TAMESIOLOGY

by
OLIVIA GUIGUE

TAMESIOLOGY: INTRODUCTION

Tamesiology is a multidisciplinary project that investigates the geology of Anthropocene. The ongoing research takes the Thames' foreshore as a case study and borrows the river's ancient name *Tamesas*, rendering the study of the Thames a discipline *per se*.

'Hornwrack & Pseudo-Hornwrack, Polypropylene Foliacea.'
Exhibition 'Vision of Science' at The Edge Art Center, Bath University, UK. 2018.
Preceding page: 'Pseudo-Hornwrack, Polypropylene Foliacea. 112 x 82 x 46 mm. 104 g.'

6-DEGREE CLASSIFICATION OF MATTER

'6-Degree Classification Of The Contemporary Geological Formation Of The Thames Riverbed.'
Exhibition view of Tamesiology at the SE8 Gallery, UK – vitrine 117 x 118 x 61 cm – 2021.

1st ° INDIGENOUS MATTER

flint
freswater snail shells
fossils
wood
animal and human bones

Flint nodule. 65x170x47mm. 184g. Deptford wharf.

Indigenous to the Thames' riverbed. In prehistorical times, the foreshore was the main source of raw material for stone tools. In the 17th. c, flint was broken into small squares and used in flintlock guns to generate sparks and ignite gunpowder. Gunflints can be found on the foreshore and in shipwrecks sank in the estuary. Art amateurs refer to this peculiar type of flint nodule as the Henry Moore flint for their resemblance to the artist's sculptures.

2nd ° IMPORTED NATURAL MATTER

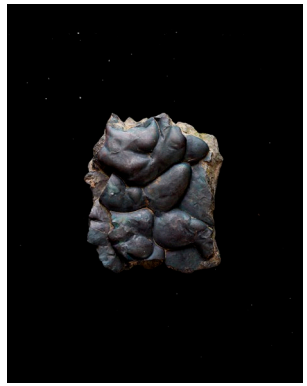
chalk
oyster shells
coral
fruit cores
coconut shells

Coral Diploria strigosa. 125x83x55mm. 325g. Barnards wharf.

For centuries, coral, basalt, small or large stones, metal, etc. were collected on beaches on the other side of the world and used as ballast in large ships requiring more weight for the vessel's stability. On arrival in London, the ballast was offloaded into the river. Coral found in the Thames is usually from the Caribbean and South-East Asia.

3rd ° BY-PRODUCTS FROM NATURAL MATERIALS' EXCTRACTION

slag
clinker
metal scrap

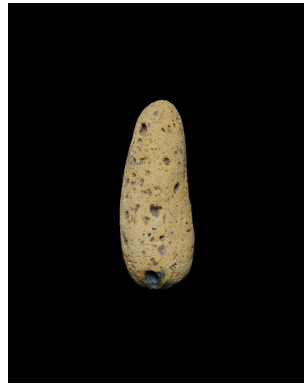


Ferrous slag. 74x85x39mm. 907g. Burrells wharf.

Large chunks of iron slag were used to stabilize the foreshore's muddy banks and provided soft beds for barges at low tide. Iron slag is as by-product of the manufacturing process of iron extraction.

4th ° PROCESSED NATURAL MATERIALS

alloy
leather
ceramic
brick
tar

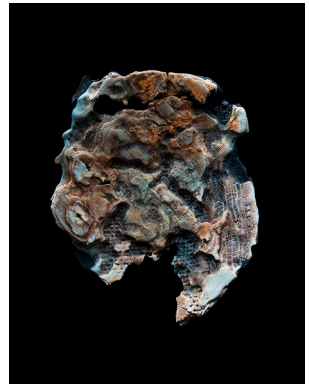


London brick. 89x52x40mm. 383g. Millers wharf.

