

sions make it clear that the abstract specimens are similar representations. (4) There is archaeological evidence that the same motif was widespread in the deserts of Southern California. (5) There is ethnographic evidence that at least at times the symbol was used in several ways in connection with the initiations of young girls. The effigies actually represented the female organ and were believed to be an insurance against harm and efficacious in promoting safe and easy childbirth.

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## RUBBINGS FROM CHAVÍN DE HUÁNTAR, PERU

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### ABSTRACT

The inked-roller technique used to obtain "surface prints" of Chavín carvings, many of which have been discovered only recently, is described, and twelve prints or rubbings of these carvings and one of the Raimondi stela are illustrated.

THE RUINS OF Chavín de Huántar are in a narrow valley of the Peruvian Highlands just east of the Cordillera Blanca (Figs. 1, 2). They are accessible by gravel road from the town of Recuay in the Callejón de Huaylas.



FIG. 2 [AYRES]. Telephoto view of the Castillo at Chavín de Huántar. Visiting school children are scrambling over the ruins. The "condor slab" shown in Figures 3-6 is in the center foreground in front of the stairway flanked by carved round columns. The "millstone" shown in Figures 7 and 9 is to the right on the same level excavated area.

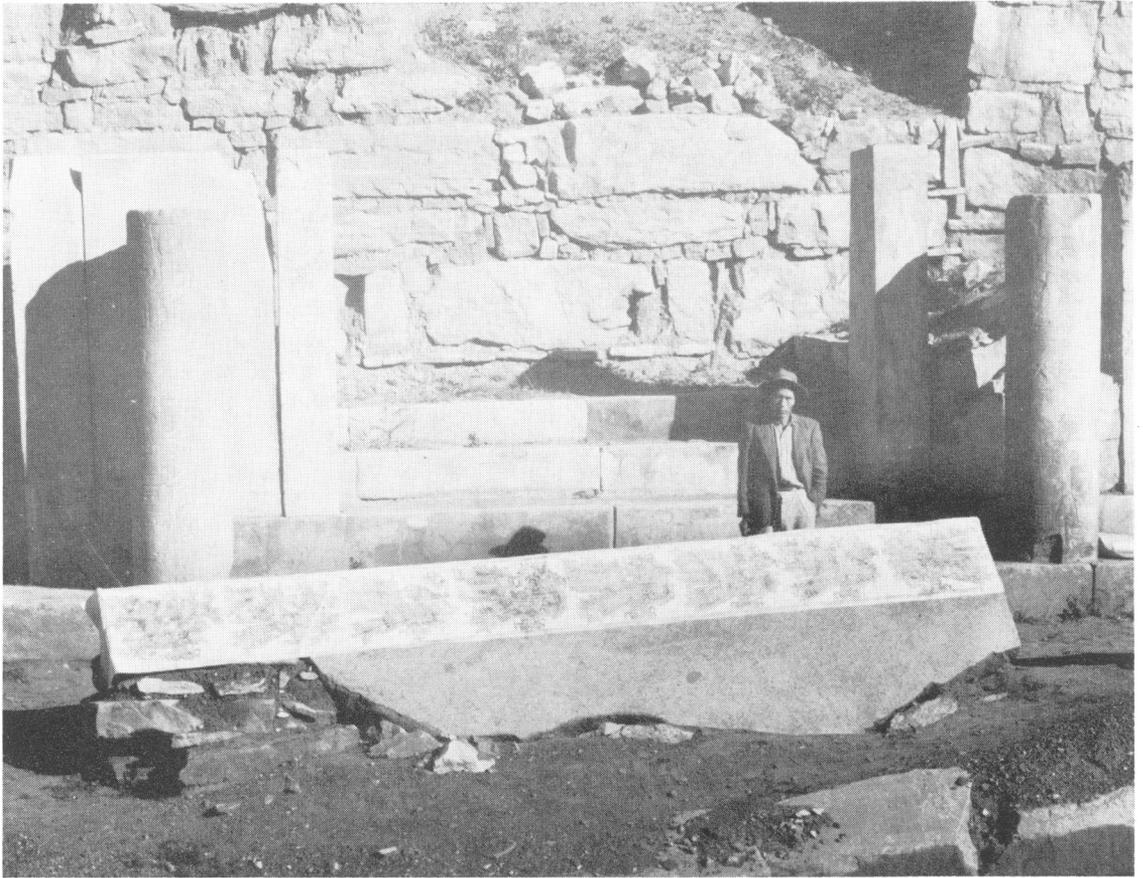


FIG. 3 [AYRES]. Granite "condor slab" showing a rubbing of the eight condors still in place. See Figure 2 for location of the slab in relation to the Castillo. The eight condors are numbered from left to right. The slab is broken through Number 2. Numbers 1 and 8 are different from each other and from all the rest. The remaining six are in pairs of substantially identical condors, Numbers 2 and 3, Numbers 4 (Fig. 4) and 5 (Fig. 5), Numbers 6 (Fig. 6) and 7. The carved round columns just behind the slab were excavated in 1955. Efforts to take surface prints of these columns were only partially successful. Results similar to those obtained for the condor slab were achieved for about half of each column. The remaining portions of the column are so roughened by weathering that prints by the inked roller method are illegible.

