

Bioceramology: Ceramics is 'bio'

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The definition of 'bio' matches the definition of ceramics perfectly because it is related to nature. But animals make pots and nests from clay too. They could have been the mentors of the potters.

Humankind is a natural and a cultural being. Ceramics is also a natural and cultural product. Culture is made by humans, nature is inborn. One might also say that nature is the material that culture is made of. Humans develop from their natural state and yet continue to remain within it. Humans are thus not purely cultural beings independent of nature. They are biocultural. This is particularly true for ceramics.

According to duden.de online German dictionary, 'bio' expresses that 'someone or something has to do with nature or natural things, or is in some way related to nature'. This needs no further explanation for ceramics. What is new is that there is now a new field of research called 'biomusicology'. One area it is concerned with is the question of why our early ancestors began to make music, and it points to the 'musical instinct' in animals. This is an example of interdisciplinary research that the new century is full of. So why not a discipline called 'bioceramology'? Apart from the mineral nature of the material,

there is what we might call the 'potter's instinct' among animals which make their nests from clay or mud.

Potter Wasps

It is said that the Indigenous Peoples of America learned how to pot by observing the potter wasp. All wasps that build pots from clay or mud are solitary kinds. They do not form colonies with a division of labour. Wasps that make pots are all females, just as it is the women among the Indigenous Peoples who do the potting. It is the men's job to do the decoration for it is only they who are believed to be in contact with the gods. Potter wasps (eumenidae) are the most remarkable potter and form a subfamily of the vespidae, which fold their wings lengthwise at rest. The genus of the eumenes are true construction artists that build urns with a narrow neck and a protruding lip, made of clay or mud. The wasp attaches these delicate vessels to plants or concealed beneath flaking areas of bark, individually, in twos or threes. The material is fetched from muddy patches of ground. As dried mud is too hard, the potter wasp carries water in its stomach and spits it on the clay. It then scrapes off the softened clay and forms a 'pill' from it. It uses its fore-

legs as tools, which are curved for this purpose. The jaws are also involved. The finished lump of clay is then grasped between the forelegs and supported by the head. The wasp then flies to the construction site where it draws out this lump to form a narrow, flat strip that is added on one strip after another until the hollow vessel is finished, in the same way as the Indigenous women potters do it. It is a storage vessel in which the wasp collects larvae as food for its young. It lays an egg and attaches it high on the interior of the wall. The it closes the opening with a stone.

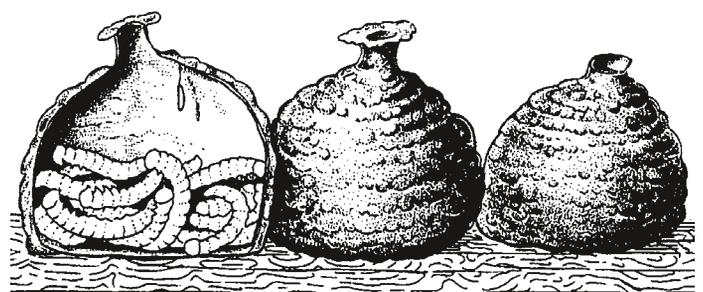
Oven Birds

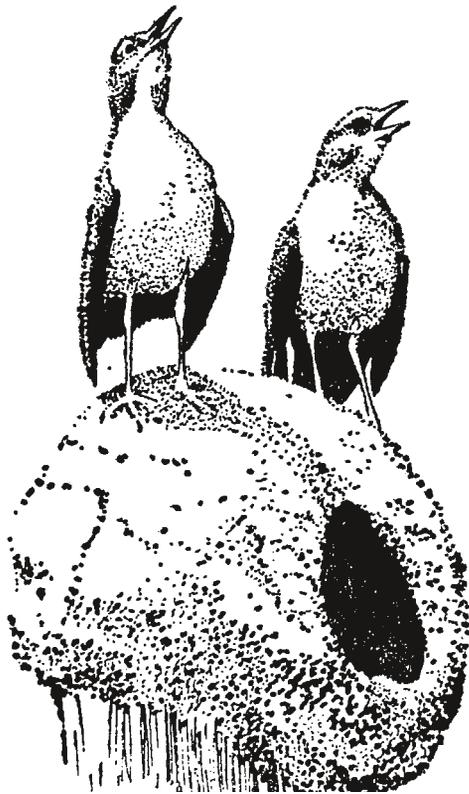
In the tropics of South America, the Oven Birds (German: 'potter birds'; furnaridae), of which six of the 2019 species are really 'potters'. Ornithologists note that the oven bird is stimulated to start potting by the mere sight of wet mud. For a pottery nest, a pair takes between ten and sixteen days. It is made of between 1,500 and 2,500 lumps of clay weighing 3-5 grammes, using the bill and the legs: first the base, then the walls. The whole nest weighs several kilos, on average 4.25 kg. It is more of a spherical object than a vessel. The latin term furnarius comes

A potter wasp flying to the mud pot it has built itself with a lump of mud.