The infamous London stock bricks are traditionally made with the London clay that lays most of the London basin - on and from which the capital is built. This geological soft bed made the erection of skyscrapers nearly impossible until recent development in engineering allowing London's skyscrapers to "float on rafts" embedded deep in the clay.

5th ° PSEUDO-MINERALS

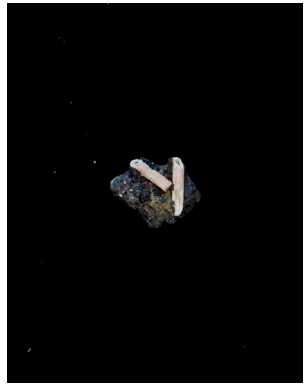
plastics
nylon
synthetic rubber
polypropylene



Pseudo-mineral. 163x163x11mm. 147g. Enderby's wharf.

The composition of this pseudo-mineral still needs to be analysed. The layering structure indicates that the sample is probably a fragment car tyre.

6th ° AGGLOMERATES

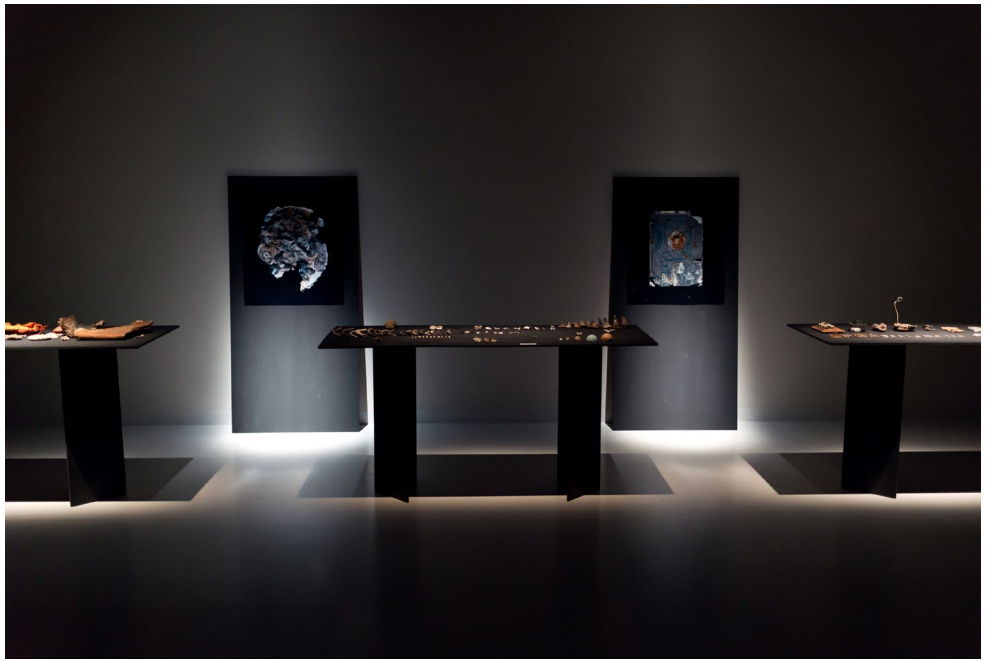


Clinker and clay pipe necks. 46x37x19mm. 17g. Ballast quay.