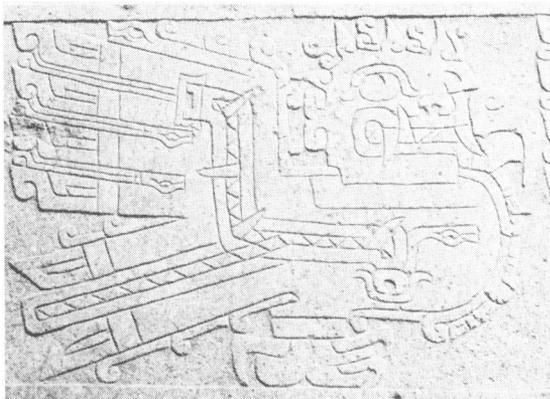


FIG. 4 [AYRES]. Photograph of condor Number 4 on the slab in Figure 3.

I happened to visit the site while on a mountaineering expedition in the Cordillera Blanca in 1958 and was greatly impressed by the stone carvings which are there (Bennett 1942). Some of these have been excavated only within the last six years. The highly stylized designs are, for the most part, incised on polished stone surfaces which are either flat or cylindrical in shape. The relief is on two levels only, the flat-surfaced figures themselves, and the background which is cut away to a depth of about 1/16 to 1/8 inch. For these reasons, the designs are very well adapted to duplication by the "rubbing" technique, particularly since the paper can be fitted to the stone surfaces with little or no distortion (Figs. 3-15, 17, 18, compare Fig. 16).

Although "rubbing" is the term often applied to this method of duplication, it seems hardly descriptive of the procedure actually used. There are at least three

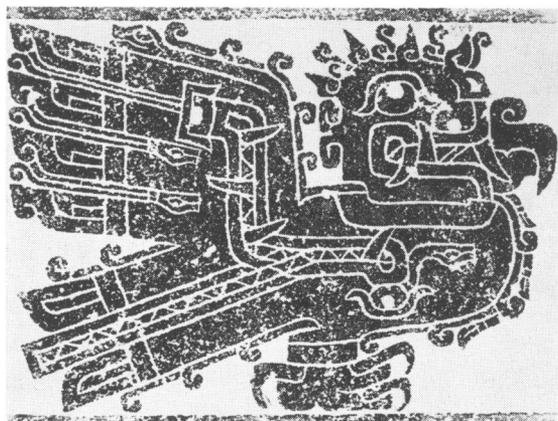


FIG. 5 [AYRES]. Rubbing of condor Number 5 on the slab in Figure 3.

variations of the technique. In China, an inked-pad procedure has been practiced for many centuries. Descriptions of the method have been published in English in several sources (Sickman 1937; Roberts 1938; MacAgy 1955). A sheet of thin, tough paper is placed over the surface, moistened with water and tapped gently with a clean, soft pad until the paper stretches and conforms to the raised and depressed sections of the relief. When nearly dry, the paper is tapped repeatedly with an inked pad. This controlled tapping transfers ink to the paper surface and a faithful replica of the underlying design appears.

