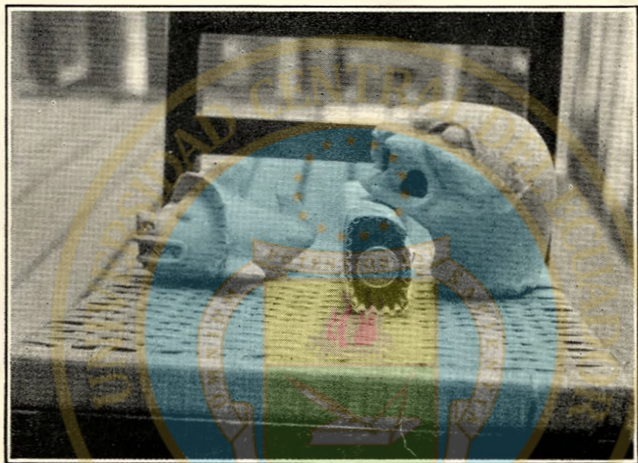


El Palacio

VOL. XLVIII

JANUARY, 1941

No. 1



FIGURINES FROM LA TOLITA, ESMERALDAS. COLLECTION OF
SR. YANNUZZELLI

In This Issue

RECONNAISSANCE IN ESMERALDAS
SIX GAME PIECES FROM OTOWI

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SIX GAME PIECES FROM OTOWI

By MARJORIE FERGUSON TICHY

A RARE GROUP of clay specimens came to light recently in the process of cataloging the archaeological material from the ruins of Otowi, New Mexico, acquired by the Museum of New Mexico from the Philadelphia Commercial Museum, which conducted excavations there in 1916 and 1917, under an arrangement with the New Mexico institution. Among the several hundred clay vessels, consisting largely of Abiquiu, Bandelier black on grey and Tsankawi black on cream, dark culinary vessels, Potsuwi-incised and a few Rio Grande glaze decorated pieces, hundreds of interesting artifacts and ceremonial pieces of stone, bone, and wood, were six actual Biscuit ware "biscuits." These interesting little objects were undoubtedly gaming pieces, the writer believes. Their size and shape must, first of all, exclude them from any practical every day usage, such as our so called "pot lids." While possessing the same general superficial characteristics each one is unique in detail.

Unfortunately, nothing is known regarding their actual excavation history other than the fact that they were recovered at Otowi by Dr. (Mrs.) L. L. W. Wilson during one of her seasons of activities there. The only possible reference to anything akin to these specimens discovered in any of her written works is found in EL PALACIO, Vol. 3, p. 34, which reads as follows: "We found also specimens of clay balls, both white and red." The six pieces under discussion here, while of clay, are neither white nor red, but are

more nearly a dirty, greyish-buff; also they are more like buns, or biscuits, than balls. If classified according to pottery standards they would stand in the Bandelier black on grey¹ group, although only one actually contains any black decoration.

As already indicated, it is not known whether these gaming pieces were found in a cache or not. Neither can one be sure they were used in a game requiring six "men."

It is a well known fact that Indians of the Rio Grande area, Tewas, Tiguas, and Keres alike, played games in pre-historic times. One of the most popular, and one that dates back to ancient times, it is now believed, is the hidden ball, or stick game, commonly called Canute. The Zunis also played this game and used a disc of stone approximately the size of these clay Otowi pieces to throw into the air in order to determine which group would start the game. Canute, then, is mentioned as one possibility. If the Otowi specimens were used as the pieces to be hidden under the hollow tubes or cups, then the tubes would have had to be large to the bunglesome point in order to contain them. Thus they seem impractical for this phase of the game. It should be noted that Indians of some of the Northern Rio Grande pueblos still play Canute.

Sets of six dice are found in use today in some of the pueblos. These are usually of bone, however, and are not as large as the ones described here.² The shape, however, is somewhat the same, and it is barely possible that these could have been dice. That dice were employed in games of chance in pre-historic times is borne out by the finding of an occasional bone dice in pre-Spanish strata in many southwestern ruins. Bo 14/11 (with the nail³ marks on the under side) rather suggests a marked or "loaded" dice. Bo 14/8 is also uniquely marked. If the six pieces were originally used together in one set, they are all different

1. See Table of Specifications.

2. See Table of Specifications

3. See Table of Specifications.

enough to be easily recognized in a game of chance.

The writer feels that the most logical explanation of these objects is that they were used in a game similar to quoits, shuffleboard, or shinny, the first named being the most likely solution. Any such game as quoits played with these clay objects would have to be played on a fairly soft surface or dirt floor; otherwise it would not be long before they would break.

In spite of the lack of experience in playing quoits, the writer discovered that these specimens made excellent discs in aiming at a target. Their size, rounded tops, and weight aided greatly in making them sail through the air easily. In Culin's *Games of the North American Indians*; B.A.E., 1907, vol. 24, there are several accounts of how the Zunis played quoits. On pages 726-727 the following is given:

"Zuni, New Mexico. Mr. John G. Owens describes this game as follows: *Than-ka-la-wa*.—This game is usually played in the spring, and resembles somewhat our game of quoits. In place of the ordinary quoit they use flat stones. Any number may take part. A small stone, or even a corn-cob, is set up, and on this each places his stake. To determine which shall play first they all throw for some distant point. He who comes nearest the mark chosen pitches first, and each one follows according to his throw; then the game begins. The distance pitched is nearly 100 feet. The object is to knock over the stake or pool. If the pool is knocked over, and the stone pitched goes beyond it, it counts nothing; if just even with it, the one who pitched has another chance; if it remains behind, he takes everything and all put up again. They count it great sport, and some become very skilful in pitching. Frank H. Cushing in 1893 described the game as 'the standing cob game.'