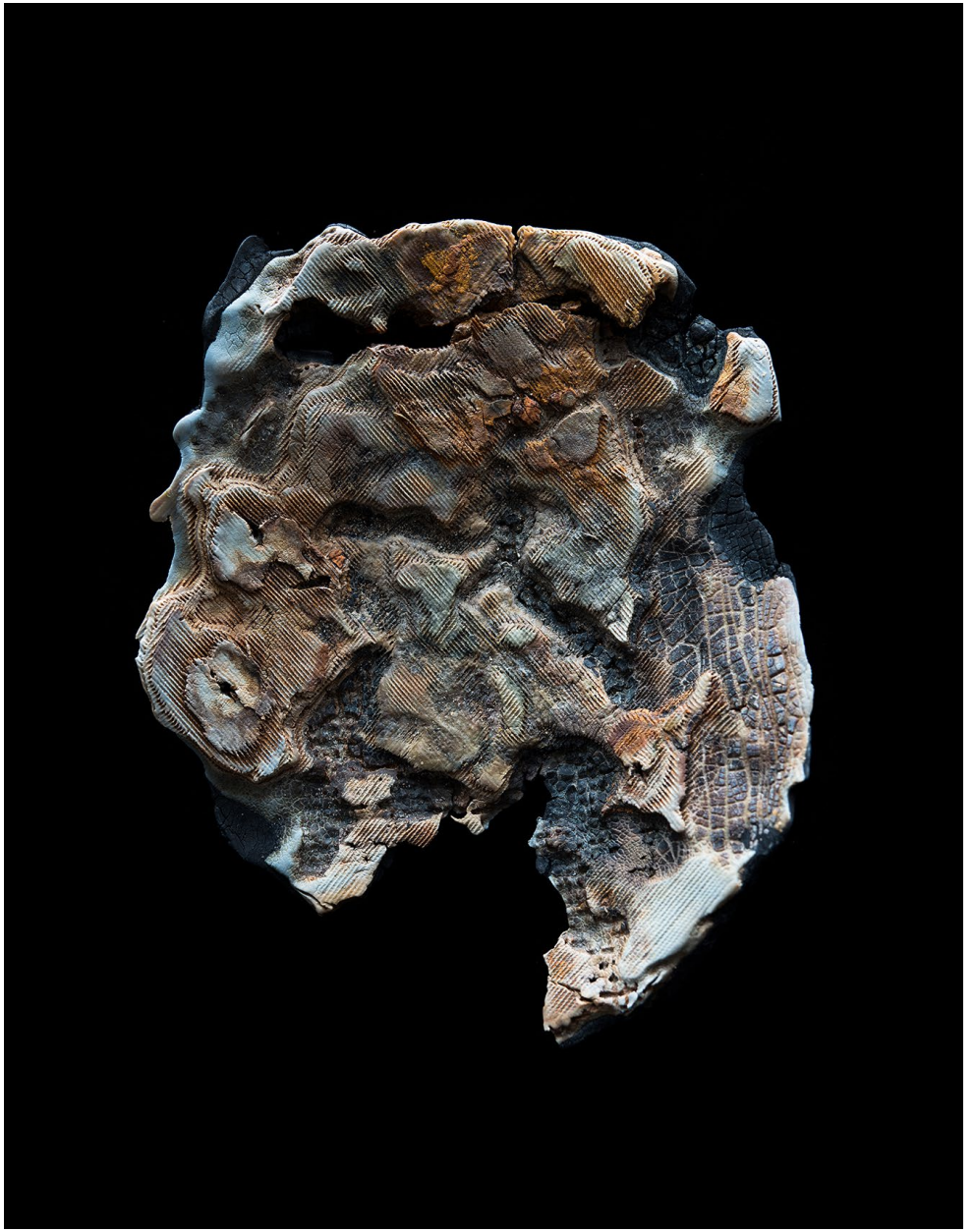
This sample resembles buchite clinker of natural formation. But the two peces of clay pipe necks entrapped within indicate that the specimen is more likely to be a waste product from coal-mining dumps or a fragment from a clay tobacco kiln. The percularity of this specimen is that it could be regarded as a fossil of the modern age.

PSEUDO-MINERALS

The study Tamesiology focuses particularly on the fact that plastic is becoming part of the geological ground. In order to bring about a new perspective on this issue, specimen of synthetic materials (classified into the 6th degree) are brought together as a toxonomy of pseudo-minerals. The samples are selected upon aesthetic criteria, presenting a stage of degradation that allows an abstraction from the objects they once were.
The Pseudo-minerals collection won the ALife Art Award 2018 and was exhibited during the Artifical Life Conference at the National Museum of Emerging Science and Innovation, Miraikan in Tokyo, Japan, along with two other sections of the Tamesiology: Analogies and Museum for a Future.