In another method (Frassetto 1960), a water-soluble ink is applied directly to the surface of the carving. The paper is then stretched over the pre-inked relief and a moistened sponge is used to "bleed" the ink through the paper. After the duplication is completed the ink is washed from the stone surface.

In a third method (Hedden 1958), the ink is applied with a hand roller, or brayer, to either a paper sheet or a cloth stretched over the clean stone surface. This

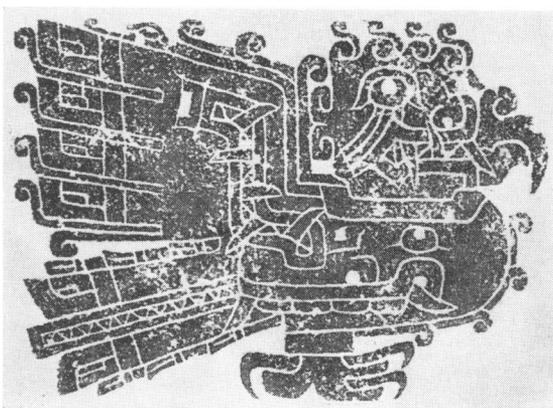


FIG. 6 [AYRES]. Rubbing of condor Number 6 on the slab in Figure 3.

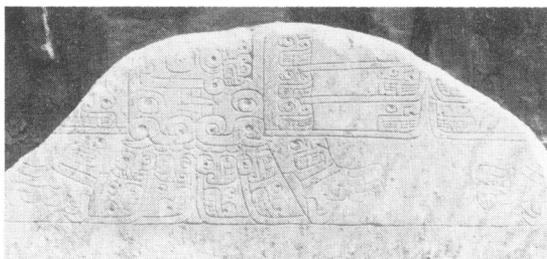


FIG. 7 [AYRES]. Photograph of carving on the "millstone." This carving has been largely destroyed by recent efforts to make it into a millstone. See Figure 9, lower, for rubbing.

method appeared to me to be best adapted for use with the Chavín carvings.

When I returned to the site in 1959 and again in 1960, I took with me the rather simple equipment for making rubbings or surface prints by the inked-roller method. I followed substantially the procedure described by Hedden (1958) and used the following items: (1) paper, Webril EM231 non-woven fabric; (2) hand roller, a 6-inch printer's brayer of soft rubber called a sleeve-type cushion-rubber roller; (3) ink, several small tubes of black oil-base printer's ink of the type supplied for

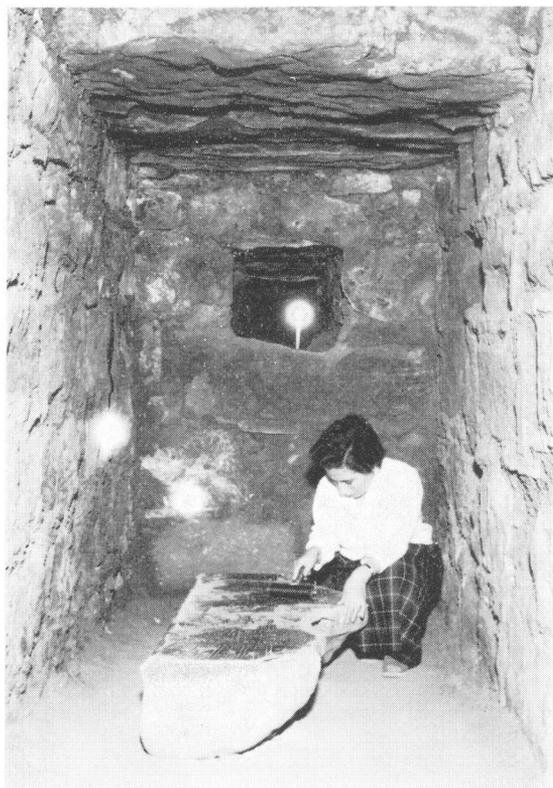


FIG. 8 [AYRES]. Preparing a rubbing by candlelight inside the Castillo. See Figure 9, upper, for rubbing. Electric lights were installed in 1961.

