



The earth goddess Tlaltecuhli monolith from ca. 1486-1502 CE.

The Great Temple Project: In Search of the Sacred Precinct of Mexico-Tenochtitlan

大神庙项目：找寻墨西哥特诺奇蒂特兰城的圣域

Leonardo López Luján (Mexico's National Institute of Anthropology and History)

列奥纳多·洛佩斯·卢汉 (墨西哥国家人类学与历史研究所)

The archaeology of Mexico-Tenochtitlan occupies a very unique place in the field of Mesoamerican studies. Constrained by its circumstances, it faces the same kind of challenges as archaeology in Rome, Jerusalem, Istanbul, Alexandria, and other settlements of the ancient world whose remains lie buried beneath a modern metropolis. In order to study the Mexica (Aztec) imperial capital, one must overcome the enormous obstacles presented by Mexico City, one of the largest demographic concentrations on our planet in the twenty-first century. The problem is compounded every day as the growth rate of the urban area increases at a dizzying pace. Thus Mexico-Tenochtitlan, along with its contemporaneous surrounding lakeside communities, has been buried nearly irretrievably under tons of asphalt and concrete.

The fundamental problem, however, does not stem from the disproportionate expansion of the current city limits, but rather from the particularities of the Historic Center in the heart of the sprawling metropolis. This area contains the most artistically and historically rich monumental complex in all of the Americas, where buildings of exceptional quality coexist in their diversity of Baroque, Neoclassic, Porfirian, Art Nouveau, Art Deco, and Neocolonial

特诺奇蒂特兰城考古在中美洲研究中占据着独一无二的地位。由于周边环境的限制，这里的考古工作与其它埋藏在现代大都市之下的古代聚落，如罗马、耶路撒冷、伊斯坦布尔、亚历山大港等一样，面临着相同的挑战。为了研究墨西哥（阿兹特克）帝国的都城，研究者必须克服现代墨西哥城所造成的大量障碍，而这座城市是 21 世纪人口密度最高的城市之一。随着城区范围的急速增长，这一问题也变得越来越突出。因此，特诺奇蒂特兰城以及同时期环绕在其四周的湖边社区，都不可挽回地覆盖在数吨沥青和混凝土之下。不过，根本的问题并不是现代城市范围无节制的扩张，而是历史上的中心区域恰好与现代都市的核心位置相重叠。这一区域包含了整个美洲最富艺术和历史价值的纪念性建筑群，各种品质卓越、风格各异的建筑在这里共存，包括巴洛克、新古典主义、波费里奥、新艺术、装饰艺术及新殖民主义等风格。这种状况使得



The Great Temple archaeological zone and museum in downtown Mexico City.

(Photo: K. Garrett, courtesy Great Temple Project)

styles. Such a context gives rise to the paradox that any ambitious attempt to recover the material remains of Mexico-Tenochtitlan and reconstruct the history of its inhabitants implies sacrificing an essential part of the colonial heritage and that of the nineteenth and twentieth centuries.

A proven method of avoiding such obstacles is to pursue subterranean explorations that enable the study of the deepest archaeological levels without altering the monuments on the surface. But these types of excavations are practically unimaginable in the Historic Center of Mexico City for two simple reasons: on the one hand, the subsoil of the ancient lake basin is extremely unstable as it consists of compressible clays and is subject to the indiscriminate exploitation of its groundwater to satisfy the demands of the present population, and on the other, the Historic Center has a difficult subsoil to penetrate given the existence of a high water table and thick layers of cement foundations crisscrossed by anarchic networks of potable water, drainage, and electrical lines.

As if this were not enough, immediately below this substrata are located the oldest levels of the colonial capital of New Spain, which date to the period between 1521 and 1650 CE. These levels are distinguished by an unusual abundance of cultural elements that attest to the opulent life of the conquistadors and their descendants in imperial Spain's most prosperous overseas center. Below the colonial levels are those of the Mexica, which were terribly damaged by the armed confrontations of 1521 and by the systematic demolition of buildings begun after the Conquest. Consequently, the occasions in which one manages to reach these levels are quite rare. Paving, hydraulic projects, the installation of electrical plants, and the reconstruction of building foundations are among the few

前述的困境更为严峻，因为任何试图发掘墨西哥—特诺奇蒂特兰城的物质遗存或重建其居民历史的想法，都意味着要牺牲殖民时代及十九、二十世纪的遗产中不可割舍的一部分。

避免这些阻碍的一个可行的方法是进行地下式的发掘，这种方式既能使我们研究最深层的考古遗存，又不会改变地表的纪念性建筑。但是这些发掘方法对于墨西哥城古城的中心区而言是无法想象的，原因很简单：一是古湖盆的沉积层非常不稳定，因为其中包含易于变形的粘土，而且为了满足当前人口需求，地下水被无节制地开发，这一区域已经成为一个主要来源；二是由于地下水位较高，同时用于饮用水、排水和输电线路等用途的水泥地基非常厚，要到达古城的中心区域会遇到一个很难穿透的地层。