"The specimens in Figs. 951 and 952, page 727, were collected by the writer (Culin) in 1903. [Figure 952, particularly, resembles the Otowi pieces. Its diameter was four inches. The two specimens in figure 951 were four and

one-half inches and five inches, respectively, in diameter. They are described as quoits by Culin.] The stones are called *tankalanina*. It is a winter game for men and boys. Each one has a quoit. They set a corncob up on the ground and put the stakes—turquoise, silver beads or buttons, or money—on top of the cob and throw at it in turn. The first player throws his stone from the cob at some distant point, about as far as he can. The players then stand at this point and throw at the cob until one of them knocks it down. Then the one whose quoit fell nearest the stakes (not the cob) wins all. After a player throws he draws a ring around his stone to mark where it fell when he takes it up to throw again. A stone, a chip, or any convenient object is put on the cob to lay the stakes on.

"Figure 953, page 727, has a cross incised on one face and on the other the face of the sun. [Its diameter was three and one-half inches, and was called a sun quoit by Culin.] It was presented to the writer by Zuni Dick in 1903. He gave the name as *tankalana yettokia*, and said it was anciently used on Corn Mountain by the Sun Priest."

Bo 14/9 is the only one of the group showing great wear and battering. It apparently had been used a great deal, and such marks as it bore would more likely have been made by a cue or shinny stick than by aiming at a target.

There are examples of stone discs (possible gaming pieces) from ruins throughout the Rio Grande and elsewhere in the Southwest, but data regarding such clay discs as those described from the Otowi ruins are practically non-existent.⁴ If their distribution had been common it would seem logical that they should come to light with some regularity in excavated ruins. Likewise, stone discs are also somewhat rare in comparison with the thousands of oddly shaped and rounded, worked sherds occurring in every pottery producing community of the Southwest.

4. Dr. Frank Hibben, U. N. M., informs the writer that he knows of one specimen from the Mimbres similar to those of the Otowi group.

TABULATED SPECIFICATIONS OF THE OTOWI GAME PIECES

Cat. No.	Length	Width	Thickness	Description
Bo 14/6	2 3/8"	2 1/16"	1"	Typical biscuit ware paste. Somewhat cracked due to poor mixing. No decoration. Slight cavity on bottom containing smoother slip than rest of body. Bottom shows slight wear.
Bo 14/7	3 1/4"	3"	1 1/4"	Typical bis. w. paste. Slipped, no design. Rounded top. Chipped and worn from usage. Small punched hole on upper side near rim.
Bo 14/8	3"	3"	1"	Typical bis. w. paste. Well smoothed. Black linear design on upper side. Flat top and uneven slightly convex bottom. Surface scuffed and scratched.
Bo 14/9	2 1/8"	2 8/16"	1"	Typical bis. w. paste. Slightly rounded top. Entire surface on both sides so badly worn and chipped that nothing can be said of its original surface treatment.
Bo 14/10	2 1/4"	2 1/16"	1 1/8"	Typical bis. w. paste. Slipped, scraped, and smoothed. High rounded top. Good condition—shows little wear except on bottom.
Bo 14/11	2 1/4"	2 1/8"	1"	Typical bis. w. paste. No slip on under side which contains a series of some 27 finger nail indentations at one end. Top well smoothed with sloping ends and high rounded middle.

However, among these many worked sherds there are quite a good number of a size and shape to make good gaming pieces, and it is possible that these were used instead of stone quoits; although it seems somewhat more difficult to aim with them because of their lightness. The group of pottery discs from Otowi, however, would appear to be unique archaeological specimens.

FORTY FOOT SKELETON AT DENVER

THE COLORADO Museum of Natural History, Denver, has just placed on exhibition what officials say is the most perfect plesiosaur skeleton ever prepared. It was found remarkably intact and complete in a cliff of shale on Baca Creek by a farmer early in 1939. He reported it to the Museum. The huge marine reptile probably weighed about three tons in life. The Museum skeleton weighs 1,400 pounds. The reptile had a stubby tail and limbs that terminated in flippers 37 inches long. Its total length was about 40 feet. It was a denizen of shallow salt seas that rolled over the present High Plains perhaps 100 million years ago. The skeleton was prepared by Philip Reinheimer, the Museum's chief preparator, and his staff.

HARVARD ACQUIRES FOSSIL SITE

HARVARD UNIVERSITY has become owner of a "mine" of fossil bones in Florida, stated to be the only reasonably complete deposit of Miocene date known in the United States east of the Rocky Mountains. It lies within a 40-acre farmsite in Gilchrist county, in the northern part of the state. In preliminary excavations, a party under the direction of Dr. Thomas Barbour, director of the Harvard Museum of Comparative Zoology, has found remains of several primitive horses, camels, dogs, and rhinoceros. Dr. Theodore E. White, of the Museum staff, will work at the site this winter. Announcement of the purchase is made in a recent issue of *Science*.

