

SANGAMONIAN AMERICA

by

Prof. Cyclone Covey

Summary

The world's leading diatomist Sam Leighton Van Landingham culminatively corroborates the archaeological site Hueyatlaco at the Valsequillo Reservoir just south of Puebla, Mexico as Middle Pleistocene, identifying numerous artifact-associated diatom species that grew extinct before the last glacier. Hueyatlaco corresponds to Middle Pleistocene sites in Europe except possibly older because its extinct animal bones include rhynchotheres (ancestral elephants) believed to have died out before the Pleistocene but obviously lived longer in the New World from South America to California. Van Landingham verifies comparable radiometric dates, geological stratum, and diatomaceous *Homo erectus* skullcap, as also *Homo erectus* stone tools found in western American deserts (prairies in the Pleistocene) Wyoming to Chile).

THE 20th CENTURY left many intimations of people in the Americas before continent-wide spread of Clovis points which were Magdalenian. Prejudgment and limited imagination blocked acknowledging continuity of New World cultures with Old earlier than Clovis and then immensely earlier.

The irreproachable archaeologist Ruth DeEtte Simpson ("Dee") announced 1962 in Mexico City having since 1955 found Lower Paleolithic artifacts vastly (scrapers, choppers, handaxes) in deserts from Baja California to Wyoming to the Rockies, Sonora, and Atacama Desert of north-coastal Chile—all prairie in the

Pleistocene. Colleagues who never doubted Dee's veracity could not believe her artifacts man-made. At Tule Springs in Vegas Wash (13 miles NE of Las Vegas), in addition to chipped bone and stone tools associated with split-&-burnt extinct-animal remains on oak-&-juniper-ash hearths she found (1961) a scraper-with-charcoal in a side canyon that carbon-dated 26,050-31,000 B.C.—beyond not only Clovis but prior Solutrean—and already had reported 70+ sites in Black's Forest Locality of SW Wyoming bearing much earlier diagnostic tools classifiable Pre-Chellean, Chellean, and Mousterian [“An Introduction to Early Western American History,” *Southern Calif. Acad. Sciences Bulletin* LV/2 (1956), 65-66].

She excavated what proved a workshop/living area in the Mojave Desert 4½ miles NE of Yermo, Calif. whose tools were Oldowan-type, as Louis Leakey recognized 1963 from her collection of 11,000+ which uranium-dated over 200,000 years identical to *Homo erectus* artifacts he and his family had dug from Olduvai Gorge. He located the main site a few miles farther up in Calico foothills above Manix Lake whose confirming excavation began 1964 [Leakey, Simpson, & Thomas Clements, "Archaeological Excavation in the Calico Mts., Calif.: Preliminary Report," *Science* CLX/3831 (31May 1968), 1022]. Anthropologists of the time generally could not accept this heresy, but everything unearthed was consistent with itself, Lower Paleolithic Africa/Europe, and astounding uranium dates.

Candid George Carter excavated metates, scrapers, handaxes, and choppers of the same style along with thousands of hearths 1947 and summers to 1976 at Texas Street, San Diego dating on the order of 80,000-130,000 years. Texas Street has been landscaped unrecognizably, but Herb Marshall's excavation of the C.H. Brown site 3 miles west, found it duplicated Texas St. stratigraphy [Carter, *Pleistocene Man at San Diego* (Johns Hopkins U. 1957); etc.].

A skull that Malcolm J. Rogers excavated 1929 from a cliff on the north side of San Dieguito mouth near Del Mar racetrack which Jeffrey Bada 1974 dated 48,000 years by protein racemization, and one that washed out of Lake Utah sediments in the 1930s which Paleontologist George Hansen measured, were both Neanderthal [Carter, *Later than You Think* (Texas A&M U. 1980), 56-58, 293-94]. Alan L. Bryan reported a more primitive skull discovered in Brazil [ed., *Early Man in America from a Circum-Pacific Perspective*,

Occasional Papers #1 (U. Alberta Dept. Anthropology 1978); cited in *ibid.* 291].

