

## METATES AND HALLUCINOGENS IN COSTA RICA

Ursula Jones Institute of Archaeology

Metates are grinding stones on which corn and other substances are ground with hand-held stones called manos. The term 'metate' is derived from the Nahuatl 'metlatl' but is commonly used today to describe the grinding stones of precolumbian America.

Metates and manos have formed part of the standard household equipment in the Americas ever since settled life began in the 2nd millennium BC. They occur in a great variety of shapes and sizes and it can be assumed that they were used throughout the ages not only for grinding corn, but for processing other substances such as nuts, seeds, leaves, beans, and for mashing and crushing tubers, fruits, berries, mushrooms, and also for pounding and pulverizing bark shavings, pigments and potter's clay.

In Lower Central America - and specifically within the area bounded by eastern Honduras in the north and the Panama Canal in the south - prehispanic peoples fashioned some of their metates in a highly individual manner, both in form and decoration. Examples from Costa Rica in particular display often a sophisticated and complex imagery. Involvement in hallucinatory rituals may be a possible explanation why such distinct grinding implements were manufactured.

A variety of plants with hallucinogenic properties are known to grow in this area of Central America and, although there is neither documentary evidence nor any form of direct proof for the use of such substances in the region, the archaeological record offers a few items which suggest indirectly that hallucinogens were processed and consumed in prehispanic times.

A clue that grinding stones were associated with mushroom rituals is, for example, provided by a tripod metate from NW Costa Rica belonging to the period of the 2nd or 3rd century AD (fig.1). Its grinding top has, at the front end, an openwork ornament in which a central human figure is flanked by two perforated circular elements. Biologists have identified these as hallucinogenic mushrooms of the *Amanita Muscaria* ('Fly Agaric') species (Ana Baez, pers. comm.).

Preclassic period pottery sculptures in the form of mushrooms are known from El Hacha in Guanacaste, NW Costa Rica (Snarskis 1982, 23; Stone 1977, 34). Not only are these pieces mushroom-shaped, but on the stems appear images of humans and animals upside-down and in three-dimensional form. This could be a representation of an hallucinatory vision of the world inverted. It is known that certain hallucinogenic snuffs cause such illusions (Emboden 1979, 110), and it is possible that some psychotropic mushrooms produce a similar effect.

From highland Guatemala, some distance to the north of Costa Rica, a great number of mushroom-shaped effigy stones are known dating to the Preclassic period (Borhegyi 1961; Mayer 1977; Wasson 1980). They are of different sizes and many have human or animal effigies incorporated in their stems. One of them shows a woman apparently in the process of grinding (fig.2). Perhaps it is a scene connected with the preparation of hallucinogenic mushrooms for a ritual similar to the ceremonies described by

Wasson (1980, 179, fig.4) of present-day Mazatec Indians in Oaxaca, southern Mexico, where mushrooms are ground and mashed on a metate and the resultant pulpy meal drunk in water.

Another interesting find in highland Guatemala is a cache of nine miniature mushroom-shaped stones found together with nine miniature metates and manos from the Verbena cemetery at Kaminaljuyu (Nottebohm collection; Wasson 1980, 181). They vary in size between 14 and 18 cm in height and date to the Preclassic period (Borhegyi 1961, 498). Four of the mushroom-shaped stones are plain - one of them stands on three legs - and the others incorporate figures in their stems: two have bird effigies (possibly a vulture and an owl), one has a jaguar-like effigy, and two have human effigies, both seated cross-legged. The fact that the nine mushroom-shaped stones and the nine metates were found as a unit is certainly curious and could indicate the existence of prehistoric mushroom ceremonies, involving metates for the grinding and preparing of hallucinogenic fungi for ritual consumption.

It should be added that mushroom-shaped stones were widespread in Central America (Mayer 1977). It is not unreasonable, therefore, to suppose that similar ceremonies existed also in Lower Central America. The environment in the isthmus is not radically different from that in the adjacent areas to the north, and one can assume that the mycoflora is relatively similar to that in highland Guatemala.

There is good evidence available in Costa Rica for the use of snuff in prehispanic times. Nasal sniffers made of pottery have been found dating back as far as the first century BC (El Bosque complex; Snarskis 1982, 94). It is thought that these were used for sniffing tobacco and for inhaling 'cojoba' snuff. 'Cohoba' sniffing, as reported in the 16th century by Fra. Ramon Paul, a monk travelling with Columbus, refers in all probability to the same substance, i.e. the ground seeds of *Anadenanthera* pods.

