

Introduction

When I first assimilated the need for a complete *corpus* of Chiquihuite Cave lithic artefacts¹, I thought of it in terms of a “home-made” instrument meant for an “in-house” use. Today, this catalogue is still “home-made”, but meant for a more global use. The following more than 1300 pages — the fruit of eighteen months of work during the COVID-19 pandemic (2020-2021) — contain a detailed database of Pleistocene-aged stone artefacts excavated from the stratified, dated deposits at the remarkable, central-northern Mexican prehistoric site.

This visual and descriptive guide should not be perceived as a definitive academic publication, but as an everyday-use manual, something to have at hand when Chiquihuite Cave and its cultural-chronological implications come up in discussions or when analogies seem to appear among tools still to be excavated from ancient sites across the Americas in the future. The reader should neither expect in-depth scientific analyses and functional assessments: this is only a reference collection database. Specialized studies (such as use-wear analyses, additional raw material petrography, etc.) are rather the concern of future academic articles, already in preparation at the moment of termination of this volume. The entire amount of work invested in this book (measurements, taxonomy, analysis, descriptions, photography, final illustrations, etc.) was done by myself alone, principally because of the fierce restrictions about face-to-face work imposed by the pandemic. Consequently, all flaws and mistakes should only be imputed to me alone, and to nobody else.

The original publication in *Nature* (Ardelean et al., 2020) caused a widespread, international stir, with a lot of different hues, aggressive reactions, manifestations of skepticism and doubts raised about the artificial origin of the items we had published back then. At some point, I decided to pay attention to some of those voices, and let myself adhere somehow to that skepticism (partially). As a result, I proceeded to a complete and thorough re-evaluation of the entire lithic assemblage, starting with the collection excavated in the main trench X-12 (excavated in 2015-2017 and the core of the 2020 publication). After six months of arduous effort and piece-by-piece re-evaluations, I reached the conclusion that, indeed, perhaps, not all those specimens provided arguments strong enough in favor of their human origin; or at least not strong enough to be successfully appreciated in published illustrations. In *Nature*, we had reported 1930 stone artefacts from excavation X-12 alone. After the re-assessment I performed, less than half of those specimens were selected to become part of the principal collection reported here. A tone of skepticism of my own can still be detected in the description of several items included in this database: perhaps, an indicator of the subliminal need for objectivity. This does not mean the other stone items from Chiquihuite are not artefacts. They have only been stored separately and set aside temporarily, until a new re-evaluation and future publications will do them justice.

At the end of this process, the main Chiquihuite collection is composed today of 1139 artefacts, plus four additional items recovered in the 2011-2012 initial works — all depicted in this first catalogue. Of the total amount of 1139 artefacts from the 2015-2019 excavations, only 63.56 percent (n=724) were discovered in dig unit X-12. Subsequently, new lithic tools and

¹ In the English-speaking academic literature, human-made objects are referred to either as *artefacts* or *artifacts*. The first spelling is more common in British and European writings, while the second is more characteristic to American authors. This book respects both spellings, as they also reflect our diversity.

debitage (flaking debris) joined the assemblage: 35.30 percent (n=402) came from excavation X-16 (on January-February 2019), and the remnant small percentage corresponds to the 13 tools found in the small test pit X-17 (February 2019). As of their relative antiquity (regardless of their spatial provenience), 980 artefacts (86.04%) belong to the “younger” stratigraphic component B (SC-B, dating roughly between 12,500–17,000 calBP²), whilst only 159 specimens (13.96% of the total) belong to component C (SC-C), dating to the Last Glacial Maximum (LGM) or before (Ardelean et al., 2020, 2022; Becerra-Valdivia and Higham, 2020). The small count of anthropic objects at the cave, when compared to its very long chronology, probably suggests sporadic and very brief occupational episodes, seemingly linked to very wide migration circles spanning over vast territories, with human groups only returning to Chiquihuite every few years or after decades, leaving behind scant indicators of their presence.