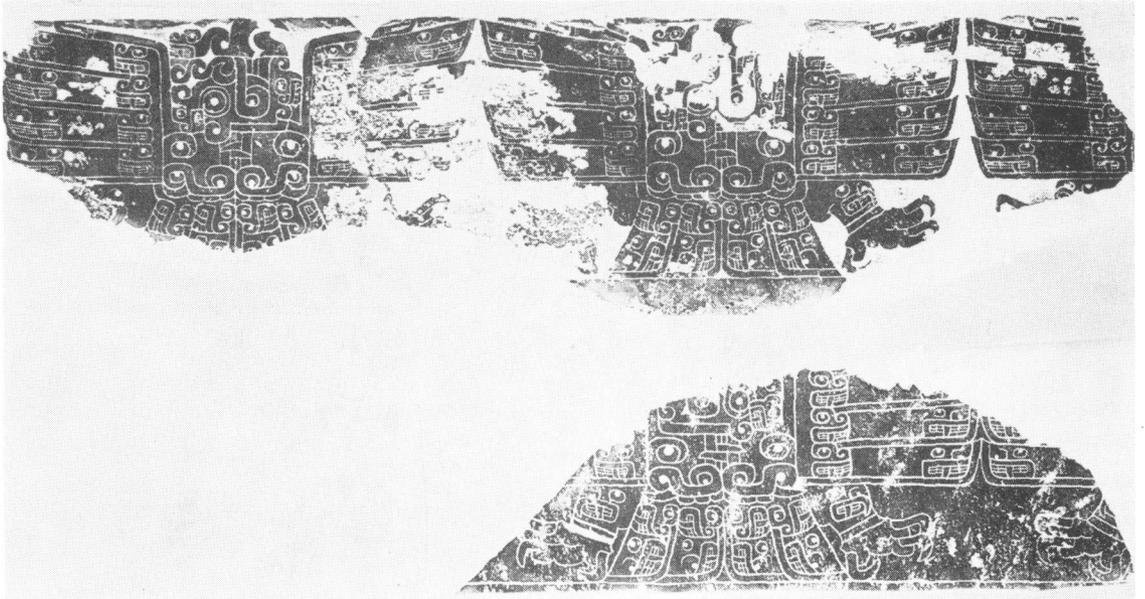


FIG. 9 [AYRES]. Rubbings of comparable carvings. Upper, the rubbing shown being prepared in Figure 8; the small rectangular pattern in the upper corner of the left wing of the nearly complete figure is the print of a razor blade (used for trimming the paper) accidentally left on the stone in the dim candlelight. Lower, rubbing of the carved fragment remaining on the "millstone" in Figure 7.

linoleum-block work; (4) a sheet of 1/8-inch thick hardboard (Masonite) about 14 inches by 20 inches for inking the roller; (5) a roll of industrial tape (Texcel Acetate Fibre) for securing the paper to the stone surface; (6) a small screw-top polyethylene bottle containing solvent such as ordinary kerosene for cleaning the hardboard and roller after use; (7) several rolls of toilet paper for wiping the ink and solvent from the brayer and hardboard. The rubber brayer is preferable to the less ex-

pensive gelatin rollers which are easily damaged by water and by the heat of the sun.

To make a print, a sheet of paper of suitable size is stretched smoothly over the surface and held in place by numerous pieces of tape attached around the edges. A small amount of ink is squeezed from a tube onto the hardboard. The roller is then passed over the surface of the board repeatedly until the rubber surface has a uniform, thin coating of ink. After the completion of one stroke, it is better to lift the roller and return it to



FIG. 10 [AYRES]. Rubbing of a carved stone stored in the Castillo.

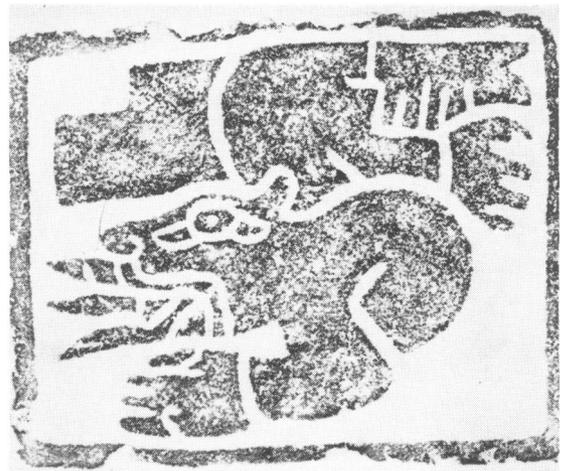


FIG. 11 [AYRES]. Rubbing of a carved stone stored in the Castillo. The stone is about 18 inches square.