The mud pots of the potter wasp are vessels for raising their offspring. The egg has been attached by a thread, above the larvae that will later provide nourishment for the young wasps.





A pair of oven birds, singing on their nest



The oven bird is only 19cm long; its song resembles bright, bell-like laughter.

from the word *furnus*, an oven. This object has a curved inner wall that separates the antechamber from the breeding chamber. The nests are usually built on fence posts or telegraph poles. The clay body is 'shortened' with plant fibres just as human potters have been doing since the Neolithic Age. Perhaps they learned to do this from the birds.

Geophagia

According to *duden.de* again, 'bio' can mean that a person or a thing is in some way 'connected with organic life, with living beings'. This applies to the tradition of geophagia among African and Oceanian peoples for various reasons. When African slaves came to market in America, the slave traders kept watch for symptoms of tetanus, also known as lockjaw: among the bacteria present in clay are the pathogens that cause tetanus. This is why even in Antiquity people endeavoured to obtain medicinal earths from great depths, where they are usually wholly or largely sterile. For this reason, earths were also often heat treated. New analytical methods have led to the discovery that kaolinite also contains tiny concentrations of dioxin.

Most historical records of geophagia come from ancient Greek culture. Thus in Homer's times, earth from the island of Lemnos was famous for its antitoxic properties, and it retains its reputation even today. This fame certainly had cultic origins too. By the hill of the village of Varos on the island of Lemnos, where the earth was extracted, a fire fuelled by natural gases used to burn, which made the location to a cult site for Hephaistos, the god of fire and the arts. We discover more about terra lemnia through Galen (129-201), probably the most famous physician of his times. He visited the island to become better acquainted with the extraction of this earth. It was dug in underground galleries, and by watering, the coarser particles were removed. When it was half-dry, a certain proportion of goat's blood was mixed in. Pressed to form small pills, the earth finally received a seal or stamp with a picture of a goat. This led to the expression 'sealed earth'.

Right up to the early modern age, terra sigillata was sold in pharmacies as a valuable remedy. Galen ascribed desiccating properties to terra lemnia and used it principally as a remedy for chronic inflammatory swellings. When he was called to the emperor Marcus Aurelius' military

encampment in Aquileja, he stocked up with 20,000 terra lemnia pills. With this remedy, he succeeded in curing the emperor of a stomach complaint. When the island of Lemnos was later occupied by the Turks, the new ruler took over the extraction and sale of terra lemnia. In accordance with a fixed ritual, once a year on 6 August, in the presence of Greek and Turkish priests, the earth was extracted. It was on sale in those days in the pharmacies of the Middle East, and among the diplomats of those countries it was considered a particularly valuable present for one's host. In the Middle Ages, the great epidemics, especially of plague and cholera, caused a spreading of the use of medicinal earths. Alchemy, which was developing at the time, provided the stimulus for this phenomenon with its particular interest in rocks and minerals. In the 17th and 18th centuries, many healing earths were used. The so-called 'Steinmark', extracted between the galleries of mineral ore mines was also used for this purpose in the Ore Mountains ('Erzgebirge') in the south of contemporary east Germany.

In the Modern era, Franz Kafka was the most prominent patient of Dr Adolf Just, who coined the term 'healing earth'. Kafka wrote a chapter in his incomplete

novel America (also known as The Missing Man). Today, Luvos Healing Clay is available in pharmacies.

Biocultural ceramics

Among the great ceramic artists of the previous century are Max Laeuger and Bontjes van Beek. Laeuger was fascinated by the beauty of Islamic maiolica and travelled to Sultanabad to study it.