RECONNAISSANCE IN ESMERALDAS

By EDWIN N. FERDON, JR.

(Concluded from the December number)

DURING OUR stay at La Tolita time was found to make two hasty trips around the island and through some of the many estuaries whose passages even today do not appear on maps of the region. No large prehistoric settlements were found but seven small sites were recorded. Without exception, these small sites, found satisfactory by the prehistoric inhabitants, have been taken over by the present day natives as good house sites. Many of the present thatched houses have been built on top of primitive conical and flat topped mounds. Not all of the sites encountered on these trips contained mounds, many consisting only of a cultural deposit a few feet thick and lying just below the surface of the ground. One site in particular deserves further study by archaeologists. In our survey it is recorded as E-8 and is located near the southern point of Santa Rosa Island. The culture debris, extending for a distance of about 1,500 feet, seems to be made up of two deposits, possibly representative of two distinct time periods. The top level is made up of a black clay-like soil well filled with shards and extending from the surface of the ground to a depth of about three feet. Below this occurs a deposit of fine buff colored sand in which shards also occur, though to a lesser extent. This lower layer as well as part of the upper deposit are subject to the erosive forces of the high tidal waters. With the exception of one small badly pot-hunted mound no structures appear to be present. The shards gathered from this site do not seem to fit into the ceramic type of La Tolita, the material appearing to be of a cruder nature.

Our study of La Tolita finished, we embarked early the morning of August 22 in Sr. Yannuzzelli's launch, crossing the smooth waters of the Santiago to the little town of La Tola, situated on the left bank of the river not far from its

mouth. Here horses from Lagarto were waiting for us and after seeing our paniers firmly strapped on the mules we set out southward, guided by Sr. Calderon. The settlement of La Tola that we were leaving behind us was a typical thatched roofed town of about forty houses strung out along the river with a locally estimated population of about three hundred people. A little plank school house, fitted out with long board benches, along which dark skinned children sat loudly reciting their lessons, gave evidence of an attempt at education.

Winding slowly westward from La Tola, our horses carefully picking their way along the muddy trail, we could not help being impressed by the open grass lands that met our eyes. Fat cattle lazily grazed on strands of grass so tall that it brushed the bellies of our horses as we rode along. White marsh birds, perched upon slim branches, strained their long necks to get a better look at us and, finding us uninteresting, spread their wings in search of other things.

The sun was just becoming hot as we drove our horses through the last mud hole, in which they floundered miserably, pushed our way through the last remaining underbrush and rode out upon a beach that has no pier. We had timed our ride so that the tide would be out and now we beheld, stretching southward in a seemingly never ending line, a wide smooth beach, the only trail from La Tola to Esmeraldas.

We set our horses to a trot and soon had crossed the little Majagual, Molinita, and Rompido rivers and were riding along the base of the high wave-cut cliffs that line the beach from midway between haciendas Molino and Vainilla, southward to Esmeraldas and beyond. These cliffs have been cut by the waves at such a rate that a few small streams have been left hanging high in the cliffs, while the heads of other streams flowing inland to meet some river have been completely cut away. The cliffs, often exposed to a height of one hundred and fifty feet, show at their

bases a laminated limestone bed which quickly passes upward into alternating layers of thinly laminated clay and limestone. At the top, the beds are cut by an unconformity overlain by a deposit of chocolate colored earth about three feet thick. This in turn is capped by a layer of black earth extending to the top of the cliff. The limestone and clay deposits below the unconformity show minor faulting of a local character accompanied by joint fracture lines. These cliff structures result from an uplifted peneplain of no great geologic age. The hills of the region are still quite flat on their tops, the erosive forces not yet having had time to round them off.

Riding southward we crossed the Rio Vainilla and Rio Lagartillo, arriving that noon at the hacienda El Paraiso, or Lagarto, as it appears on the maps. Here we stayed for a few days inspecting archaeological sites in the nearby region. Hacienda Lagarto, as is the case with most of the haciendas on this part of the coast, is devoted entirely to cattle raising. Fine grazing lands are obtained by clearing the heavy undergrowth and trees of the valley bottoms, and the flat tops of the hills. During our three days at this hacienda we were able to carefully study the coast line from Rio Vainilla westward to the Rio Ostiones and inland as far as the town of Horqueta, or Montalvo, located on the right bank of the Rio Ostiones some three miles or more from the river's mouth. At this latter town we studied a small collection of interesting ceramics and figurines which had come from the Rio Felfa, a branch of the Rio Ostiones, located about four hours by horse upstream from Montalvo.

All in all, we were able to locate ten prehistoric sites in the region, of which three amounted to single conical mounds or tolas. Two of these mounds were found on the flat topped hills, just back of the sea cliffs between Lagarto and the little town of Africa, while the third was found in the bottom lands of the Rio Lagarto, southwest of the hacienda Lagarto in the potrero *El Bajo*. These tolas averaged

about sixty feet in diameter and ranged from ten to fifteen feet in height.