ANCIENT BOULDER-PILED cairn burials strew the Southern & SE California desert. James L. Bischoff of the U.S. Geological Survey with 2 other geologists, W. Morlin Childers & Roy J. Schlemmon, determined from depth and soil pluviality, etc. that a Yuha- Desert cairn burial near the Mexican border west of El Centro fell in the last glacial/pluvial c.16,150-20,050 B.C. (largely Solutrean) ["Comments on the Pleistocene Age Assignment of a Human Burial from the Yuha Desert, Calif.: A Rebuttal," *American Antiquity* XLIII/4 (Oct. 1978), 747].

CONTINENT-ROAMING Clovis-spearmen concentrated more along eastern and Ohio & Tennessee Valley rivers than in New Mexico where first identified, thus likelier reached America via the Atlantic than the Bering land-bridge, especially considering Siberian absence of Franco-Spanish-type fluted flakes. Siberia also had no prior Sandia points identical to those of Solutrean Europe at the height of the last glacier.

Frank Cummings Hibben of U. New Mexico Museum first identified Sandia points in the bedrock stratum of Sandia Cave northeast of Albuquerque 1936-37 associated with extinct mammoth, mastodon, *excelsius* horse, *antiquus* bison, and camel [Hibben, "Association of Man with Pleistocene Mammals in the Sandia Mts., N.M.," *American Antiquity* II/4 (April 1937) 120-63; & *Evidences of Early Occupation in Sandia Cave, N.M., and Other Sites in the Sandia-Manzano Region*, *Smithsonian Miscellaneous Collections* XCIX/23 (1941)]. In conventional presupposition, Hibben could not conceive transatlantic transmission but came to recognize "alarmingly wide" distribution—to SE New Mexico and adjacent West Texas counties, central Oklahoma, West & South Missouri, South Iowa, and extreme East Colorado,



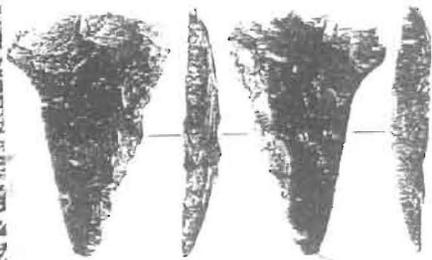
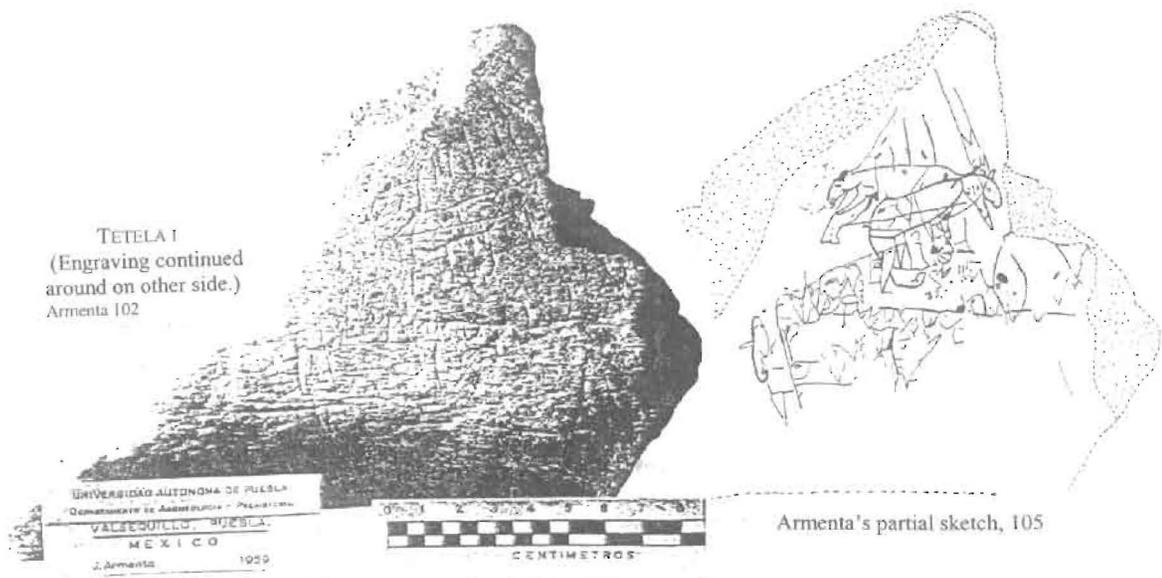
View of Hueyatlaco from the northwest during excavation in 1973. A trench has been cut through a cliff-forming ledge of volcanic ash (center) informally called the Hueyatlaco ash. The man at the upper right kneels on a ledge formed by a mudflow informally named the Tetela brown mud. Steen-McIntyre, Fryxell, Malde, *Quaternary Research* XVI (1981), 4 (Courtesy U. Washington)

