

## Two Mammoth sites in La Alta Mixteca (Oaxaca), México

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Since the beginning of this century, paleontologists were interested by the abundance of fossils of different ages found in Southwestern Mexico. Our area of study is the Teposcolula District in La Alta Mixteca (Oaxaca). This area is a complex system of valley-lakes that extends from the Neovolcanic Plateau into Guatemala, with a rich fossil record of Pleistocene age. One of the lakes lasted from the Pleistocene until the XVI century, as it can be seen in a painting in the Convent of San Pedro and San Pablo, in the town of Teposcolula.

The deformation of sedimentary rocks and of the Precambrian basement gave origin to a structural depression that formed an endorheic basin, in which continental sediments of the Tertiary were deposited. The volcanic activity stopped in the Upper Pleistocene, after having caused a new physiographic rejuvenation. The igneous rocks dispersed in the area building up a hydrologic barrier that fractionated the vast Mixteca Basin into sub-basins. The Quaternary deposits consist basically in fills of the valley (crushed stone), and in lacustrine deposits.

Two areas of the District of Teposcolula attracted our attention: the towns of San Felipe Ixtapa and of La Trinidad Vista Hermosa. In the first, there is a group of footprints that belong to different Pleistocene-early Holocene animals

such as mammoths, camelids, bison, deer, horses and small mammals such as rabbits. On the same rocks human footprints were detected. There are also petroglyphs that represent some of these animals and some bones disturbed by erosion.

During the survey, we were able to find fossil remains of camelids, deer, bison and horses, but not of mammoth. In the area we also discovered much flint lithic material (both waste products and projectile points).

In the second site, bones were found and collected by fieldworkers during their traditional “*Tequio*”. They later invited us to work on their findings. All over, two mammoth bones and two molars were discovered, partially destroyed by the stream that crosses the town. In the last day of our survey, the rain uncovered the proximal end of a mammoth tusk and part of the skull of a young specimen.

The area can provide important information on the micro-environments that determined the seasonal movements of the first human populations, particularly if we analyse the mammoth bones (enamel growth, trace elements, etc.), and correlate them with the micropaleoenvironmental evidence and resources availability during the Upper Pleistocene. This will hopefully allow the formulation of new hypotheses on the early human peopling of the Americas.