

## The occurrence of tortoiseshell on a pre-Hispanic Maya mosaic mask

Jack Frazier<sup>1</sup> & Reiko Ishihara-Brito<sup>2</sup>

<sup>1</sup> *Department of Vertebrate Zoology—Amphibians & Reptiles, National Museum of Natural History, Smithsonian Institution, P.O. Box 37012, Washington, DC 20013-7012, USA*  
(kurma@shentel.net)

<sup>2</sup> *Dumbarton Oaks Research Library and Collection, 1703 32<sup>nd</sup> Street, NW, Washington, DC 20007, USA* (reikoish@gmail.com)

*Both authors contributed equally to this work.*

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*The Dumbarton Oaks Maya mosaic mask is shown to have included tortoiseshell on an earlobe—remarkable since this is the only demonstrated use of this material in pre-Hispanic Mesoamerica. The authors present diagnostic evidence for the presence of tortoiseshell, account for its absence in pre-Hispanic artefacts because of decay, and propose its use (in the mask) as being symbolic of the ocean.*

**Keywords:** Mesoamerica, Maya, K'inich Ajaw, Postclassic, thirteenth–fourteenth century AD, marine turtle, tortoiseshell, mask, sea symbolism, taphonomy, keratin

### Appendix 2. Other mosaic masks in Mesoamerica

Numerous pre-Hispanic mosaic masks are known from the Maya area and elsewhere in Mesoamerica.<sup>1</sup> Classic-period Maya mosaic masks—thought to be life-size likenesses of the face of the respective interred individual—include those recovered from funerary contexts at Palenque, Calakmul, Tikal, Oxkintok and Dzibanché (González Cruz 2000, 2004; Carrasco Vargas 2004; Nalda 2004; Schmidt 2004), among other places. In some cases, the mask was found near the head of the interred individual, suggesting that it had been placed over the person's face or near it, while in other instances the mask was located by the groin area along with pendant celts, indicative of its use as part of a mask-and-celt belt assemblage. At El Portón, Salama Valley, Guatemala, a miniature mosaic mask (H. 10.5cm, W. 6.7cm) was

found within a Terminal Preclassic cache of two ceramic vessels placed lip-to-lip (Sharer & Sedat 1987: 69, pl. 3.21d), thus not in a funerary context. All of the above mentioned masks are distinct from the Dumbarton Oaks example. They are made predominantly of jade and other greenstones such as malachite; the tesserae are much larger, hence fewer than those on the Dumbarton Oaks mask. They also lack a wooden substrate, but it is not known if this is the original condition or because the base deteriorated over time. Moreover, the eyes of the aforementioned masks are usually not pierced, but rather are defined by appropriately shaped pieces of obsidian or pyrite with marine shell such as mother-of-pearl. In contrast, the eyes in the Dumbarton Oaks mask are pierced, though they may have once held inlays. In summary, these other masks were made by distinct production techniques and indicate different aesthetics in comparison to the Dumbarton Oaks mask. There is no evidence that any of these, or any other, Classic-period masks from Mesoamerica has any tortoiseshell.

Other mosaic masks attributed to the Postclassic Mixtec culture from southern Mexico bear a closer resemblance to the Dumbarton Oaks mask in terms of tesserae size and materials—small, turquoise-coloured<sup>ii</sup> stones—as well as the intact wooden backing. In some cases wood is not just a base for the mosaic pieces, but it forms a significant part of the front of the mask, an effect that could be produced by fallen tesserae. A feature found on many of these masks is a shape, usually circular or elliptical, rarely square or rectangular, over each temple. Many of the 20 mosaic Mixtec masks studied by Ramsey (1975: 706–15, 912–16; his collection numbers Mm/354–367, 369, 881, 884, 885, 896–921; *pers. comm.* 2009—formerly in the Museum of the American Indian, Heye Foundation, and now in the Smithsonian Institution’s National Museum of the American Indian [NMAI])—have these discs, or squares, made of different materials (e.g. clay or charcoal). None of these masks appears to be a realistic likeness of a person and none is known to have been in a funerary context; many were said to have been found in caves (NMAI catalogue data).