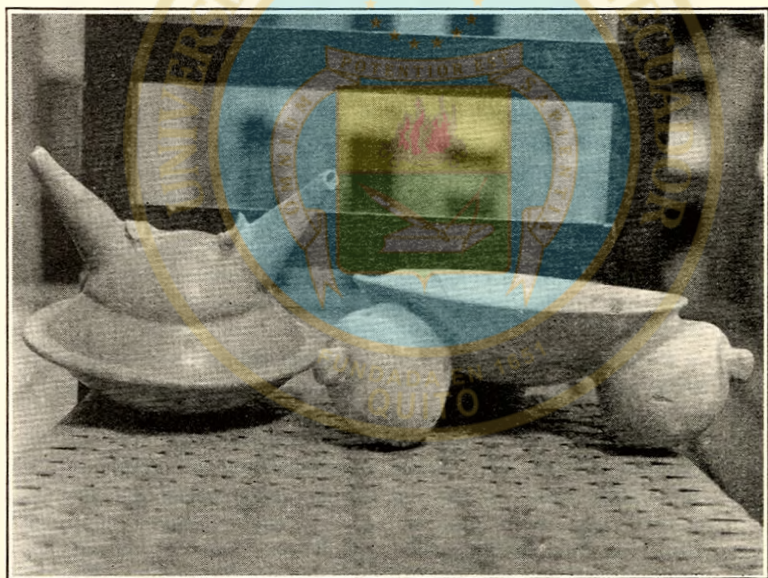
The remaining seven sites of this immediate region are all located either directly on the beach or back up the rivers or estuaries a few hundred feet. No structures accompany these beach sites, their location and size being determined by shard debris visible in banks of earth or on the beach where the high tide or rains have washed the pottery out onto the sands. Interestingly enough, these beach sites are not true shell mounds. Only one deposit showed any appreciable amount of shell debris. Our observations completed and shard collections made, we left Lagarto early one morning and packed in one day to Esmeraldas.

Having noted the archaeological deposits as far as the Rio Ostiones, we rode westward around Ostiones Point toward the town of Mate. It was on this part of the ride that we got the biggest surprise of the trip. Rounding Ostiones Point we began to see crude pieces of pottery in the sands of the beach. Riding up the beach to where a bank of earth rose abruptly to a height of six to eight feet we beheld a deposit of shards literally packed into the soil. The culture deposit extended from the surface of the ground to a varying depth of from three to four feet, where the black earth of the culture layer rested upon a deposit of grey-buff clay. We got off our horses and began to figure the extent of this site but soon returned to our saddles when we found the pottery continuing indefinitely. Eventually we found that this site extended in an almost continuous shard deposit from Ostiones Point to the town of Mate, a distance of five miles.

We have given this deposit a single survey number, for although a more careful study might result in the breaking up of this large deposit into a number of sites, the general disposition of the material is such that for the purpose of a survey it may be recorded as one large settlement. No mounds accompany this site, but one interesting point was noted. Whereas the majority of the thickly

deposited cultural material showed little if any shell deposit we found at the *estero Tigre* a thin layer of broken shells one and one-half feet thick, extending for a distance of about five hundred yards. This layer of shells, located in about the middle of the site, may be the result of the ancient inhabitants having had a centrally placed refuse heap for the town. Although high tide does not quite reach the culture layer of this site, heavy seas and the destructive effects of the rainy season are taking their toll.

Lunching on sardines, bread, and cheese at Mate, we mounted again and rode to the Rio Verde where it was necessary to swim our horses across the river. Riding



POLISHED RED DOUBLE-SPOUTED VESSEL AND TRIPOD BOWL FROM LA TOLITA
COLLECTION OF SR. YANNUZZELLI

southward, we passed the little hamlet of Colope, situated on the right bank of the river by that name, and later passed the town of Camarones on the left bank of the Rio Camarones. It was evening when we finally turned inland to cut across the hills to Tachina, where we left our horses and were paddled across the Rio Esmeraldas to the town of Esmeraldas.

Luck held with us in Esmeraldas, for Sr. Calderon, our companion, was able to get us food and fairly comfortable rooms in the town, although spiders and an inquisitive scorpion made the room walls a bit hazardous to lean against. Esmeraldas is the largest town in the province and the seat of government, yet there is no hotel to be found in the place. The chief export product here is tagua and lumber. Formerly an excellent grade of tobacco was grown and shipped to Cuba where it was used in the famous Cuban cigars. However, the government has now placed a monopoly on tobacco, and because the fine Esmeraldas tobacco costs more to produce, it has been discarded and only a cheap product is grown. Cattle, the major product of the province, are shipped from this port to Guayaquil, and sometimes even to Peru and Colombia. Cacao and an excellent grade of coffee are also produced here, though the former has been all but obliterated by a pest that spread from the great cacao plantations of the Guayas river.

After resting a few days and catching up on our field notes, we found a small launch bound for Atacames where a fiesta for the town saint was about to take place. We boarded the launch early the following morning only to wait for over an hour for the *cura*, who was to accompany us to Atacames, to bless the town and perform all the church marriage ceremonies for the year. However, news finally arrived that he had decided not to go with us and was embarking that day for a vacation in Manta. We promptly headed for the open sea, and in a few hours of cruising along the cliff lined coast we rode the surf into

the quiet waters of the Rio Atacames, where we rudely disturbed the only alligator seen on our entire trip.