It is known that the snuffing practices of certain Amazonian tribes are closely associated with birds (Wassen 1965). Curiously, the shape of the snuffing tubes from prehispanic Costa Rica is highly reminiscent of the basic bird form (fig.3) and is thought to be associated with soul flight. Both the eagle and the vulture are considered sacred birds in the mythology of many tropical people (Emboden 1979, 108) because of their keen sight and high flight and their ability to remain seemingly suspended in air; in addition the vulture plays a role as a scavenger of the dead.

The idea of the bird spirit represented by eagles and vultures combined with human images is a prominent iconographic element in isthmian artifacts of jade (Balsler 1980, 53; Snarskis 1981, 164-164) and other stone as well as in pottery (Snarskis 1981, 191) during the period of the early centuries AD.

The composite human/bird representations of the jade pendants form a large proportion of the Costa Rican lapidary work known from that period (Easby 1981, 139). The 'birdness' and the 'humanness' of these effigies varies, although the birds are all of the high-soaring species. It is thought (Snarskis 1981, fig. 163) that these effigies were intended to represent the intermediaries between the individual, the community and the supernatural world. In other words they were the all-seeing eyes and ears of shamanistic

personages. Such people have been described for the historic Talamancan tribes in Costa Rica (Bozzoli 1979; Ferrero 1981, 102).

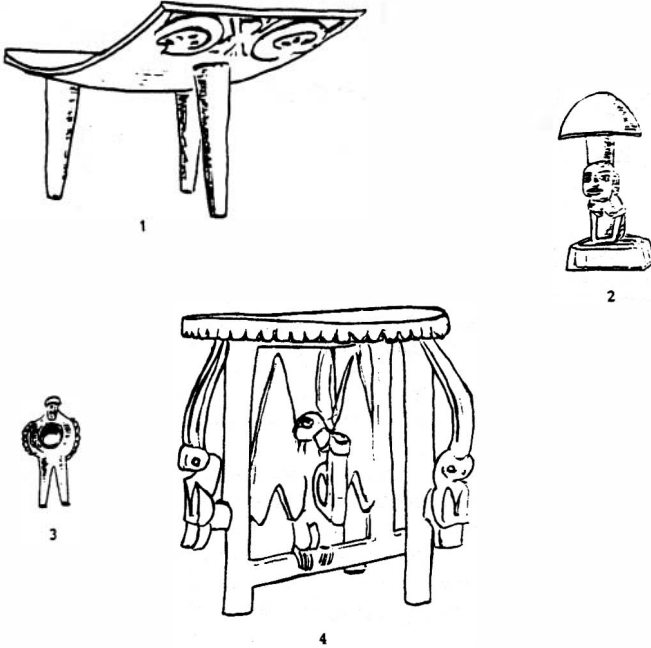


Fig. 1 Tripod metate, NW costa Rica, c.200-300 AD. Length:98cm. Museo Nacional de Costa Rica, no. 32065. After Snarskis 1981, 18.

Fig. 2. Mushroom-shaped stone figure with woman grinding on a metate, Highland Quatemala, Late Preclassic period. Height:c.33cm. Collection Hans Namuth, New York. After Wason 1980, fig.5.

Fig. 3. Bird-shaped pottery snuffing tubes, Costa Rica, c100-500 AD. Length: 8cm. Museo Nacional de Costa Rica, no. 25391. After Snarskis 1981, 132.

Fig. 4. Flying-panel metate, Atlantic Watershed Costa Rica, c.AD 200-500 Length:79cm. Mus. Nac. de Costa Rica, no. 25679. After Snarskis 1981, 144, pl. 29.

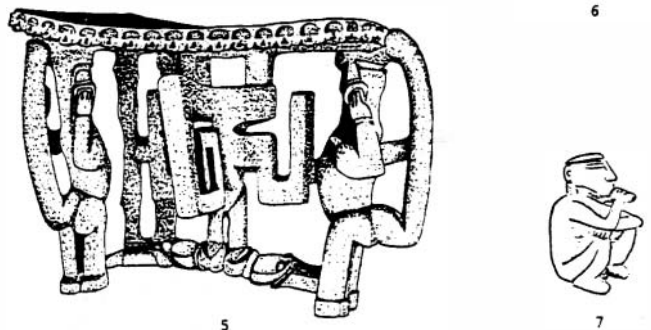


Fig. 5. Flying-panel metate, reportedly from Azul de Turrialba, Atlantic Watershed Costa Rica, c. AD 200-500. Length: 77cm. Museo Nacional de Costa Rica, no. 20788. from Pfeiffer 1987, fig.18.