The advantages of a complete (and mainly digital) catalogue like this are undeniable. No scientific journal or average book would ever grant the space and editorial capacity to include the thousands of illustrations required to reveal the complete list of artefacts from a given lithic assemblage. Presenting it as an open-access document (basically, a free-distribution PDF) eliminates the financial barriers and allows any person in the world to judge by themselves, without having to pay for expensive subscriptions or prohibitive book prices. Such an approach is indispensable when the goal is to facilitate global access and consolidate the validity of the site as one of the oldest Last Glacial Maximum human occupation localities in the Americas.

Readers may disagree with my interpretations of the technology visible in the Chiquihuite assemblage or with the functional interpretation of tools. The taxonomic categories should be taken lightly, as non-definitve and permeable, with artefacts eager to belong to more than one taxon at a time or moving between taxa after each re-analysis. However, a strictly morpho-technical analysis (meaning, avoiding functional interpretations) would not have been entirely a good option, considering that the skepticism generated after the *Nature* paper was somehow indirectly — and at least partially — caused by our initial decision to avoid any cultural analogies and functional statements, generating the impressions that we did not know how to explain the use of the tools. Before aiming at establishing connections with other known archaeological complexes, the main goal here is to convince the world that Chiquihuite lithics are legitimate human-made artefacts. However, experience teaches us that, when artefacts are of unfamiliar aspect, readers are less eager to acknowledge and accept their artificial nature, unless the archaeologist who has the artefacts spread out on the table is successful in pointing at the relevant features of the object and in guiding the skeptics’ eyes towards comprehension. Under this optic, daring functional assumptions about tools (with labels like “point”, “backed knife”, “scraper”, etc.) are necessary, at least as working hypotheses and guiding suggestions. An excess of caution is often interpreted as an agnostic posture framed by confusion.

Each specimen in this catalogue comes with a typified table containing contextual and metric information, such as: date of discovery, excavation (trench) number, square and sub-square (e.g. M4-NW), depth range and/or precise depth measurement (always referred to the site’s datum, never ‘below surface’), UTM geographic coordinates, stratigraphic unit (or stratum, layer), the stratigraphic component (whether B or C), but also the item’s maximum length, width and thickness values (expressed in millimeters), as well as its weight (in grams).

² Calibrated (calendric) years before present, as opposed to radiocarbon years before present (RCYBP)

Finally, the before-last column contains a code for the raw material, but this aspect is always better detailed in the subsequent description. Each artefact contains such a descriptive (but also analytical) text, sometimes very brief, sometimes fairly long — a variation entirely dependent on my own capacity to “squeeze” morphological and technological “juices” from each object. Often, readers may notice certain repetition or redundancy in the formulation of these descriptions. This apparent flaw is intentional, because the catalogue is prepared to be utilized in a modular manner: some users may simply want to save or print specific chapters or only certain pages, so the content of each entry is meant to be independent and self-sufficient. Also — as probably understood from the *Preface* above — the apparent repetition of images is an attempt to provide the best views of relevant features by sensitive movements under angular light, an attempt to replicate a tridimensional manipulation of the piece.

In this catalogue, photographs have no captions. The written descriptions should be more than sufficient for those who have a minimal knowledge of lithic technologies to understand the features emphasized in each illustration. This book is not intended as a manual of introduction to lithics, but as a supporting material for proving the human origin of the finds; an instrument against skeptics. Yet, a couple of terminological clarifications are crucial. In our understanding of archaeological concepts, an *artefact* is any object produced by or involved in a human activity, no matter how extensively human agency manifests in its morphology. Not only projectile points are artefacts: a flake extracted from a core and immediately discarded is an artefact, and so is a simple rock picked up from the side of the road to smash bones or nuts. They both might bear indicators on their surfaces that testify of their involvement in human activities. On the other hand, a *tool* (stone tool, in this case) is an artefact that has been at least minimally adapted and utilized for specific tasks that can be identified to a certain level of precision: a flake retouched and used as a cutting tool, a flake modified to become a scraper, a simple point manufactured by retouching a blade, a pebble employed as a stone hammer for making other tools, and so on. All tools are artefacts, but not all artefacts are actual tools. Whatever the case, human hands underlay the origins of both.

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C.F.A. 