Exhibition view of 'ALife Art Award' at the National Museum of Emerging Science and Innovation, Tokyo, Jp. 2018.

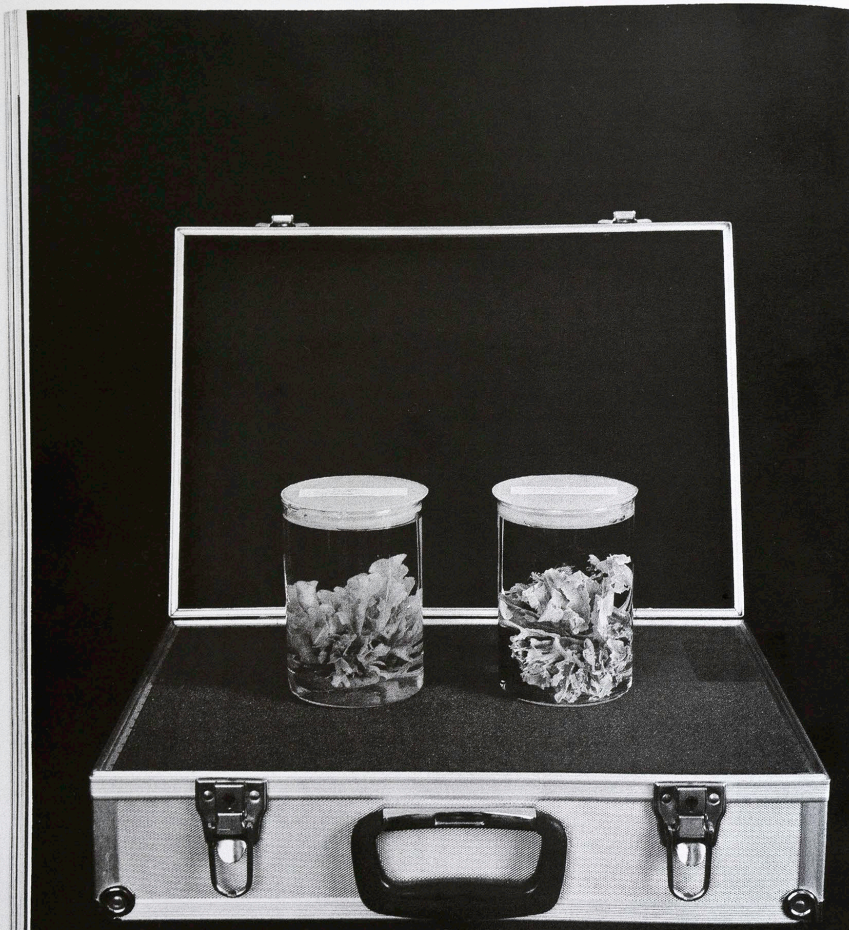


'Pseudo-mineral (tyre).'
C-print, 70 x 80 cm, 2018.

'Pseudo-mineral (meteorite-like). 137 x 152 x 23 mm. 88 g.'
C-print, 20 x 25 cm, 2017-21.

'Pseudo-mineral (hardened putty). 95 x 68 x 27 mm. 62 g.'
C-print, 20 x 25 cm, 2020-21.

'Pseudo-ambers'
Studio view – :s Found materials – 2017-18



Two specimens: Hornwrack (left) and Pseudo-Hornwrack, Polypropylene Foliacea (right) presented as a travel display kit created for exhibition and educational purposes by Olivia Guigue.

The emergence of pseudo-minerals

by Zuzanna Steingarten

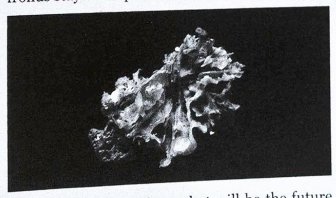
Today evidence of humans' impact on the ecosystem is solid as rock. We live in the epoch of the controversial Anthropocene: the era where human productions are influencing the geological formation and inscribe themselves in the stratification of Earth's crust. While a minority of scientists goes even further calling our era the Plasticocene.