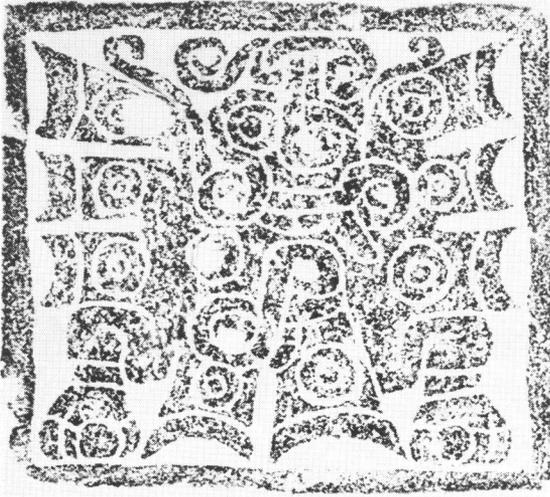


FIG. 12 [AYRES]. Rubbing of a carved stone stored in the Castillo. The stone is about 18 inches square.

the other end of the board for the start of the next stroke. If the roller is simply passed back and forth in continuous contact with the board, the ink is spread much less effectively. The direction of the strokes is also varied at random.

It is advisable now to remove most of the ink from the two extreme ends of the roller. Otherwise two fine, parallel lines are liable to be imprinted on the paper by the slight excess of ink which has accumulated on the end surfaces of the roller during the coating process. One way to do this is to make several strokes of the

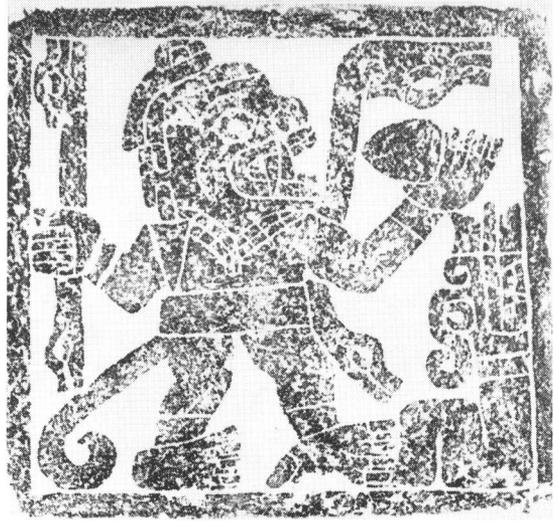


FIG. 14 [AYRES]. Rubbing of a carved stone stored in the Castillo. The stone is about 18 inches square.

roller on a sheet of old newspaper, with the roller tilted up at about  $45^\circ$  so that only the tip end of the cylinder is in contact with the paper. This blots off the excess ink at the end. The process is repeated for the other end of the roller.

The inked brayer is now rolled carefully over the paper. The ink impression appears only on those areas of the paper which are backed by the high portions of the design. The remainder of the paper remains white. At the first stroke the design appears as dark gray. This is gradually built up to jet black (Fig. 3) by repeated passes, inking the roller whenever necessary. If an attempt is made to speed up the process by using a more heavily inked roller, the result is likely to be a smudgy, non-uniform print. The finished reproduction may be removed almost at once, but it should not be rolled



FIG. 13 [AYRES]. Rubbing of a carved stone stored in the Castillo. The stone is about 18 inches square.



FIG. 15 [AYRES]. Rubbing of a carved stone stored in the Castillo. Compare Bennett 1942, Fig. 30. The stone is about  $19\frac{1}{2}$  inches wide.