然而，问题还远非如此，叠压在这些层位之下的是最古老的新西班牙殖民首都的地层，其年代在公元1521-1650年。因为文化元素异常丰富，这些地层非常容易甄别，它们见证了殖民者及其后代在西班牙帝国最为富饶的海外中心过着无比富足的生活。在这些殖民时代的地层之下，才是墨西哥古文明的遗存，这些遗存在1521年的武装对抗中受到了极大的破坏，而且很多建筑在被征服之后遭到系统的拆除。因此，能够到达这些地层的机会有非常少的。铺砌路面抑或水利



Colonial and pre-Hispanic temples: Mexico City's Metropolitan Cathedral and Mexico-Tenochtitlan's Main Pyramid.

(Photo: M. Calderwood, courtesy Great Temple Project)



Aerial view of the Great Temple archaeological zone showing the location of the Tlaltecuctli monolith.

(Photo: M. Calderwood, courtesy Great Temple Project)

opportunities that archaeologists must seize to shed light on minute fractions of the Mexica capital. In these situations, considerable human effort and financial resources are expended knowing that, in the best-case scenario, part of a temple, a house, or a canal will be unearthed in an area of excavation generally categorized as non-scientific.

The Great Temple Project

The unexpected discovery of the great monolith depicting the moon goddess Coyolxauhqui in February 1978 initiated a series of events that transformed the face of Mexico City and revolutionized our understanding of the ancient Mexica civilization (1325-1521 CE). In this unique situation, Mexico's National Institute of Anthropology and History (INAH) managed to carry out one of the most ambitious and long running archaeological undertakings of our times: the Great Temple Project. Founded by Eduardo Matos Moctezuma, this research project's mission has been the excavation of a large part of the sacred precinct of Mexico-Tenochtitlan with the expressed objective of reconstructing life in the imperial capital. Thus far, eight long seasons of excavations have been carried out, the first three directed by Matos himself and the last five by Leonardo López Luján.

Another important moment occurred in 1991 when the Urban Archaeology Program was created for rescue and salvage excavations in the city which, in many ways, have complemented the Great Temple Project. The secret to the success of both archaeological teams, one investigative and the other responsive, has been continuity. Specifically, successive generations of specialists have joined forces, gradually adding "pieces" to a gigantic "archaeological puzzle" that we know will never be

水利项目、电气设备的安装、建筑基础的重建等活动，是考古学家能够有幸探究墨西哥古都局部信息的机会。在这些情况下，大量的人力、财力都花费在了保存最好的遗存上，诸如在某个区域的发掘中被揭露出来的神庙的一部分、一座房址或者一条运河，但这种活动通常不是科学发掘。

大神庙项目

1978年2月，意外发现刻绘有月神科由尔齐圭（Coyolxauhqui）的巨石，开启了一系列改变墨西哥古城面貌的事件，也大大改变了我们对古墨西哥文明（公元1325-1521）的认识。在这个千载难逢的机遇下，墨西哥国家人类学与历史学研究所促成了当代最富雄心、旷日持久的考古项目——大神庙项目。在爱德华多·马托斯·蒙特苏马（Eduardo Matos Moctezuma）的资助下，这一研究项目的任务是发掘特诺奇蒂特兰城的一大块圣域，从而重建当时帝国都城的生活景象。截止目前，已经进行了八个季度的考古发掘工作，前三个季度由马托斯本人负责，之后的五次则由李奥纳多·洛佩斯·卢汉（Leonardo López Luján）负责。

1991年发生的另一个重要事件是城市考古项目的设立，其目的主要是在现代城市中进行抢救性发掘，这在很多方面弥补了大神庙项目的不足。这两个考古团



PROYECTO TEMPLO MAYOR
SEPTIMA TEMPORADA
OPERACION 3
N 40 30 20 10
OPRENDA 126
NIVEL 3B 20 06 2008

Archaeological team digging under the place where the Tlaltecuctli monolith was originally located.