but raising such restrictive criteria (*e.g.* rejecting a large Oregon specimen solely on suspicion) that by the end of 1945 he certified only 38 specimens as certainly genuine [“The First 38 Sandia Points Industry,” *American Antiquity* XI/3 (Jan. 1946), 257-68]. Hannah Marie Wormington, esteemed Denver Museum archaeology curator, verified minimal additional specimens from eastern Alberta, NE Alabama, and near a primeval lake at Long Valley, Calif. [*Ancient Man in North America* (Denver: Museum of Natural History 1957), 91].

Hibben’s discoveries predated carbon-14 dating. The preeminent geologist Kirk Bryan of Harvard U. correlated the thick yellow ochre (= flooded) stratum above the Sandia-points stratum with the Wisconsin pluvial maximum, thus the Sandia stratum earlier than 23,000 B.C. (pre-Solutrean), the Folsom stratum above yellow ochre late Pleistocene, and top caliche layer ascribed to return of heavy rains [“Ancient Man in America.” *Geographical Review* XXVII (1937), 507-09; & “Correlation of the Deposits of Sandia Cave, N.M., with the Glacial Chronology,” appendix to Hibben, *Evidences of Early Occupation in Sandia Cave. op*

cit.]. Hugo Gross of Bamberg, Germany, though highly respectful of Bryan’s correlations, equated the yellow ochre stratum with Europ’s Götweig loam that formed during the Würm I/II interstadial *c.* 40,050-26,050 B.C., thus the Sandia-points layer earlier than that [“Age of the Sandia Culture,” *Science* CXXVI/3268 (16 Aug. 1957), 305-06].

JOSEPH McAVOY 1987 discovered 2 unfluted white points together with quartzite blades and bladelets plus unstruck cores 5 millennia *older* than the Clovis stratum above it, at Cactus Hill overlooking Nottaway River 50 miles south of Richmond, Virginia. Nearby charcoal particles carbon-dated $13,1220 \pm 70$ & $14,050 \pm 730$ B.C. [Stuart J. Fidel, “The Peopling of the New World,” *Journal of Archaeological Research* VIII/1 (March 2000), 47]. Similarly at the Topper Site on the Savannah near Allendale, South Carolina Prof. Albert Goodyear’s resumed digging a yard *below* the Clovis layer revealed scores of blades and flakes that he cautiously estimated older than 10,060 B.C. but which will surely prove far older. An



Alter Vestigios de Labor Humana en Huesos de Animales Exintos de Valsequillo, Puebla, Mexico (Puebla: Puebla:
Publicaciones del Consejo Editorial del Gobierno del Estado de Puebla 1978), 31 [courtesy Virginia Steen-McIntyre]