From the creation of the Bakelite in 1907, the first material 100% synthetic, followed by progress in chemistry, plastic production thrived into unexpected amounts of new materials. Plastics are everywhere in our day-to-day lives as well in the latest technologies, and traces of plastic in the environment are becoming invasive.

A new phenomenon has been recently brought to light in the emergence of what researcher Olivia Guigue calls the pseudo-minerals. During numerous missions between 2017 and 2019 on the Thame's foreshore in London, UK, Guigue discovered about 40 different types of specimens: " The samples have been identified as plastics that take the appearance of natural minerals and rocks " says Guigue. Pseudo-minerals are different from pseudomorphs that results from a natural phenomenon where one mineral replaces another by a substitution process, taking its shape like in a cast. What's happening with the pseudo-minerals has never been observed before: " It seems that, by abstracting from the object they once belonged to, these complex combinations of synthetic polymers are capable to sense the natural environment in which they begin a second life after being discarded and, by elective affinity, start to mimic natural elements" adds Guigue.

The researcher has no satisfying explanation as for the phenomenon yet. However, she notes that " the term plastic comes from Greek πλαστικός plastikos meaning "capable of being shaped or moulded", what induces me to think that the very nature of plastic matter is imputed with adaptative properties that permits to this type of material to mutate ".

Let's have a look at a concrete example: the *Pseudo-Hornwrack, Polypropylene Foliacea* shown on the opposite page. Spectroscopy analysis by SGS Laboratory, Manchester, identifies the puzzling specimen as *poly-dipropylene endomethylene tetrahydrophtalate*. The specimen imitates a hornwrack or flustra foliacea, a colonial animal, species of bryozoans, found in the North Sea, frequently mistaken for a seaweed. Guigue reports: " The empirical study of the *pseudo-hornwrack* sample, along with the results of testing, let us think that it could be a type of varnish or primer: a liquid that leaked through a structure and moulded its shape; although the exact formation of its palmate fronds stays unexplained".



We can ask ourselves what will be the future of plastic materials if we continue to abandon them to their own life in the environment. While sceptics see here a deception, the results of Guigue's forensic are alarming the scientific community.