(Photo: J. López, courtesy Great Temple Project)

entirely complete. Most prominent among these “pieces” are the Great Temple, a twin-pyramid structure dedicated to the sun god Huitzilopochtli and the rain god Tlaloc; the House of the Eagles, a neo-Toltec style building that possibly served as a hallowed space for the veiling of deceased sovereigns and the penitential bloodletting rituals of their successors; the Red Temples, neo-Teotihuacan shrines associated with the cult of Xochipilli, patron of music, song, dance, and amusements; the Huey Tlachco or Great Ballcourt, where ritual competitions took place that emulated the eternal cosmic battle between day and night; the Calmecac, a temple-school where nobles were educated in all areas of knowledge; Ehecatl’s Temple, a conical-shaped structure built in honor of the wind god; and the Huey Tzompantli, a large rack where the skulls of sacrificial victims were displayed. Associated with these splendid constructions, now in ruins, is a multitude of small shrines, sculptures, mural paintings, and offerings that have enriched the patrimonial inheritance of the Mexican people.

Over the years, the work of the Great Temple Project has resulted in: 1) the consolidation, conservation, and opening of a 1.5-hectar archaeological zone that is visited by hundreds of thousands people annually; 2) the construction of the Great Temple Museum, whose eight exhibition halls display the great treasures uncovered in the excavations; and 3) the establishment of a state-of-the-art research center to study and conserve these objects and plan future excavations. The great magnitude and impact of these achievements have led UNESCO to designate the Historic Center of Mexico City as a World Heritage Site.

队得以成功的秘诀是，一方主要进行调查，另一方则对调查结果做出响应和开展相关工作，这一合作模式得到了长期延续。需要特别指出的是，正是一代又一代专家的加入，才逐渐为这个“考古拼图”增加了一个个碎片，纵使我们很清楚这个拼图永远无法完整。这些碎片中最为精彩的部分包括大神庙（奉献给日神维齐洛波奇特利和雨神特拉洛克的双金字塔形建筑）、鹰殿（一座新托尔特克式建筑，很可能是为了纪念已故的君主，并供其后代在此进行祭祀仪式的场所）、红庙（一座新特奥蒂瓦坎式建筑，很可能是祭祀花神休奇皮里的场所，他掌管着音乐、舞蹈和娱乐）、大竞技场（模仿宇宙中白天和黑夜永恒之战的仪式性竞技在这里举行）、卡尔迈卡（一座宗教学校，贵族在这里接受教育，学习各方面的知识）、伊尔克特尔神庙（一座纪念风神的圆锥形建筑）、骷髅头神庙（一个用于放置献祭头颅的大台子）。与这些曾经辉煌、如今已经成为废墟的建筑同时存在的还有很多小神殿、雕塑、壁画以及丰富了墨西哥人民世代相传的遗产的献祭之物。

在过去这些年中，大神庙项目取得了以下成果：1) 巩固并保护了 1.5 公顷的考古遗址区并向公众开放，每年接待的观众达数十万人；2) 建立大神庙博物馆，其中的 8 个展厅陈列着发掘工作中获得的珍贵遗物；3)



Uppermost level of offering 126, the richest Mexica ritual deposit ever found. It contained more than 12 thousand objects.

The Seventh and Eighth Field Seasons (2007-2015)

One of the most brilliant chapters of this scientific undertaking was set in motion a few years ago when the government of Mexico City ordered the demolition of two buildings that had been damaged by the devastating earthquake of 1985. This decision raised great expectations among archaeologists, for both properties were located on the corner of Argentina and Guatemala streets in front of the Great Temple. According to sixteenth-century sources, the area situated at the foot of this pyramid was a ritual stage of the first order, where ceremonies related to the transforming power of fire took place. Here, during the month of Quecholli, symbols commemorating those in fallen battle were burned, as were a fire serpent figure made of wood, paper, and feathers that was brought down from the top of the Great Temple in the month of Panquetzaliztli, and a wood and paper construction called “the grain bin of Ilamatecuhtli” during the month of Tititl. Also cremated at the foot of the pyramid were the corpses of deceased kings, whose resulting ashes were buried nearby along with rich funerary offerings. At least this is what occurred in the case of three brothers who successively occupied the throne: Axayacatl (1469-1481), Tizoc (1481-1486), and Ahuitzotl (1486-1502).