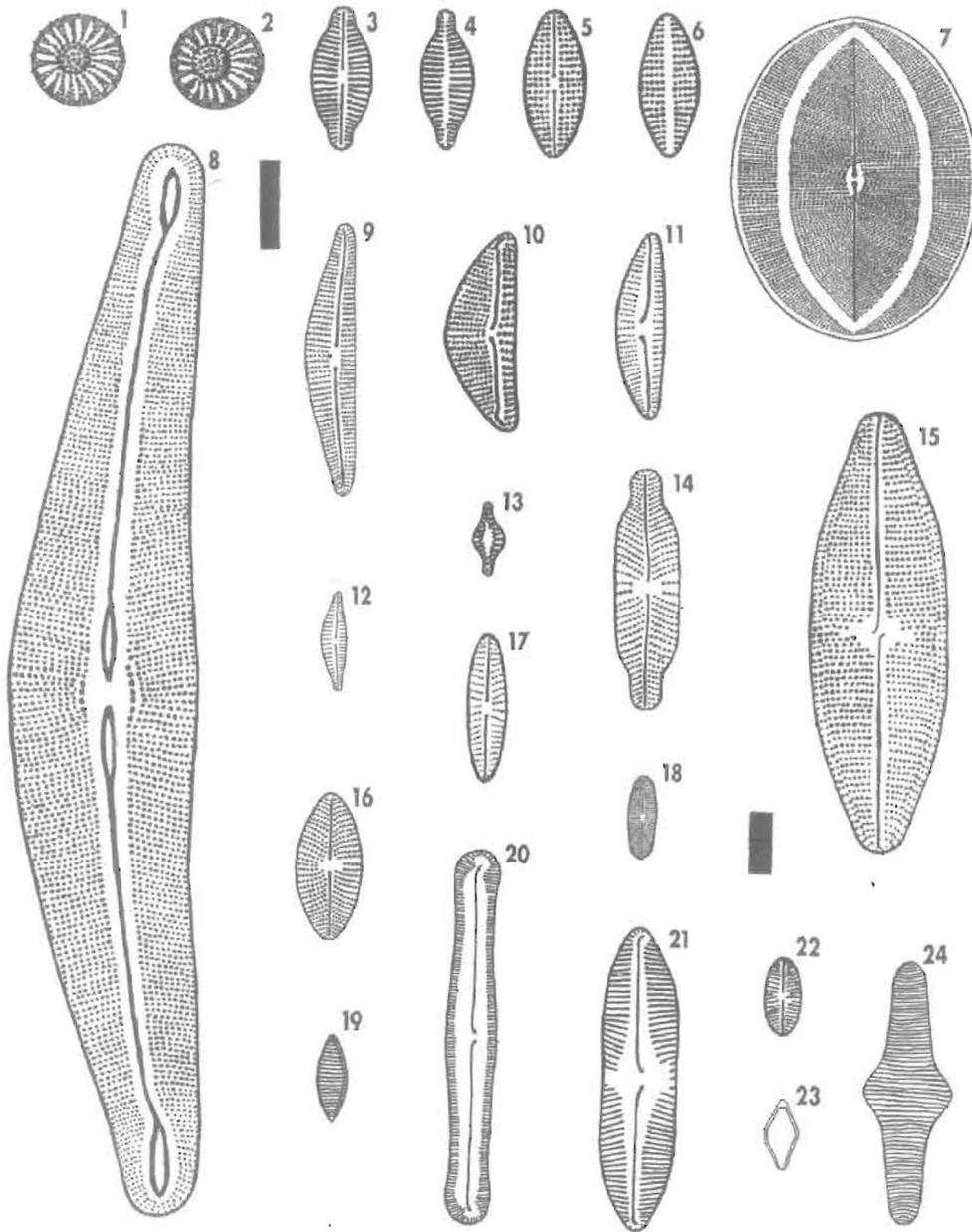
ancestral walrus bearing an embedded Solutrean point was dredged not from the arctic Pacific but near Chesapeake Bay [Jim Leslie, "The Peopling of the Americas," *Midwestern Epigraphic Newsletter* XXII/1 (8 April 2005), 6].

In the ratcheting of consciousness/ingenuity from crowded retreat of iced North Europe's population to South France and Iberian coasts must have impelled glacier-edge coasting in wicker-frame skin-boats to America, striking New Jersey. Inland on Cross Creek which flows west 7½ miles into the Ohio River, 29 miles SW of the site of Pittsburgh, 51.57 miles below the Wisconsin Glacier edge, Meadowcroft Rockshelter awaited. Mercyhurst Professor James M. Adovasio with distinguished team have excavated since 1975. Fire pits, fire floors, ash & charcoal lenses, refuse storage pits, concentrations of stone & bone manufacturing (unfluted points, knives, scrapers, bones from meals, and edible plant remains, hackberry seeds above all) attest intermittent human habitation beginning in the next-to-lowest Stratum II. Cut-bark basketry from lower IIa carbon-dated 17,650 ±2400 B.C. by Smithsonian diagnosis; which could fall too late, since Dicarb Radioisotope, Gainesville, Florida by a different process computed 19,430 ±800 & 19,120 ±475 on charcoal samples immediately beneath the basket. The best place to tackle this site's extensive literature would be Adavosio, Jack Donahue, Kathleen A. Cushman, Ronald C. Carlisle, R. Stuckenrath, J.D. Gunn, & William C. Johnson, "Evidence for Meadowcroft Rockshelter," chap. 13, *Early Man in the New World*, ed. Richard S. Shutler, Jr. (Sage 1989), 163-89.