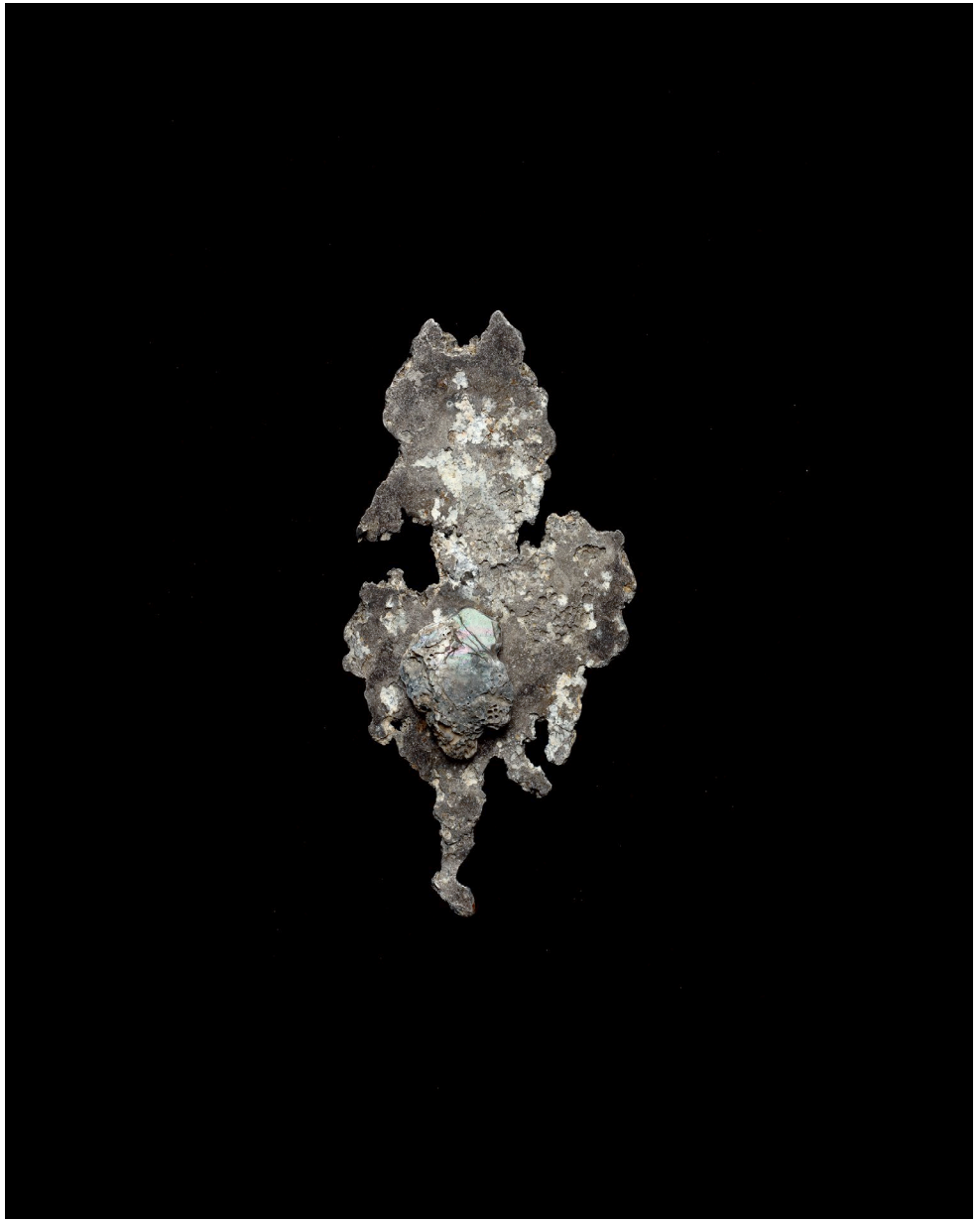
'The emergence of pseudo-minerals.'
Article published in 'Nichts Als Schönheit', De, 2019.

PSEUDO-MIMESIS RESEARCH TABLE

The pseudo-mimesis research table, is a working bench showing the long process of categorising specimens. It is a research tool in the form of an ever-changing repertoire of shapes and materials where new foraged samples are added and replaced in order to refine the search of perfect matches between natural and man-made samples. These materials presented side by side contrast not only by their nature but also in age: a four-hundred-year-old eroded bone leaning against a ten-year-old abraded piece of cinder block. A million-year-old piece of stone juxtaposed to a thirty-year-old piece of plastic.