In 2006, during the last of four salvage operations conducted by the Urban Archaeology Program on the corner of Argentina and Guatemala, the enormous importance of the area was revealed by the discovery of the largest Mexica monolith ever found. On 2 October, while the foundation for a new Cultural Center for the Arts of Indigenous Communities was being laid, a worker sunk his pick outside the construction perimeter and suddenly exposed part of a massive sculpture measuring $4.17 \times 3.62 \times 0.38$ meters and

3) 建立艺术研究中心，致力于研究和保存各类遗物，并规划未来的发掘工作。这些成果的重大影响和意义使得联合国教科文组织将墨西哥古城的中心区列入了世界遗产名录。

第七、八次田野季 (2007-2015)

这项科学事业中最为灿烂的一页始于数年之前，当时墨西哥市政府命令拆除两座在 1985 年大地震中受到破坏的建筑。这一决定引起了众多考古学家的兴趣和关注，因为两座建筑都位于大神庙前的阿根廷街和危地马拉街。根据十六世纪的资料，这块处在金字塔脚下的区域是第一等级人群举行仪式的平台，传递权力之火的典礼就在这里举行。这里在 Quecholli 月（阿兹特克太阳历中的节日，意为“珍奇羽毛”，10月31日至11月19日）会焚烧纪念战争中死去战士的象征物；在 Panquetzaliztli 月（意为“举旗”，11月20日至12月9日）会将一个由木头、纸和羽毛制成的毒火巨蟒像从大神庙的顶上搬下来；在 Tititl 月（意为“伸展”，12月30日至1月18日）会用木头和纸建造一个“伊拉玛特库特里女神的谷物箱”。去世国王的尸体也是在金字塔脚下进行火葬，之后骨灰被埋葬在附近，并有丰富的陪葬品。这一做法至少在先后继承王位的三个兄弟时期确实如此，他们分别是阿克萨雅



Offering 126 included, among many other items, basalt images of the fire god, balls made of aromatic resins, sawfish, felines, and wolves.

weighing about 12 tons, making it larger than the Coyolxauhqui monolith and the famous Sun or Calendar Stone. This monument represents the feminine avocation of the venerated and also feared earth goddess Tlaltecuhli.

As expected, a discovery of this magnitude meant the cancelation of the cultural center construction. In March 2007, the Great Temple Project organized a small multidisciplinary working group made up of Mexican specialists of the highest caliber, accompanied by colleagues from Japan, France, Italy, and the United States. For the past eight years, the seventh and eighth field seasons of the project have pursued the following four lines of action:

1) Digital mapping. The latest generation of total stations and satellite systems have enabled the creation of a topographical survey of all of the Mexica buildings currently visible in the Historic Center. The resulting information has allowed the production of a high precision, three-dimensional plan that will permit us to generate hypothetical models of the sacred precinct.

2) Geophysical analysis. The systematic employment of ground penetrating radar, a magnetometer, and a resistivity meter has allowed us to detect the presence of older buildings and water systems, as well as ritual deposits such as burials and offerings.

3) Graphic documentation of mural painting. New imaging technologies have enabled us to recover and store data on the polychrome murals that decorate many of the buildings in the archaeological zone.

4) Archaeological excavations. These explorations are intended to understand the function and meaning of the ritual area found immediately in front of the Great Temple. The objective is to reconstruct "ritual-architectural events," that is, the phenomena of

是阿克萨雅卡托 (1469-1481), 蒂索克 (1481-1486), 和威佐特 (1486-1502)。

2006年, 在城市考古项目对阿根廷街和危地马拉街转角进行的四次抢救性发掘的最后一次中, 墨西哥古城最大巨石的发现极大地提升了这一区域的重要性。

10月2日, 当一个土著社区的文化艺术中心完成地基部分之后, 一个工人不慎将鹤嘴锄跌落到了建筑边界之下, 非常偶然地揭露出了一个巨大石雕的一角, 长、宽、高分别为4.17、3.62和0.38米, 重达12吨, 比柯约莎克浮雕和著名的阿兹特克历法石还要大。这个石雕代表了对大地女神特拉尔泰库特利的喜爱、崇敬和畏惧。

正如我们所料, 大地女神石雕的发现使得文化中心的建设计划被取消。2007年3月, 大神庙项目组织了一个由墨西哥顶级专家和来自日本、法国、意大利和美国的学者共同组成的小型多学科团队。在过去的8年中, 项目的第7、8两个田野季主要进行了以下工作。

1) 数字地图的制作。最新的全站仪和卫星系统使得我们可以对目前墨西哥古城中心可见的所有古代建筑进行地形上的调查分析。由此获得的信息可以用来建构古城圣域范围高精度的三维模型。

2) 地球物理分析。探地雷达、磁力计、电阻率计的系统应用使得我们可以探测古建筑、水系和包括墓葬



Restoration process of the polychromed sculpture of Tlaltecuhтли.

(Photo: K. Garrett, courtesy Great Temple Project)

interaction between a religious scene, its actors, and the ceremonies conducted there. To date, thirty-eight ritual deposits have been discovered around the Tlaltecuhli monolith. These ritual deposits have yielded more than fifty thousand objects that demonstrate not only the enormous religious significance of the area of study, but also the indisputable political and economic power of the Mexica empire. Such a high concentration of riches in such a small space is surprising and has no comparison in similar contexts from the Olmec, Maya, and Teotihuacan cultures.