AMERICAN SITES OLDER THAN CLOVIS include lake-country-bog Monte Verde west of Puerto de Montt, extreme

south-central Chile, where 1988 Tom Dillehay reported charcoal 42,000 years old associated with butchered mastodon bones and 11 stone tools. Observing anthropologists at last 1997 accepted his 11,500-B.C. carbon date for a *later* mastodon-butcherer encampment nearby, most convinced by a child's footprint, but could not countenance empirical evidence for the older camp. Late as 1997 they were just beginning to realize that New World pioneers could not have come exclusively across the Bering Strait or so come first, but could not yet entertain Atlantic ingress at all.

By spring, 1986 the great São Paulo Museum archaeologist Niède Guidon reached a level at Pedra Furada whose hearth charcoal carbon-dated 30,210 B.C. [Guidon & G. Delibries, *Nature* (10 June 1986), 767-71] which scientists reluctantly accepted. But she kept descending in a consistent sequence to 48,050 B.C. at bedrock—too early for their premises. She had begun excavating Pedra Furada (Perforated Rock) as her Site #1 1978, among 275 rockshelters lining Rio Piauí in NE Brazil, remarkably duplicating France's Black Périgord with same type hearths and stone tools, even polychrome murals in Aurignacian-to-Azilian styles, most corresponding to Spanish Levantine Mesolithic 10,000-4,000 B.C. (which Guidon named *Serra Talhada*). Evolving in apparent tandem with SW Europe suggests two-way traffic and a branch of the Gulf Stream, in any event, seems a more plausible passage to NE Brazil than hiking from Alaska Peninsula. Suppose such hikers got as far as Panamá. Even today you cannot hike from Panamá to Piauí Province. Habitation on the Piauí incurred a millennium interruption but revived till



VanLandingham, "Corroboration of Sangamonian age,
micropaleontology, vol. 50, no. 4, 2004

PLATE 9

Extinct (figure 1-23) and extant (figure 24) diatoms from samples listed in table 3.
Magnifications: short black bar = 10µm, applies to 1-2 and 7-24, ×1000; long black bar = 10µm, applies to 3-6, ×1500.
1 (from VanLandingham 1990) and 23, 66M285; 2, 13, and 18, 66M288;
3-6, 66M239; 20 and 24, VL2120; 7, 66M191; 8, VL2158;
9, 11 and 22, VL2121; 10, 66M287; 12, 14, 17, and 19, 66M286; 15 and 16, VL2173; and, 21, 66M228.