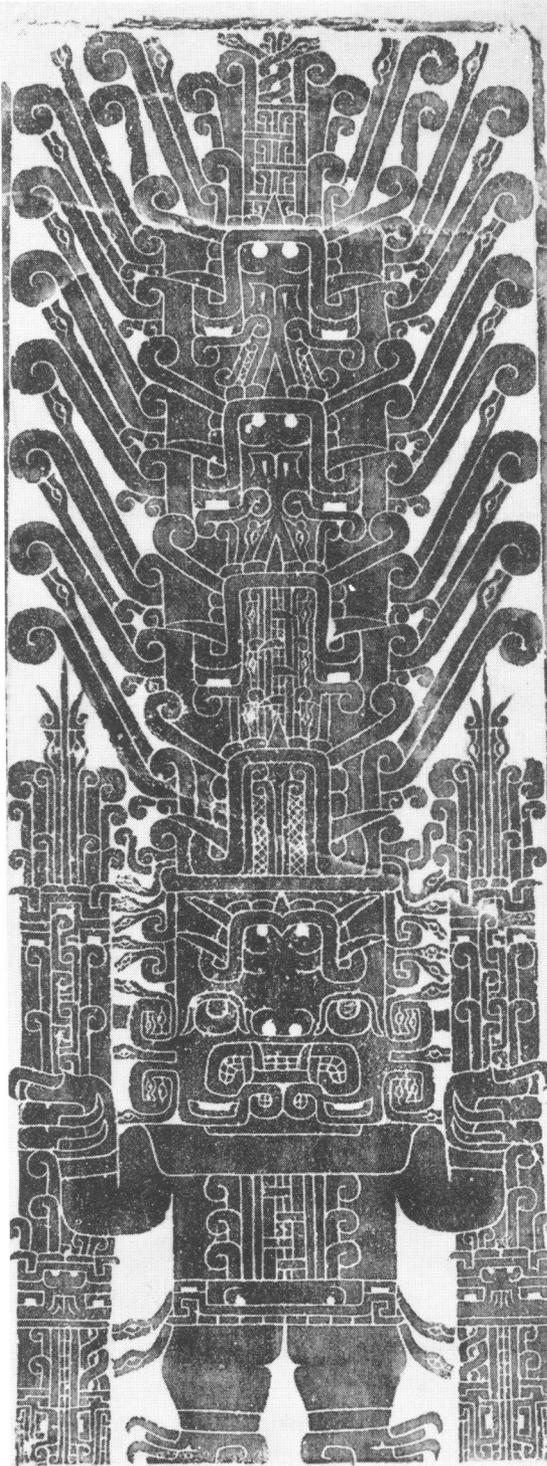


FIG. 16 [AYRES]. Rubbing of the well-known Raimondi stela, now in the Museum of Archaeology and Anthropology in Lima. This rubbing of an unweathered surface shows much more detail than do those of the weathered stones from Chavín. The figure is 75 inches high. The

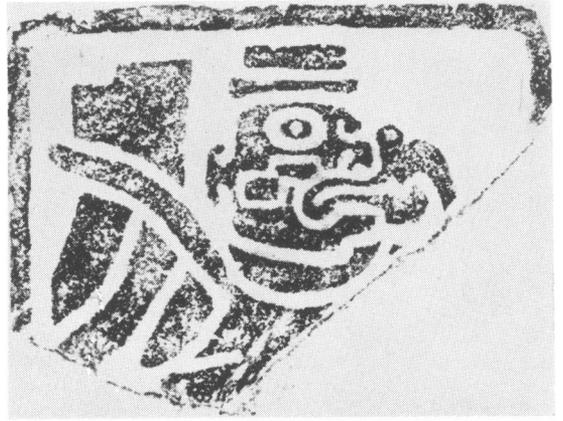


FIG. 17 [AYRES]. Rubbing of a carved stone fragment stored in the Castillo. Original was probably about 18 inches square.

tightly for half an hour or so because there is some danger that the undried ink may smudge slightly.

One of the carved slabs at Chavín is 16 feet long (Fig. 3). It is evident that, on a windy day, the operator has little chance of keeping that much paper under control. My wife and I spent a total of seven days at the ruins. We began work in the quiet morning before it was fully light and were usually forced to stop at about 9:30 to 10:00 a.m. by rising wind. There are several smaller slabs and fragments inside the galleries of the Castillo (Figs. 10-15, 17, 18) the great stone structure which is the dominating feature of the ruins (Fig. 2). Here, of course, work may be continued independently of the outside weather. Several candles are necessary to provide sufficient light (Fig. 8). The interior galleries and rooms of the Castillo are totally dark.