Two days in Atacames resulted in the finding of three large sites. The present town of Atacames is virtually built upon a rich archaeological deposit that may best be studied on the right bank of the river at the southwestern edge of the town. Here the high tide waters of the river have for years been washing out complete pottery vessels, which fall into the river where they can be fished for, though when found they are usually heavily covered with barnacles.

Hiking northeastward along the beach, we passed the hacienda Tomsupa with its stand of 3,500 coconut palms grown for the copra, which is dried and sent to Manta where the oil is extracted and exported for use in soaps and perfumes. Cattle raising is also an industry of Tomsupa, and today cattle graze over many grass covered prehistoric mounds that lie just behind the coconut grove of the hacienda. This mound site, one of the few large ones found along the Esmeraldas coast, contains approximately twenty mounds spread over a large field that parallels the coast. It would be most interesting to excavate such a site as this, for it is known that the Spaniards found a thriving culture here in Atacames Bay. Could this mound site have been occupied at the time of the conquest?

One kilometer northeastward along the beach from Tomsupa we found another large prehistoric settlement, consisting of a two foot thick layer of culture debris outcropping in an eight foot bank. It is interesting to note that the top of this culture deposit lay about one foot and a half below the surface of the ground. The site extends for over one thousand four hundred feet and is without any mound structures.

While collecting shards from these three sites we were impressed by the abundance, especially at the town of Atacames, of a ware that might best be described as a red line ware on a brown background. The surface of this pot-

tery is smoothed but not polished. This ceramic type was found as far as the Rio Esmeraldas but was not encountered further up the coast. Although there has been little time for a concentrated study and comparison of this ware, one is struck by the obvious similarity of it to that occurring in large quantities in the ruin of Socapamba, in the highland province of Imbabura, near Lake Yaguacocha. If upon closer study these wares should prove to be related, it might go far in verifying the much discussed story of Velasco that the Caras migrated from the coast of Esmeraldas up the Rio Esmeraldas to the highlands of Imbabura, eventually passing to the capital of the Quitus.

Returning to Esmeraldas, we spent the last days of our expedition working the right bank of the Rio Esmeraldas from the village of Tachina to the mouth of the river. One large mound site was found in this area as well as two very small culture deposits. Part of the mound site was destroyed recently when the Panagra Airlines constructed their new airport at the southern edge of the site. We were told that seven low mounds were scraped away and a great deal of pottery broken up. This was easily verified by the virtual pavement of shards that now covers the landing field. However, about fifteen more mounds extend immediately to the north of the airfield and have been untouched. The other two small culture deposits, one just south of the airport and the other at the river's bank near its mouth, produced well fired, fine, highly polished shards of a type found by us at La Libertad in the province of Guayas. This fine ware is not found in the other sites of the immediate region, nor was it encountered further north along the coast.

Having been warned by all those to whom we talked against our proposed pack trip down the coast to Manabi, because of the virtual absence of any trail, we changed our plans and boarded the diesel powered converted sail boat gratuitously called the "Plus Ultra," and embarked for Guayaquil.

The expedition to the northern coast of Esmeraldas may be summed up as resulting in the recording of twenty-five archaeological sites, many of which had not been mentioned by earlier students in the field. Three of the four large sites constituted mound groups, while the fourth, located between Mate and Ostiones Point, though lacking mounds, is probably one of the largest continuous shard deposits in Ecuador. From many of these recorded sites shard collections were obtained and a number of sketched locational maps drawn. The large ruin of La Tolita was carefully studied over a period of ten days and a plane-table map made of the site. Information was also gathered concerning apparently rich archaeological deposits along the course of the Rios Santiago, Verde, and Esmeraldas, and its branches the Rio Viche and Rio Tiaone, as well as the Rio Atacames. Geographical data were also gathered regarding local industries, physiography, etc., and locational information on such matters as towns and water ways noted. Some of this latter information has already been forwarded to the American Geographical Society in New York City.

The importance of the archaeology of Esmeraldas should not be overlooked by South American archaeologists. The coastal plain of western South America, closely bound as it is by the rugged Andes, must have seemed an easy migration and trade route for the ancients. The ceramics of La Tolita alone show certain indications of influence from both Peru and Panama, if not even Costa Rica. It is to be hoped that we will, in developing the archaeological survey of Ecuador, get another opportunity during the dry season of the coming year, to further this Esmeraldas work, by studying the major river systems of the province and by extending the coastal survey from Atacames to at least Manta. This winter with our proposed excavations at La Libertad much should be learned of the little known coastal cultures around Santa Elena peninsula and the Gulf of Guayaquil.