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| 1-2 <i>Stephanodiscus excentricus</i> ; | 14 <i>Navicula elginensis</i> v. <i>campylonema</i> McLaughlin; |
| 3 <i>Achnanthes laterostrata</i> v. <i>capitata</i> , raphe valve; | 15 <i>Neidium distinctepunctatum</i> v. <i>major</i> Sreenivasa; |
| 4 <i>A. laterostrata</i> v. <i>capitata</i> , rapheless valve; | 16 <i>Navicula intermixta</i> v. <i>parva</i> Stone; |
| 5 <i>A. nikiskii</i> Stone, raphe valve; | 17 <i>N. karelica</i> v. <i>minor</i> Cleve-Euler; |
| 6 <i>A. nikiskii</i> , rapheless valve; | 18 <i>N. oberohensis</i> Hustedt; |
| 7 <i>Cocconeis grovei</i> ; | 19 <i>Nitzschia angustata</i> v. <i>minuta</i> Krasske; |
| 8 <i>Cymbella sturii</i> ; | 20 <i>Pinnularia acrosphaeria</i> v. <i>badeana</i> Héribaoud; |
| 9 <i>C. cymbiformis</i> v. <i>dorsepunctata</i> Reháková; | 21 <i>P. brebissonii</i> v. <i>intermedia</i> M. Peragallo; |
| 10 <i>C. hagermanensis</i> Lohman; | 22 <i>Navicula bronislaae</i> ; |
| 11 <i>C. neupauerii</i> Pantocsek; | 23 <i>Tetracyclus ellipticus</i> v. <i>lancea</i> f. <i>subrostrata</i> Hustedt, intercalary band; |
| 12 <i>C. fonticola</i> f. <i>fossilis</i> Manguin; | 24 <i>Fragilaria floridiana</i> Hanna |
| 13 <i>Fragilaria leptostauron</i> v. <i>obesa</i> Lohman; | |

desiccation-forced abandonment c.4,000 B.C. Forested mountain and verdant prairie turned total desert by c.1050.

FANTASTICALLY EARLY as such sites flourished, they had remotely earlier predecessors—before the last glacier during the *Sandamonian* interstadial (between glaciers) c.80,000-220,000 B.C.

The crucial site is Hueyatlaco (*Hwaya-tlaco*) on the north shore of Valsequillo Reservoir just SSE of Puebla, Mexico.

In extinct fauna, projectile points, controlled fire, unifacial/bifacial stone implements, and skulls, Hueyatlaco resembled *Homo erectus*/neanderthaloid Middle Pleistocene Vérteszöllös (Hungary), Bilzingsleben (Germany), Swanscombe (England), and L'Arago

(French Pyrenees), none of which knew rhynchotheres (*Rhynchotherium*) as Sandia Cave did not but Hueyatlaco familiarly, depicted in engraving there and bones found at several Río Valsequillo localities, identification conclusive from molars (chief diagnostic of *Proboscidae*). Indigenous to Oligocene North Africa, this ancestor of true elephants distinctively grew double tusks from *both* jaws; pig-toothed and longer-bodied than later elephants, presumably extinct before the Pleistocene. Had specimens swum from Morocco to Central America? Their distribution point in the New World appears to have been early-late Miocene Honduras, where dated 1984 8.8 million years ago [S.D. Webb & S.C. Perrigo, "Late Cenozoic Vertebrates from Honduras & El Salvador," *Journal of Vertebrate Paleontology* IV 1998), 237-54]. They spread into South America and northward

to Florida, Gulf coast, Deer Park on the Santa Fe River (New Mexico), Graham Reservoir (Arizona), California to the coast, and Great Plains.

Puebla Naturalist Juan Armenta Comacho discovered a rain-landslide-exposed mammoth femur embedded in Valsequillo Gravels of a mountain bank in Alse seca Arroyo c.2 miles SE of Puebla June 1933. In the next 30 years he located partial skeletons of 93 mammoths and 26 mastodons, plus bones of extinct camel, bison, horse, 4-horn antelope, peccary, sloth, megatheres (very long slothlike mammals normally ranging in South America), glyptogon (giant armadillo), short-faced bear, dire wolf, saber-tooth cat, other felines, canids, tirsids (bears), various deer-like and weasel-like animals, rodents, *et al.*, many of their bones sharpened as tools or broken for marrow, 6 engraved.

Of these 6, the prize first, which Armenta found 2 May 1959 in Valsequillo Gravels of the lower-middle Tetela Peninsula was a 2.4"-thick, 6" high, 7.6" base mastodon pelvic bone engraved while the bone was still fresh with crisscross lines as in Magdalenian style which Armenta microscopically traced, showing a serpent head, hunting scenery, and large saber-tooth cat leaping upon or over a multiply-drawn rhynchothere.

We had not thought any art antedated Aurignacian or specifically crisscross engraving before Magdalenian. If such existed on pre-Aurignacian bones it would probably have gone unnoticed, as Linear A & B tablets were before detected purposely. The c.12,000 La Marche (Vienne) engravings lay stacked

un-overlookably. Hueyatlaco engravings do raise a question of dating.