The Mexica priests used to bury all kinds of gifts for their divinities within stone caches or cavities made under floors. These gifts included all types of materials, nearly always charged with powerful symbolism: minerals, plants, animals, and human beings. They also contained finished and partially worked objects made of ceramic, stone, metal, shell, bone, textile, wood, and so on. Prominent among the recovered artifacts are imported goods that arrived to Mexico-Tenochtitlan through tribute, trade, donation, or plunder. We also found an impressive number of antiquities taken during the fifteenth and sixteenth centuries from tombs and offerings belonging to societies that were not contemporaneous with the Mexica.

In most of the cases, the gifts were not randomly deposited; rather they followed a strictly proscribed ritual order. This is because Mexica offerings were true symbolic complexes that communicated their message through their spatial distribution. For example, objects were arranged horizontally along imaginary axes, grouped in sets with numbers of components that related to the cosmos, and then were replicated vertically, forming layers of the same types of materials. Thus these offering complexes were cosmograms that reproduced in miniature a section or the totality

计的系统应用使得我们可以探测古建筑、水系和包括墓葬及随葬品在内的祭祀遗存在地下的分布状况。

3) 壁画的图形记录。新的图像技术使我们可以恢复和储存多彩的壁画数据，这些大都装饰在考古遗址的很多建筑中。

4) 考古发掘。这些探索工作是为了理解大神庙前发现的祭祀区的功能和意义。其目的在于重建“仪式——建筑事件”，也就是宗教场景、仪式中的扮演者以及在此进行的典礼之间的互动现象。目前为止，在大地女神雕像附近已经发现了 38 处祭祀堆积。这些祭祀堆积中出土了五万多件遗物，这些不仅展示了这一研究区域重要的宗教意义，而且显示了墨西哥帝国国王的政治和经济权力。在这么小的区域范围内，如此高密度的财富非常令人惊讶，在奥尔梅克、玛雅和特奥蒂瓦坎等文化中也从未发现类似的遗迹。

古代墨西哥的祭司常常将奉献给神的各类祭品埋在地下的隐秘之处或者洞穴之中。这些祭品包括各种不同的材料，而且大多具有权力象征意义，如矿物、植物、动物和人。其中也会有很多陶器、石器、金属器、骨器、纺织品和木器等成品或半成品。这些发掘出的遗物中最为引人注目的是那些通过朝贡、贸易、捐赠或者掠夺而达到特诺奇蒂特兰城的舶来品。我们还发现了相当数量的 15、16 世纪的墓葬和祭祀用品，这些并非古



Offering 120 contained the skeleton of a young wolf with wooden, copper, jade, shell, and obsidian ornaments.

of the universe.

The Great Temple Project is affiliated with Mexico's National Institute of Anthropology and History, with academic support from the Aichi Prefectural University of Nagakute (Japan), Harvard University's Moses Mesoamerican Archive and Research Project, the National Autonomous University of Mexico, and the Paris Institute for Advanced Study.

这些并非古墨西哥帝国时期的遗物。

大多数情况下，这些祭品并不是随意放置的，而要严格遵循仪式顺序。这是因为古墨西哥的祭品是真正的符号复合体，它们通过空间分布来互相传递信息。例如，物品是沿着想象中的轴线水平放置的，并按照宇宙观归成不同的组，之后在垂直方向上重复，从而形成同类材质的层位。因此，这些祭品群代表了全部或者一部分微缩的宇宙。

大神庙项目由墨西哥国家人类学与历史学研究所开展，同时得到了日本爱知县立大学、哈佛大学摩西中美洲档案和研究项目、墨西哥国立自治大学和巴黎高等研究院等研究单位的学术帮助。



A greenstone relic from the Classic period recovered and reburied by the Mexicas in Late Postclassic times.

(Photo: J. López, courtesy Great Temple Project)



A flint sacrificial knife representing the wind god Ehecatl-Quetzalcoatl.