Bontjes van Beek was inspired by the cultural zenith of stoneware in Song ceramics, which he encountered in exhibitions. His vision was that ceramists should produce glazes of that kind as works of art. The art of the glaze existed in Europe before and Bontjes had been successful with it. With his participation, it became a characteristic of ceramics as

applied art. He is also considered to be someone who calculated and developed individual glazes. Parallel to the technology euphoria of the 20th century, this led to the emergence of a kind of art with a new relationship to nature that Bontjes no longer participated in. However, consciously or unconsciously, he had initiated a kind of ceramics that one might term biocultural. Nature in ceramics proved to be so full of knowledge and experience that it developed a great attraction. The substantiality of this kind of ceramics surpassed all surviving traditions. It was possible to make glazes just from natural rock that you found or from vegetable ash that you burned yourself. It was possible to create a material with visual and material properties that produced a sensitive result. However, natural instinct proved

to be too inflexible in a commercially defined development, where the spirit of the times had been washed away by the flow of time and regionalism was supplanted by globality. On the overheated path of art, ceramics was ultimately defeated by conventional judgement, according to which it was to be classified as sculpture or design. In these pigeon holes, it lost much of the secure sense of its natural heart.

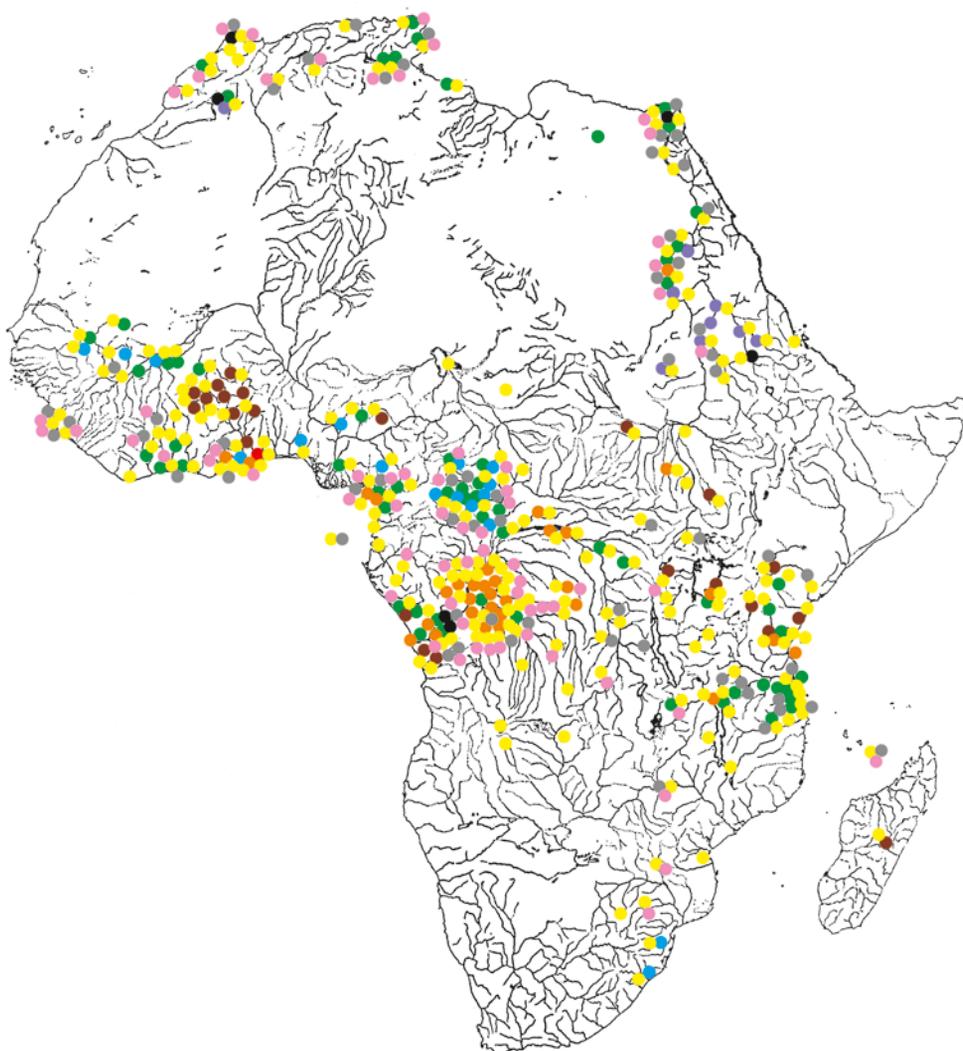
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www.gustav-weiss.de



Distribution of geophagia in Africa

from habit ● and hunger (especially among children ●), as medicine against parasites ●, for syphilis ● and diarrhoea ●, during pregnancy ●, for religious reasons: earth from a holy place ● or grave ● when swearing oaths, earth from the grave of a holy man or an ancestor as medicine, earth from a holy place ● or grave ● as medicine After Anell and Lagercrantz