The great geologist/tephro-chronologist (volcanic ash specialist) Virginia Steen-McIntyre, who joined the excavation 1966, discerned indefinitely older age of a formation underlying a later beneath sediment and volcanic ash & pumice as deep as 30' but was as shocked as everybody at, besides already startlingly high carbon-14 dates, uranium-thorium-series dating of a butchered camel pelvis fragment 178,050 & 243,050 \pm 40,000 B.C. and butchered mastodon tooth 152,050 & 278,050, run by U.S. Geological Survey geochemist Barney Szabo 1973. Another USGS geochemist, Chuck Naeser, measured associated mud-&-pumice by fission-track of zircon phenocrysts from coarse clasts 1981 yielding 370,050 \pm 200,000 for Hueyatlaco ash and 600,000 \pm 340,000 B.C. for Tetela mud-pumice [Armenta. *Vestigios de Labor Humana de Animales Extintos de Valsequillo* (Puebla 1978) & Steen-McIntyre's 1996-97 translation; Roald Fryxell, Harold Malde, & Steen-McIntyre, "Geologic Evidence for Age of Deposits at Hueyatlaco Archaeological Site, Valsequillo Mexico," *Quaternary Research* XVI/1 (1981), 1-17; *etc., etc.*].

CLINCHINGLY CORROBORATING preglacial dates, the world's veteran leading diatomist, Sam Leighton Vanlandingham in a remarkable series of monographs 1999-2004 ascertained from diatomite associated with artifacts in a complex sequence of volcanic, volcanosedimentary, lacustrine, and fluvatile deposits, plus a skullcap, fossil diatoms from two major groups, Phylum *Protista* & Division *Bacillariophyta* that fell within the Sangamonian Interglacial. His 2004 culminating monograph specifically identified *Navicula bronislaae* & *N. dorenbergi* known only from the Sangamonian or its equivalents, together

with 13 diatoms extinct before the end of Sangamonian; while *Cymbella cistula* var. *gibbosa* (*C. gibbosa*) first occurred in Sagamonian and survived it, but *Epithemia zebra* var. *Undulata* & *Navicula creguti*, known only in Sangamonian, reinforce an age no older than Sangamonian [“Sangamonian Interglacial (Middle Pleistocene) Environments of Deposition of Artifacts at the Valsequillo Archeological Site, Puebla, Mexico,” *Transactions of the 13th Regional Archeological Symposium for Southern New Mexico & Western Texas 9-11 April 1999* (Midland Archeological Society 2000), 81-98; two succeeding supplemental monographs; & “Corroboration of Sangamonian age of artifacts from the Valsequillo region, Puebla, Mexico by means of diatom biostratigraphy,” *Micropaleontology* L/4 (2004), 313-42].

Diatoms are hardshelled one-cell algae of various but usually elongated shapes. For his microscopic work VanLandingham utilized computer retrieval CEFDARS (*continuous extinct fossil diatom age reference system*) and CAESARS (*continuous algal ecological spectral analysis reference system*).

The Dorenberg Skull, collected south of Puebla 1899, destroyed in World War II bombing while displayed in Leipzig, proved filled with fossil Middle

Pleistocene diatoms, which VanLandingham examined in a San Francisco lab. A second skull (partial calotte), anonymously looted from the Hueyatenco vicinity c.1970, came into the possession of Prof. Charles Ostrander at Merced College, who 6 Feb. 1971 sent Virginia Steen-McIntyre a photo showing thick-walled, heavy-browridged low, small brain case. (The college relinquished this fossil from storage for tribal reburial) [Steen-McIntyre, “Approximate Dating of Tephra” (July 2002 for Aug. presentation Mexico City), 9-10; & her news report Winter-Spring 2001, both with photo].

AUTHENTIC SCIENTISTS of many disciplines concurred scientifically in Sangamonian age for Hueyatenco, in turn lending credence to Middle Pleistocene or earlier age for pre-Clovis and pre-Solutrean relics strewn on western coasts and deserts. But we have seen since Copernicus, science encroaches convention often only gradually.

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