(Photo: J. Vértiz, courtesy Great Temple Project)

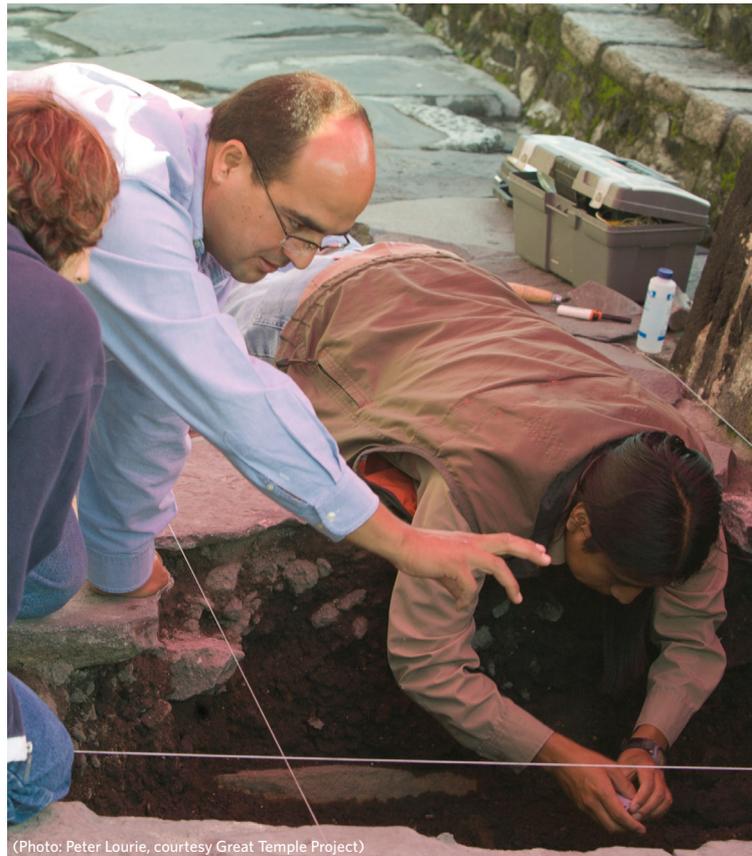
Biographical Sketch

Leonardo López Luján

Leonardo López Luján is senior researcher in archaeology at the National Institute of Anthropology and History in Mexico City and director of the Great Temple Project since 1991. He holds a PhD in Archaeology from the University of Paris X-Nanterre. His research has focused primarily on the religion, politics, and art of pre-Hispanic societies in Central Mexico. His scholarship has contributed to our knowledge of indigenous strategies of recovering the distant past, the coded language of buried offerings, the functions and symbolism of sacred architecture, the uses and meanings of Mexican sculpture, the application of materials science to the study of pre-Hispanic art and artifacts, iconoclastic activities in times of crisis, mother goddess cults, and sacrificial practices, among other areas. He has also ventured into the history of Mexican archaeology, achieving significant advances in the study of its origins in the eighteenth and nineteenth centuries.

During his academic career he has been a visiting research fellow at Princeton University, the Mankind Museum in Paris, Harvard University's Dumbarton Oaks in Washington, D.C., and the Paris Institute for Advanced Study, and a visiting professor at the University of Paris I-Sorbonne, the University of Rome-La Sapienza, the Practical School of Higher Studies in Paris, and Francisco Marroquín University in Guatemala. He has authored or co-authored fifteen books. He is currently a Fellow of the Mexican Academy of Sciences, the Mexican Academy of History, the British Academy, and the Society of Antiquaries of London.

列奥纳多·洛佩斯·卢汉是墨西哥国家人类学与历史学研究所高级研究员，自 1991 年以来担任大神庙项目的主持人。他在巴黎第十大学获得博士学位，研究兴趣主要集中在墨西哥中部前西班牙时期的宗教、政治和艺术方面。洛佩斯·卢汉博士对原住民如何认识古代社会、随葬品的内涵、祭祀建筑的功能和符号象征、墨西哥雕塑用途和意义、材料科学手段应用到前西班牙时期的艺术和遗物研



(Photo: Peter Lourie, courtesy Great Temple Project)

究、母神崇拜、献祭行为等领域的研究做出了很多贡献。他还从事考古学史研究，对 18、19 世纪墨西哥考古学起源的研究做出了很大的贡献。

他曾先后在普林斯顿大学、巴黎人类博物馆、哈佛大学敦巴顿橡树园、巴黎高等研究院、巴黎第一大学等进行访问研究、罗马大学、巴黎高等研究实践学院、危地马拉马洛京大学进行访问研究和短期教学等工作，独著或合著的书共有 15 部。他现在还是墨西哥科学院院士、墨西哥历史科学院理事、英国科学院院士和伦敦古物协会理事。



2015 SHANGHAI ARCHAEOLOGY FORUM AWARDED PROJECTS

第二届世界考古论坛获奖项目



Research Center for World Archaeology, Shanghai Academy

上海研究院世界考古研究中心

2015 Shanghai Archaeology Forum Awarded Projects

第二届世界考古论坛获奖项目

Research Center for World Archaeology, Shanghai Academy

上海研究院世界考古研究中心

Preface

As a key element of the second Shanghai Archaeology Forum, the field and research projects selected for the 2015 SAF Awards program are presented here to celebrate the excellence of recent archaeological research and discoveries and to promote the importance and relevance of protecting archaeological resources and cultural heritage across the world.

