H., Kirk A. Maasch, Fei Chai, C. Fred T. Andrus, and Elizabeth J. Reitz  
Sandweiss, Daniel H., Michael Moseley, Jonathan Haas, and Winifred Creamer  
Sandweiss, Daniel H., James B. Richardson III, Elizabeth J. Reitz, Jeffrey T. Hsu, and Robert A. Feldman  
Shady Solis, Ruth, Jonathan Haas, and Winifred Creamer  
2001 Dating Carál, a Preceramic Site in the Supé Valley on the Central Coast of Peru. Science 292:723-726.  
Torres G., Juan, and C. López Ocaña  
Vradenburg, Joseph A, Robert A. Benfer, and Lisa Sattenspiel  
Weir, Glendon and J. Philip Dering  
Wilson, David  