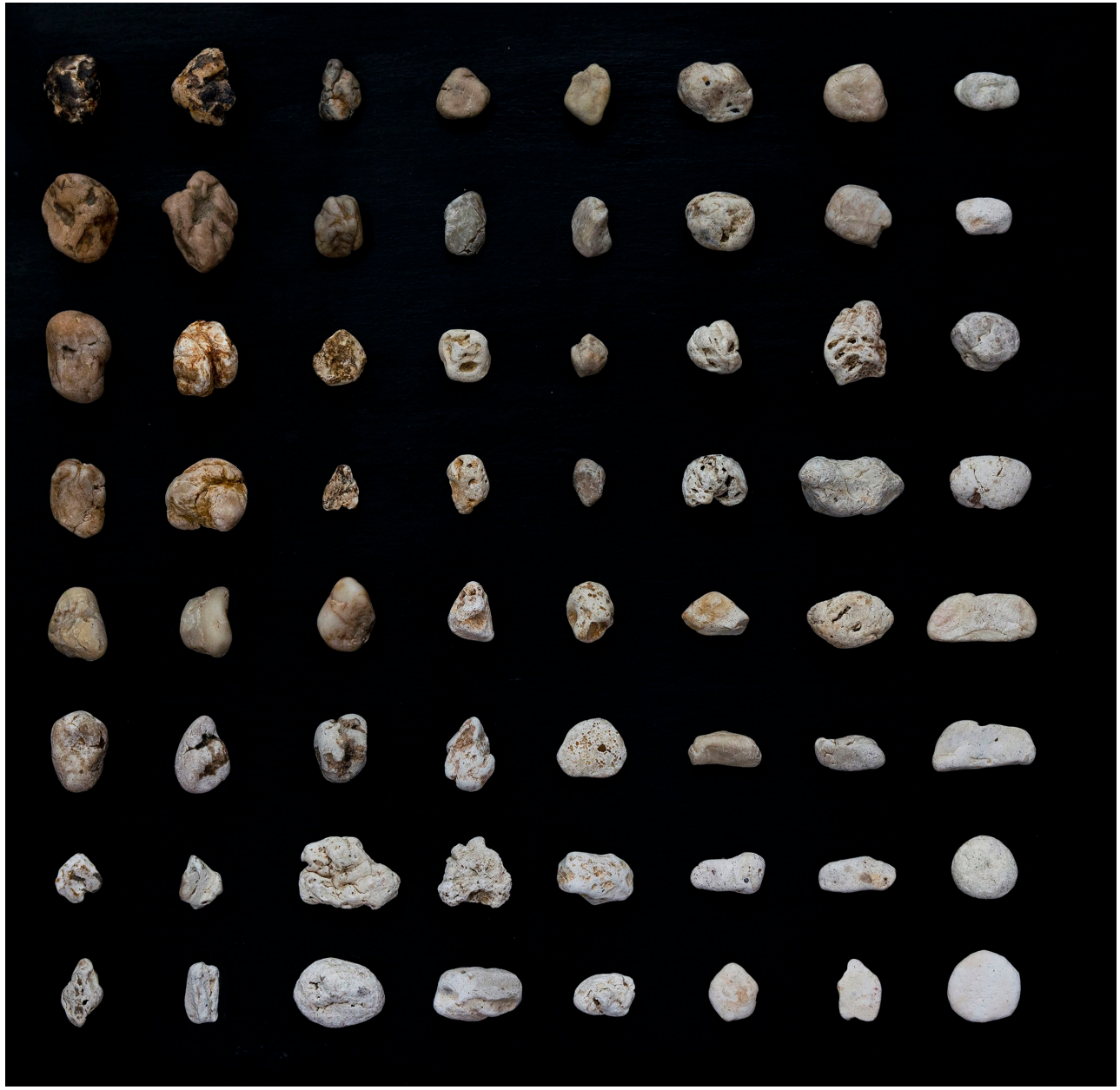
Exhibition views of Tamesiology at the SE8 Gallery, UK, 2021.

PSEUDO-MIMESIS



‘Aluminium scrap, 20th-21st C. and oyster shell fragment, Roman Era.’
C-print, 20 x 25 cm. 2021.

‘Eroded bone, circa 15th-17th C. and eroded breeze block, end of 20th C.-21st C.’
C-print, 20 x 25 cm. 2021.



'Stone pebbles, circa 3-million-year old and chewing-gums, 21st. c.'
C-print, 20 x 20 cm. 2021.