One of these masks (Mm/367) was reported to include tortoiseshell. The mask, which was formerly part of the Dumbarton Oaks collection (Benson 1963: 26, no. 124) and is now housed at the San Antonio Museum of Art (acc. no. 97.1.18), was noted to include circular discs on each of the temples that “are probably tortoise shell” (Lothrop in Bliss 1957: 248, pl. LX; see also Ramsey 1975: 711). Although the general colouration of the discs suggests tortoiseshell (see San Antonio Museum of Art 2010), a closer examination of detailed photographic images of the temple discs indicates characteristics inconsistent with tortoiseshell. Both of the circular discs have rough surfaces, and they are composed of strips

and other irregular straight-edged subcomponents that indicate that a resin-like material was applied to the surface. In no place does the material appear to have the typical characteristics of tortoiseshell; it is not smooth or translucent, nor is there any evidence that it has a variegated colouration with different coloured blotches at varying depths. It should also be noted that Kelker and Bruhns (2010: 54–55) have questioned the authenticity of this mosaic mask. There is no suggestion that any other Mixtec mask or artefact, at least those examined by Ramsey and those in the NMAI, includes tortoiseshell (Patricia L. Nietfeld, James Ramsey, and Sue Scott, *pers. comms.* 2010).

The production of mosaic masks was a well-established practice during the Classic period among the Maya peoples, in which the preferred material was green jadeite, thought to have been obtained primarily from the Motagua Valley, Guatemala. However, the Dumbarton Oaks mosaic mask, as well as the Mixtec masks, reflects artistic traditions and use of materials typical of the Postclassic period, much of which is thought to have been obtained from trade networks. Turquoise-coloured stones, not available locally to Maya and Mixtec peoples, replaced jadeite as the preferred precious material, as these communities participated in the region-wide artistic phenomenon termed the ‘Postclassic international style’ (Boone & Smith 2003). The image of the Dumbarton Oaks mask is consistent with the coastal lowlands Maya sub-style within this Postclassic international style, for similar portrayals of the sun deity appear in murals from Santa Rita and Tulum (Ishihara-Brito & Taube 2012: 466). Apart from the jadeite masks found in funerary contexts, little is known about how these masks were used, or other details of their symbolic and religious significance. However, the special environments in which they were found indicate that they had singular importance. Given the relatively small size of the Dumbarton Oaks mask, it is not clear if this object was designed to be worn by a person: an adult could not wear it covering the face. Possibly the Dumbarton Oaks mask was worn by a child, but it was considered more likely to have been used on a sculpture or other object as part of a deity or ancestral image, or perhaps as a costume assemblage such as part of a belt (Ishihara-Brito & Taube 2012: 469). There is no evidence that this mask, or any other representation of the sun god, was used at the top of a sceptre (cf Ramsey 1975: 688).

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<sup>i</sup> For example, Ramsey (1975: 684–91) listed 19 Mixtec “jade masks” (his numbers Jm/285-290, 292, 293, 295, 426, 713, 714, 716, 727, 756, 763, 765, 779, 783). This discussion of mosaic masks does not include skulls with encrusted mosaic tesserae, such as those known from the collections of the British Museum (McEwan et al. 2006: fig. 102), the main cenote at Chichen Itza (Moholy-Nagy & Ladd 1992: 132–40), and Tomb 7 at Monte Albán (Caso 1969: 62–69; Ramsey 1975: 711, 914).

<sup>ii</sup> Based on X-ray fluorescence spectrometry, a preliminary study of tesserae on a Mixtec mosaic shield housed in the National Museum of American Indian indicated that a variety of materials were used in addition to turquoise, including chrysolla, malachite, amazonite, and jadeite (Brostoff & Beaubien 2007).