ETHNOLOGICAL POTTERY ACQUIRED

THE SCHOOL of American Research recently purchased a fine collection of ethnological pottery from Arthur W. Rogers and George Schaffer, of Old Albuquerque. These young men, trained as anthropologists, are engaged in the selling of Indian wares in Old Town. The collection which the School received was gathered, for the most part, during the period from 1900 to 1915. It consists of six water jars, one pitcher, one storage jar, and two bowls from Zia pueblo. Acoma is represented by two water jars, three bowls, and one seed bowl. There are five storage jars, one small jar, and a bowl from Cochiti. Of San Juan ware there are two pieces, a bowl and a small jar. From Santo Domingo come four bowls, one small jar, two pitchers, a storage jar, and a water jar. A Laguna water jar, a Jemez bean pot, an Isleta water jar, two Navaho drum jars, five pieces of Pueblo utility ware, and one piece of Spanish manufacture complete the collection. The forty-five pieces have been deposited in the department of ethnology and will be used in installing exhibits in the new Hall of Ethnology.

ANTHROPOLOGICAL EVENTS OF 1940

THE FOLLOWING is a summary of events in the world of anthropology and archaeology for 1940, as compiled by *Science Service*:

Navaho Indians saw their language put into alphabetical writing for the first time. New equipment made it possible to play safely thousands of frail cylinder records on which scientists have preserved folk music and primitive songs.

An archaeologist of today buried the Time Capsule at the New York World's Fair, packed with exhibits and records of our civilization for the archaeologists of 6939 A.D.

War in Europe endangered such irreplaceable antiquities as the Rosetta Stone (London), the Elgin Marbles (Lon-

don), bust of Queen Nefertiti (Berlin), and temples and monuments in Athens and many other cities.

Discovery in Java of a fourth skull of *Pithecanthropus* provided scientists with the first chance to study a grown male skull of this ancient pre-human genus.

The undamaged silver coffin and golden ornaments of Pharaoh Psousennes I found in the Egyptian Delta were pronounced in some respects as important a find as the Tutankhamen tomb.

The 1940 census showed the population of continental United States has increased 7.2 per cent in 10 years to a total of 131,669,275 while preliminary figures based on the census returns give the entire United States with its territories and possessions a population of 150,621,720.

The Coronado Cuarto-Centennial celebrated in the Southwest stimulated historic and archaeological study of the early Spanish explorations.

Three successive eras of Folsom Man's career in early America were traced by finding a stratified corner of the Lindenmeier site in Colorado.

Excavating the oldest town yet found in Arctic Alaska, an expedition traced well-planned streets with more than 600 homes, and unearthed burials stored with art and cultural objects perhaps 2,000 or 3,000 years old.

An old Panama graveyard revealed the burial of an Indian official in gold regalia with sacrificed slaves or captives.

Five colossal stone heads and other remarkable art objects unearthed in Tabasco Province, Mexico, added to knowledge of the Olmec Indian civilization which preceded the Toltecs.

Dr. and Mrs. Edgar L. Hewett are spending the winter in Los Angeles. Dr. Hewett is working on a manuscript concerning the New Mexico Missions. He will be in Santa Fe for a week late in January.

PREHISTORIC MAN IN OREGON

DISCOVERY OF new characters in American prehistory, pioneers and big game hunters of the Oregon country about 6000 B.C., is reported by Emily C. Davis in *Science Service*. Dr. L. S. Cressman, director of the University of Oregon's Museum of Natural History, led the expedition unearthing new clues to ancient man in the Northwest. The most significant thing revealed is a type of stone points lacking the typical Folsom groove.

Dr. Cressman, now in the East as a Guggenheim Fellow, reported his finds before the American Philosophical Society and other scientific societies. Evidence of the Oregon hunters' presence in early America has been dug from beneath old peat beds in a dried-up lake of southern Oregon. Wild horses, camels, and elephants were trapped in swampy ground at the place and shot down by stone-tipped darts hurled from the hands of Oregon men.

While Folsom and Yuma hunters were seeking similar game east of the Rockies, these Oregon hunters shared the American wilderness with them, perhaps without either group knowing of the other. The weapons, which may seem a small clue, mean much, for in those days America's leading industries were making weapons and hunting wild beasts. Bone tools hardened to fossil state and crudely made stone knives are among other belongings abandoned at the Oregon hunting ground. Three successive chapters of early America can be read at this site, Dr. Cressman's excavations thus far reveal. A later wave of wanderers arrived when the low ground was beginning to fill with water, and these camped by the lakeside. Grinding stones and mortars and large stone projectile points for tipping weapons demonstrate their existence, about 2000 B.C.

Latest at the site were arrivals at about the dawn of the Christian era, America's immigration waves from Asia by that time had blossomed into the familiar Indian cultures. Pronounced just about the same as the well-known Kla-

math and Modoc Indians cultures of the Northwest, the artifacts of these latest lake settlers were found on abandoned beaches and islands of the recent lake.

Dr. Cressman has hope of fitting together these finds from the Oregon lake site with material from roughly similar horizons in Oregon caves, and tracing their relationship to early Southwestern cultures. He is searching museum collections of eastern cities for possible clues from other expeditions.

FOLSOM POINTS FROM EASTERN SITE

AN ANCIENT camp site has been investigated in the Blue Ridge Mountains of Virginia by David I. Bushnell, Jr., Smithsonian Institution archaeologist, says *Science Service*. Indicating the antiquity of the aboriginal home are two Folsom dart points picked out of debris of the camp. That the place may have been a Folsom hunters' workshop is inferred from finding among other man-made tools in the debris, some resembling Folsom work, and also from finding many small flakes of the same stone as the points.