*Acknowledgments.* The necessary permits for the work were obtained from the Ministry of Education in Lima, Peru. The archaeologist in charge at Chavín, Marino Gonzales, and his assistant were very cooperative and even took the time to help with some of the rubbings. I am indebted to James Haseltine of Portland, Oregon, who first demonstrated to me the possibilities of the inked roller technique. Haseltine has used the process extensively in making prints of Indian petroglyphs which occur on rock surfaces in the Columbia River Gorge.

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fracture lines record a recent Lima earthquake which toppled the stela. This rubbing was made through the courtesy of Jorge Muelle, Director of the Museum.

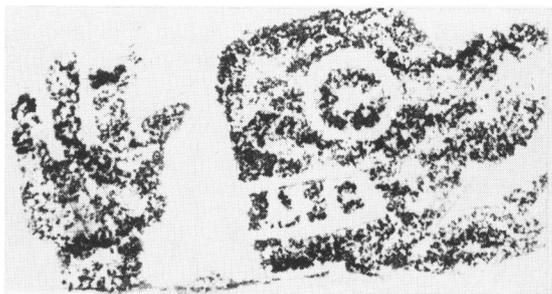


FIG. 18 [AYRES]. Rubbing of a carved stone fragment stored in the Castillo. Compare Bennett, Fig. 12. The stone is about 16 inches wide.

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Portland, Ore.  
May, 1961

### ANNOUNCEMENT OF THE 27TH ANNUAL MEETING

The 27th Annual Meeting of the Society for American Archaeology will be held on the campus of the University of Arizona, Tucson, May 3, 4, 5, 1962. William W. Wasley is Chairman of the Program Committee, and Raymond H. Thompson, Chairman of the Local Arrangements Committee. The program will consist of five symposia, topical and areal sessions of contributed papers, and field trips. Topics of the symposia are Hohokam archaeology in 1962 (plenary session), tree-ring dating throughout the world (sponsored by the Tree-Ring Society), history of metallurgy in Nuclear America, archaeological progress in the Intermediate Area, and problems of administration of emergency archaeology programs.

The deadline for all papers is February 1, 1962. The following information must be supplied the Chairman of the Program Committee by that date: title, abstract of not more than 100 words, type of slides or other illustrative material, full details on projection equipment necessary, map and artifact display requirements, and any other special needs. Maximum time for contributed papers is 20 minutes. The abstracts will be reproduced and distributed with the program. Address all communications concerning the program to William W. Wasley, Arizona State Museum, University of Arizona, Tucson, Arizona. Note that no papers will be accepted for the program of the 27th Annual Meeting after February 1, 1962.

The Pioneer Hotel will serve as headquarters for the meeting. Reservations for rooms must be made directly with hotels and motels in Tucson. Further details on housing will be supplied by mail at a later date. The 28th Annual Meeting will be held at the University of Colorado, Boulder, Colorado, May, 1963.

An International Conference on Palynology will be held at the University of Arizona, April 23-27, 1962. The formal program will include a session on pollen problems in prehistory and archaeology. After the Conference there will be a field trip to visit southwestern archaeological sites and Pleistocene pluvial lakes studied by pollen stratigraphy. The purpose of the trip is to demonstrate the application of pollen stratigraphy in the study of alluvial sediments containing cultural remains and to indicate the late Pleistocene record of climatic and environmental change revealed through pollen analysis. The itinerary includes the following points of interest: the Double Adobe site, the Sulphur Spring Valley, the Willcox Playa, and Little Ortega Lake in Arizona; and Rich Lake, Arch Lake, the San Jon site, and the San Agustin Plains in west Texas and New Mexico. The trip will leave Tucson the morning of April 28 and return the evening of May 2. Interested members and friends of the Society for American Archaeology are invited to join the field trip. For further information contact Paul S. Martin (Geochronology Laboratories, University of Arizona, Tucson, Arizona) or Fred Wendorf (Museum of New Mexico, Santa Fe, New Mexico) before February 1, 1962.