The SAF Awards program recognizes individuals and organizations that have achieved distinction through innovative, creative, and rigorous works relating to our human past, and have generated new knowledge that has particular relevance to the contemporary world and our common future. It aims to promote excellence and innovation in archaeological research, advance public awareness and appreciation of archaeology, foster the protection and conservation of the world's archaeological resources and heritage, and encourage international collaboration and partnerships between scholars and others from different countries. The SAF Awards consist of two categories: major archaeological field-discoveries (Field Discovery Award) and major research findings (Research Award) which may be based on, although not themselves primarily comprising, fieldwork. The award in the first category is made for archaeological excavations or surveys that have yielded major discoveries significantly furthering or even altering our knowledge of the human past, locally and/or globally. The award in the second category is made for archaeological research that is based on rigorous studies on specific subjects and/or laboratory and scientific analyses. They may be comprehensive and multi-year research projects, or major breakthroughs in theory, method or technique, or groundbreaking works of synthesis based on updated archaeological findings.

A total of 93 nominations were made to the 2015 SAF Awards program by the SAF Advisory Committee consisting of about 150 renowned

前 言

本图录刊载的是第二届世界考古论坛获奖项目，作为论坛的重要内容，世界考古论坛奖旨在宣传世界范围内最新的考古发现和研究成果，积极推进考古资源和文化遗产的保护。

世界考古论坛奖的评选，强调新思想、新理念，强调创新性，强调对当今世界和人类共同未来的重要性，以此推进考古学研究水平的提高和知识创新，提高公众对考古学重要性的认识，促进世界考古资源和文化遗产的保护，推动更加广泛的国际合作和交流。世界考古论坛奖包括重大田野考古发现和重大考古研究成果两类。重大田野考古发现指那些能够加深、甚至改变我们对特定地区或全球范围古文化认识的田野考古调查和发掘。重大考古研究成果主要针对的是专项课题或以实验室科学分析为基础的考古研究，包括多年综合性的研究项目，理论、方法、技术上的重大突破，以及基于考古新发现的突破性研究成果。

第二届世界考古论坛共收到有效提名 93 项，这些项目是由论坛咨询委员会委员负责推荐的。咨询委员会是世界考古论坛的重要组成部分，该委员会由来自 45 个国家和地区的 150 位委员组成，他们是考古和文化遗产研究领域一流的专家学者。评审委员会由

scholars in various fields of archaeology and cultural heritage from 45 countries. The nominations were reviewed and adjudicated by the SAF Selection Committee comprising 38 international experts from 16 countries in the world, according to the highest international standards of excellence and impartiality. A total of 40 nominations were shortlisted after the first round of reviews and adjudications in which 35 Selection Committee members were actively involved. During the second round of adjudications, with valid votes from 33 Selection Committee members, a total of 21 out of 40 shortlisted nominations were selected for the 2015 SAF Awards, including 10 Field Discovery Awards, and 11 Research Awards. We extend our warmest congratulations to all the recipients of the 2015 SAF Awards. We would like to express our great thanks to the members of the Advisory Committee and Selection Committees as well as all the nominees whose celebrated discoveries and research findings have made the 2015 SAF Awards program a reality.

Finally we would like to extend our special thanks to the following individuals, who worked tirelessly to make this catalogue of awarded projects possible: Huang Shan, Dong Wei, Zhang Quan, Yang Qingyue, Fu Bingbing, Tang Chao, Zhang Yimeng, Guo Meng, Tang Yuyun, Deng Zhenhua, Feng Yue, Li Nan, Li Keyan, Chen Hao, Shen Xie, Huang Ying, Dawulijiang, Liu Rui, Ji Yu, Cong Shiyin, Guo Zili, Chen Xiao, Daniela Wolin, Katherine Brunson, Steffan Gordon, Jasmine Sacharuk, Wu Mengyang, Chen Hui, Yuan Haibing, Sun Zhuo and others.