Workmen engaged on picturesque Skyline Drive in Shenandoah National Park attracted attention to the important site, when they struck Indian relics in their digging. Mr. Bushnell, called to investigate, found and expertly sorted out a mixture of objects obviously left by prehistoric tenants of different cultures. When North America was being settled by Europeans, Cherokee and Siouan Indian tribes had a village at the desirable site, which is in a mountain valley overlooking lofty Peaks of Otter. Far older than these Indians, revealed by artifacts of the site, were mysterious "Round Grave People," whom archaeologists in Kentucky have called the oldest inhabitants ever detected there.

Folsom Men in the West, named from the place in New Mexico where their distinctive, grooved, stone weapon points first came to light, are assigned an antiquity of at

least 20,000 years by some geologists. In the East, the antiquity of people making such weapons is not yet pinned to any date, because Folsom points found in the East have been solitary objects dropped by some hunter. The Virginia camp site, which is to be studied intensively by Mr. Bushnell and Dr. Frank H. H. Roberts, Jr., of the Smithsonian staff, may yield the long hoped for evidence of Folsom points buried under layers of earth which would give geologists a clue to their eastern age.

USE OF SIGN LANGUAGE PASSING

IF AMERICAN Indians of the future want to learn their own sign language, they may have to call in Boy Scout teachers, for youngsters are now the main students keeping alive this communication system. Deploring oblivion into which Indian talk-without-talk has sunken, Robert Hofsinde, writing in *Natural History*, urges reviving signs as a simple universal language for world use. Sign language, he says, is spoken fluently in the Indian world only by a few aged Indians, now. Once, on the Plains, fifteen or twenty tribes speaking different languages conversed by signs, demonstrating the practical usefulness of universal sign talk. Using only 169 gestures, Mr. Hofsinde can tell a story that calls for about 1,000 words in English.

ARMS DEFEAT ENDANGERS CULTURE

CIVILIZED NATIONS which fall prey to Axis powers can expect the same fate that empire-builders meted to primitive natives of the jungle, is the warning sounded before the American Anthropological Association at its Philadelphia meeting in December. Emphasizing the danger to democracies of floundering amid confused thinking on issues and aims, Dr. Melville J. Herskovits, of Northwestern University, urged that anthropologists help clarify

the inner values of our culture. "A striking resemblance is to be discerned," he stated, "between the manner in which imperial governments set up their protectorates in Africa, the South Seas, and elsewhere and the methods employed in furthering the spread of totalitarian domination in Europe."

The aggressive proselytizing of a foreign power in such cases leads the attacked people to question their long cherished ideals and way of living, he added. And this is a prelude to cultural demoralization. Dr. Herskovits' advice to Americans in the present world situation is to "reaffirm the values by which we live," for our own guidance, but without insisting that they necessarily rule other folk in the world.

COPAN STAIRWAY IS RE-SET

SOLVING A heavy-weight puzzle in stone blocks from ancient America, Carnegie archaeologists have completed the re-setting of the great hieroglyphic stairway at Copan, Honduras. Rated a masterpiece of Mayan Indian architecture, this sculptured stair led up to a lofty temple, and on the sixty-two steps were inscribed the longest Mayan calendar inscription known today. The ingenious, and cautious, scientists have set the sculptured blocks in such a way that, if future research shows mistakes have been made, blocks can be shifted easily. G. Stromsvik and Frank Lee assembled the stair.

EXCAVATIONS AT JAMESTOWN

AMERICA'S VENERATED site of Jamestown, Va., heretofore belonging to historians to explain, has been taken over by archaeologists, and the result is a unique piece of scientific research, the American Anthropological Association was told at its annual meeting. Where once only the ruined brick church tower stood to show Americans a glimpse of

the first permanent English settlement in the United States, now remains of about 18 major buildings have been brought to light by excavation, J. C. Harrington, National Park Service archaeologist, reported.

Quantities of clay pipes, glass bottles, kitchen and dining ware and other actual objects used by men, women, and children in old Jamestown, are accumulating from the careful digging. Mr. Harrington is even sorting out in sequence types of articles that generations of Virginia colonists used, as the colony grew from a wooden fort in 1607 to the impressive principal town and capital of the colony. Exactly as the typical handwork of prehistoric people is used as a clue to their antiquity, so things buried in Jamestown under plowed ground can be compared with similar objects from other colonial sites. It is hoped that this will enable archaeologists to date other, less well-known settlements occupied since 1607.

EXCAVATIONS IN GALILEE URGED

WHEN ARCHAEOLOGISTS dig in northern Palestine, in the province of Galilee where Christ's ministry centered, they will unearth finds of great importance for understanding the human geography of the world Christ knew and lived in, Dr. C. C. McCown, of the Pacific School of Religion, predicted. The earth in Galilee hides innumerable items of interest, awaiting excavation, Dr. McCown told scholars of the Society for Biblical Literature and Exegesis in his presidential address at the New York meeting, reports *Science Service*. No writer in the four gospels of the New Testament provides enough data for scholars to route the complete itinerary of Christ's journeys, Dr. McCown declared. A biography of Jesus is quite impossible, he added.

