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THE PREHISTORIC PROJECT

Robert J. Braidwood, Field Director

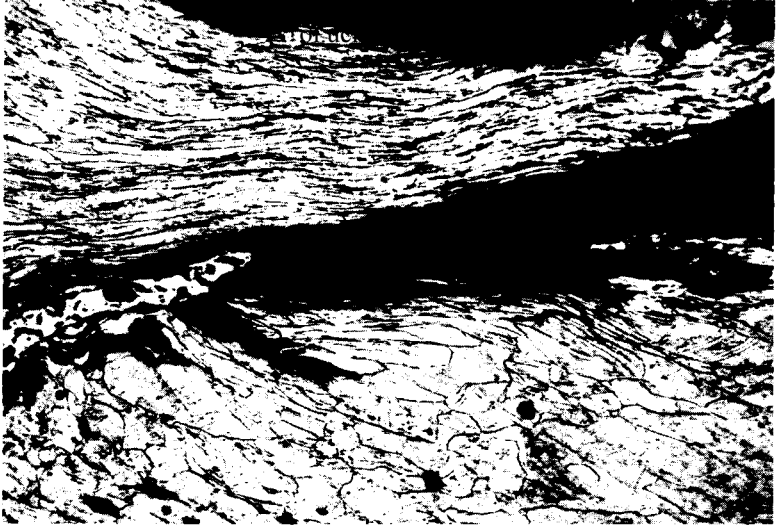
The Joint Prehistoric Project of the Prehistory Department of Istanbul University and the Oriental Institute has not undertaken field excavations since the 1963–64 season. With luck, we hope to resume work at the site of Çayönü, in southeastern Turkey, in the autumn of 1967.

The American senior staff, Bruce Howe, Linda Braidwood, and Robert J. Braidwood, as in March of 1965, joined the Turkish co-director, Halet Çambel, for the processing of the Çayönü materials in the prehistory laboratory in Istanbul University in March of 1966. A grant-in-aid from the Wenner-Gren Foundation for Anthropological Research allowed the four of us to make a tour of prehistoric sites and museum materials in Lebanon, Syria, Iraq, and Iran.

Work on materials acquired in earlier field seasons in Iraq and Iran has also gone forward in the prehistory laboratory in the Oriental Institute. A difficulty with the slow and detailed processing and interpretation of this material is that our best graduate students hold fellowships pointed toward rapid advancement in their formal academic requirements, leaving them little time for the jobs which detailed processing involves. Fortunately, Mrs. Richard C. Haines has joined the laboratory staff.

There is little enough yet to report on the processing of the Çayönü materials in Istanbul save for the studies undertaken on the metal objects. The Çayönü metals were examined by the Arbeitsgemeinschaft für Metallurgie des Altertums in Stuttgart, Germany. There is now no doubt that we do have to do with worked native copper at Çayönü. One microphotograph shows particularly well the flattened and elongated crystals of copper which resulted from the purposeful hammering of the object during its manufacture. Hence, at *ca.* 7000 B.C., the people of Çayönü were taking advantage of a unique property of metal, hitherto unutilized, the property of ductibility.

The reports of the colleagues on the natural sciences team are beginning to come in. Dr. Barbara Lawrence of the Museum of Comparative Zoology at Harvard reports the presence of the bones



Microphotograph of a polished surface of the reamer from Çayönü showing, especially on top, the elongated crystalline structure which results from hammering of native copper.

of at least domesticated goats, sheep, and dogs. Professor Jack R. Harlan of Oklahoma State University has, so far, processed few of the impressions of grain in clay lumps, and will now go only so far as to say that the people of Çayönü had access to glume wheats—but whether wild or domestic, he is not yet certain.

Harlan has, however, reported on some experiments with stands of still wild einkorn wheat from the Çayönü region. A single (inexperienced) man may gather over four pounds of the grain, with a flint sickle, in one hour. This thrashed out to two pounds of clean grain, in a wooden mortar and pestle. Chemical analysis showed the grain to be highly nutritious, containing some 24 per cent protein, in contrast to 14 per cent in modern bread wheat. Harlan estimates that an experienced prehistoric family, working for the three weeks of a normal harvest, could probably have acquired about a ton of clean grain equivalent.

The second botanical colleague, Professor Robert Stewart of Parsons College, believes he may be on to a new botanical discipline as the result of his Çayönü studies, "archeophytopathology." His microscopic studies are yielding traces of the plagues and blights to which the prehistoric cereals in the Çayönü clay lumps seem to have been subject.

The geographical colleague, Professor Marvin R. Mikesell of the University of Chicago, now believes he can estimate the gen-

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eral nature of the arboreal vegetation of the prehistoric Çayönü region. In Mikesell's opinion, there was an open stand of deciduous oaks, with relatively little shade in a general sense, so that clearance for cereal planting was not at first a great issue. The preliminary reports on the fossil pollens from lakes and marshes in both Iran and Turkey by Professor Herbert E. Wright, Jr., of the University of Minnesota and Dr. Willem van Zeist of the Biologisch-Archaeologisch Instituut of Groningen, the Netherlands, are not yet in hand. The pollen analyses will, we assume, complement Mikesell's studies. So may also the study by Dr. Robert Megard, also of Minnesota, of the microscopic animal life of these lakes and swamps, the traces of which came to be embedded on the lake bottoms along with the fossil pollen.

This sketch of work in progress emphasizes how much time and effort—and good will of colleagues—it takes to make the results of a short field season really meaningful.