Executive Committee
Shanghai Archaeology Forum
1 December 2015

来自 16 个不同国家和地区 的 38 位学术权威和专家组成。依据严格优选和公平公正的最高准则，35 位评审委员积极参与了第一轮评审，首先选出 40 项推荐；在此基础上，评审委员进行了第二轮评选，共收到 33 个有效投票，最终选出 21 项，其中 10 项获得重大田野考古发现奖，11 项获得重大考古研究成果奖。在这里我们对所有获奖项目表示最热烈的祝贺，同时对积极参与推荐和评选的世界考古论坛咨询委员和评审委员，以及所有被提名的项目或研究的负责人表示最诚挚的感谢。

最后我们要特别感谢为准备这本图册付出辛勤劳动的同仁、同学，包括黄珊、董韦、张泉、杨清越、付兵兵、汤超、张依萌、郭梦、汤毓贇、邓振华、冯玥、李楠、李可言、陈豪、沈颀、黄莹、达吾力江、刘瑞、季宇、丛诗音、郭子莉、陈筱、李丹妮、博凯龄、高俊熙、吴洁美、吴梦洋、陈晖、原海兵、孙卓等。

世界考古论坛·上海执行委员会
二零一五年十二月一日

Contents

目 录

Field Discovery Awards

田野考古发现获奖项目

- Archaeological Investigation into the *Tusi* Sites in China's Southwest : Imperial Expansion and the Colonization of Frontiers and Borderlands
中国西南土司遗址考古调查和发掘：帝国扩张及其与边疆的动态关系 1
- Exploring the Tunnel Underneath the Feathered Serpent Temple at Teotihuacan, Mexico
墨西哥特奥蒂瓦坎羽蛇神庙地下隧道的调查 37
- Early Urbanism in Europe? The Case of the Trypillia Mega-sites, Ukraine
欧洲的早期城市化？乌克兰特里波耶文化巨型遗址 55
- Revealing North America's First Native City: Rediscovery and Large-Scale Excavation of Cahokia's East St. Louis Precinct
揭秘北美印地安人建立的最早城市：卡霍基亚遗址东圣路易斯区的再发现和大规模发掘 69
- The Dawn of Technology: 3.3-million-year-old Stone Tools from Lake Turkana, Kenya
技术的黎明：肯尼亚图卡纳湖发现距今 330 万年石器 83
- Gravisca Emporion - the Port of the Etruscan City of Tarquinia: New Excavations at the Sanctuary of Śuri and Cavatha
伊特鲁里亚古城塔尔奎尼亚海港的格拉维斯卡希腊贸易站：苏里与卡娃塔圣所的最新发掘 93
- Discovering the Harbor of King Khufu at Wadi el-Jarf in Egypt
埃及瓦迪伊尔加尔夫第四王朝胡夫法老时期海港的发现 105
- A Very Early 'Palatial Complex' at Arslantepe, Malatya (Turkey): a New Trajectory to the Origin of the State
土耳其马拉蒂亚狮子山遗址最早的宫殿区：国家起源新说 123
- Recent Studies at Noyon Uul Burial Mounds: Unknown Facts of Life of Central Asian Nomads
诺音乌拉古塚发掘新收获：中亚游牧人群的隐秘生活 139
- Five Thousand Years of Taiwan's Past Brought to Light by Rescue Archaeology
抢救性考古发掘揭示台湾 5000 年的历史 155



Research Awards

考古研究成果获奖项目

Çatalhöyük: Important Anatolian Contributions to the Development of Early Societies 恰塔土丘：安纳托利亚早期社会的发展	167
Population Genomics of Bronze Age Eurasia 欧亚大陆青铜时代人群基因组研究	177
Three Global Human Migrations in Eurasia: the Origin of Humans and the Peopling of Southwestern, Southern, Eastern and Southeastern Asia and the Caucasus 欧亚大陆人群的三大迁徙：人类的起源及其在西南亚、南亚、东亚、东南亚及高加索地区的迁徙	191
Cultural Evolution of Neolithic Europe (EUROEVOL) 欧洲新石器时代的文化进化	203
Teopancazco: a Multiethnic Neighborhood Center at Teotihuacan, Central Mexico 墨西哥特奥蒂瓦坎城中的多族群中心族邑特奥潘察科	213
The Times of Their Lives: High-resolution Radiocarbon-based Chronological Analysis of the European Neolithic, through Formal Modelling 逝去的时光：高分辨率放射性碳素测年与欧洲新石器时代的年代模拟分析	227
Cuello: the Economic and Social Origins of Maya Civilisation 奎洛：玛雅文明的经济和社会起源	239
The Origin and Spread of Broomcorn and Foxtail Millets 黍和粟的起源与传播	255
The Earliest Farmers in the Southwest 美国西南部最早的农业	267
From First Farmers to First Cities: New Insights into the Agricultural Origins of Urban Societies in Western Eurasia 最早的农业到最早的城市：从农业实践的发展探讨欧亚大陆西部城市社会的起源	283
The Great Temple Project: in Search of the Sacred Precinct of Mexico-Tenochtitlan 阿兹特克大神庙计划：找寻墨西哥特诺奇蒂特兰城的圣地	297