Fig. 6. Hourglass-shaped pedestal metate or seat. Pacific coast Costa Rica, c. AD 1300-1500. Height: 44 cm. Instituto Nacional de Seguros Costa Rica, no. 3923. After Snarskis 1981, 100.

Fig. 7. 'Sukia' figure, Atlantic Watershed Costa Rica, AD 1200-1500. Height: 26 cm. Museo Nacional de Costa Rica, no. 11689. After Baudez 1970, fig. 150.

The so-called 'flying-panel' metates from Central Costa Rica are contemporary with the jade pendants. These metates are often decorated elaborately with unusually complex imagery. The 'ave pico' or other vultures are frequently present and associated with human heads (Snarskis 1981, 146). It seems reasonable to suggest that such metates could have been in the hands of shamans and used for the processing of hallucinogens or other substances in ritual contexts.

The other curious element in the 'flying-panel' metates is the representation of humans portrayed as animals, or humans wearing bird or alligator masks. Oviedo in his 'Historia Natural y General de las Indias' (1959) describes chiefs who were 'great wizards and who were thought to have the power to convert themselves into alligators, jaguars' and, we may add, birds too. Undoubtedly transformations of this kind required strong hallucinogenic potions, and it is not improbable that special metates portraying the transfiguration scene were used for their preparation (fig. 4). A 'flying-panel' metate which was reportedly found at the site of Azul de Turrialba in Atlantic Watershed Costa Rica shows a figure wearing a bird mask standing upon two recumbent humans (fig. 5). These as well as the human heads which line the rim of the metate are likely to be related to some sacrificial ritual.

Free-standing stone statues of male figures with animal masks are known from Nicaragua, Costa Rica and Panama. They are, however, of a much later date than the 'flying-panel' metates. Alligator masks are predominant and, in this connection the curious hour-glass shaped pedestals carved with alligator masks should be mentioned (fig. 6). Several of these were excavated at the Papagayo site near the Pacific coast in NW Costa Rica. They are thought to have been seats (Claude Baudez, pers. comm.) - perhaps of shamans? - but they could have served also as miniature metates in the preparation of substances for rituals. I have examined several such specimens in museum collections and found that most of them show some signs of wear from grinding.

Lastly the 'sukia' figures of Atlantic Watershed Costa Rica should be mentioned (fig. 7), although they relate indirectly only to metates. The 'sukia' figures represent one of the most frequently encountered type of statuary of the last few centuries prior to the Spanish arrival. They are small squatting males, either with arms crossed or holding a tube to their mouths. 'Sukia' is the name applied to medicine men, and such figures have been described as shamans performing a curing ritual. Whether they are blowing, smoking, sniffing or sucking is not clear. Tobacco (*Nicotiana Tabacum*) grows in Costa Rica and is ground on metates. The smoking of gigantic cigars by shamans to fumigate their clients is a widespread practice in traditional societies from the Caribbean Islands to Tierra del Fuego (Dobkin de Rios 1984, Table 3). On the other hand these tubes may have been used for sniffing 'cojoba' or other snuff, or for sucking certain plants or, even alternatively, they could have been used for blowing sounds in association with rituals.

It is undeniable that the influence of hallucinogenic substances on belief systems has been an important element in the life of traditional societies throughout history. But in Lower Central America we have no documentary evidence from prehispanic times, and ethnohistoric sources are meagre compared to those available for Mesoamerica and Central Andean South America. We therefore depend principally on the archaeological record for our information.

Although the evidence for the use of hallucinogenic substances is indirect only, it is sufficiently abundant to indicate that rituals involving such substances played more than a minor role in the lives and beliefs of ancient societies in Costa Rica. As described in the foregoing text, the people in that area carved and decorated some of their metates in such an elaborate way and with an iconography so complex that a ritualistic association is clearly indicated. Hallucinogenic experiences, in order to perceive the supernatural world to achieve power and to affect success in a curing ritual or in agriculture or in war or whatever, were probably an integral part of the daily life and culture of these societies as is the case still today with surviving Indian tribes in certain tropical forest areas of South America (Harner 1976). In Costa Rica the surviving Indian population amounts to less than 1%. But the artifacts produced by their ancestors speak for them.

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