Best geographer of the four gospel writers is Mark, in Dr. McCown's estimation. Mark apparently had no data for itineraries, on the early part of Jesus's ministry, and

arranged the accounts of incidents and teachings as best he could. Luke, who took the greatest interest in geography, knew little about Palestine, and one may doubt that he ever visited it, Dr. McCown concluded. Comparing the geography of Matthew, Mark, Luke, and John, Dr. McCown finds reason to believe that Christ did not extend his ministry into Samaria, Perea, Tyre, Sidon, or Jerusalem, but centered his attention mainly in the province of Galilee. This, he pointed out, is a reason for modern science to center its excavations in that region, which has been scarcely touched.

The human geography of Galilee's economic and social conditions in Christ's lifetime is of greater importance than the place geography problems, Dr. McCown emphasized. Questions which the earth may answer include these: How well off were the Jewish peasants of Galilee? Were their houses like those of the modern Arab peasant? How extensive was the Jewish population? What cities and villages were gentile and what Jewish? How extensive was foreign trade? Were the Greek and Roman connections more important than the Mesopotamian influence? "Once it is agreed that the history of first-century Judaism and Christianity has a tremendous stake in Galilee, these problems become of greatest interest," said Dr. McCown.

INDIAN PLACE NAMES NOT POETIC?

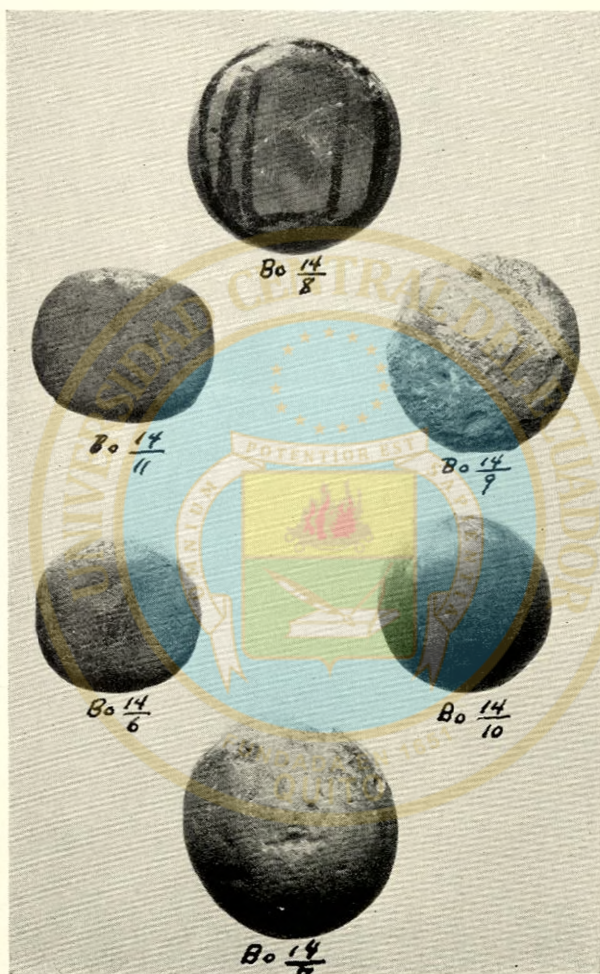
OUR INDIAN place names are not so poetic, after all, because red men who named rivers and mountains were pretty matter-of-fact about it, reports Dr. John P. Harrington, of the Smithsonian Institution, and member of the board of the School of American Research, who has been conferring with elderly Delaware Indians in Oklahoma to get at the real truth about such rippling names as Susquehanna and Chesapeake. Susquehanna means simply muddy river, Dr. Harrington concludes. Monongahela means caving banks. Chesapeake means salt bay. Rappa-

hannock means some sort of "place on a river." The first two syllables stumped Delawares helping explain the names. The Potomac, where the nation's capital stands, means resting place, or the place where one lays down a load. This, Dr. Harrington points out, is almost the opposite of previous translations, which held that Potomac meant carrying place, or center for trading. Ancestors of Delawares, living in the mid-Atlantic coastal area, spoke a language enough like that of Maryland and Virginia Indians so that conversation could have been carried on, though with some difficulty. By aid of Delawares, he believes it will be possible to reproduce partially a language similar to the now-dead language spoken by Pocahontas.

FOREIGN BIRDS FOR SMITHSONIAN

FROM Indo-China has come a large collection of birds for the Smithsonian Institution. They were obtained by Dr. Joseph F. Rock, well-known American scientist-explorer, who has worked for many years in western China. When the war made conditions too difficult for further operations, he shifted his base into Indo-China, which now is also menaced. In the new collection are many large birds, which earlier collectors did not like to handle, because of the difficulty of preparing and transporting large specimens through the wild country. Prize specimens are three giant ibis, a large gray wading bird.

The Smithsonian has also received about 1,000 bird specimens from the state of Vera Cruz, Mexico, collected by M. A. Carriker, former associate curator of birds at the Philadelphia Academy of Natural Sciences. Under the auspices of the U. S. National Museum, Mr. Carriker continued the collecting work in this region started last winter by Dr. Alexander Wetmore.



THE SIX GAME PIECES FROM OTOWI