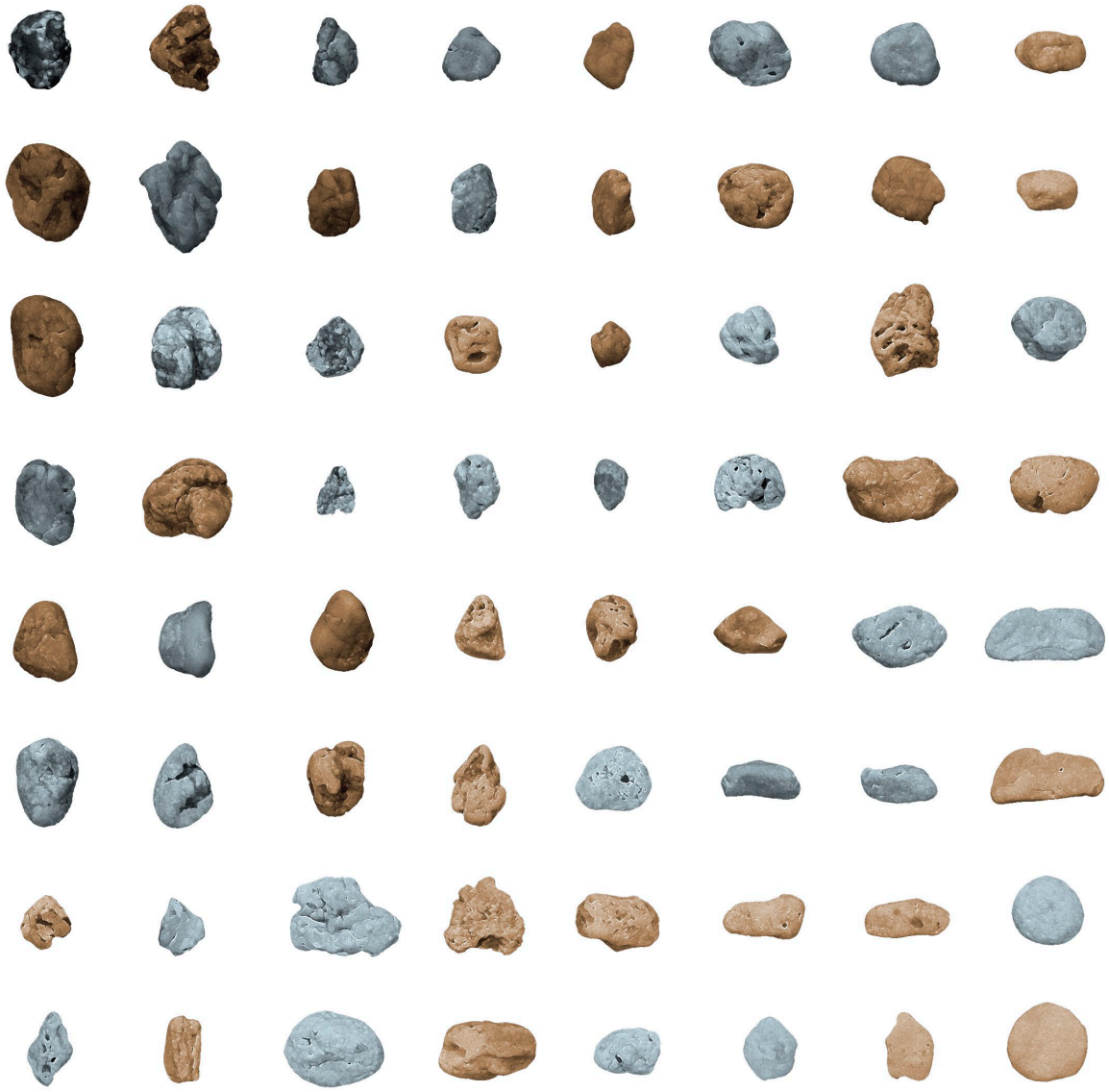


Diagram differentiating "stone pebbles" in orange and "chewing-gums" in blue.

'Thoracic cage'
Rib bones, mostly medieval and various man-made artefacts, 20th. and 21st. c.
C-print, 50 x 60 cm, 2021.

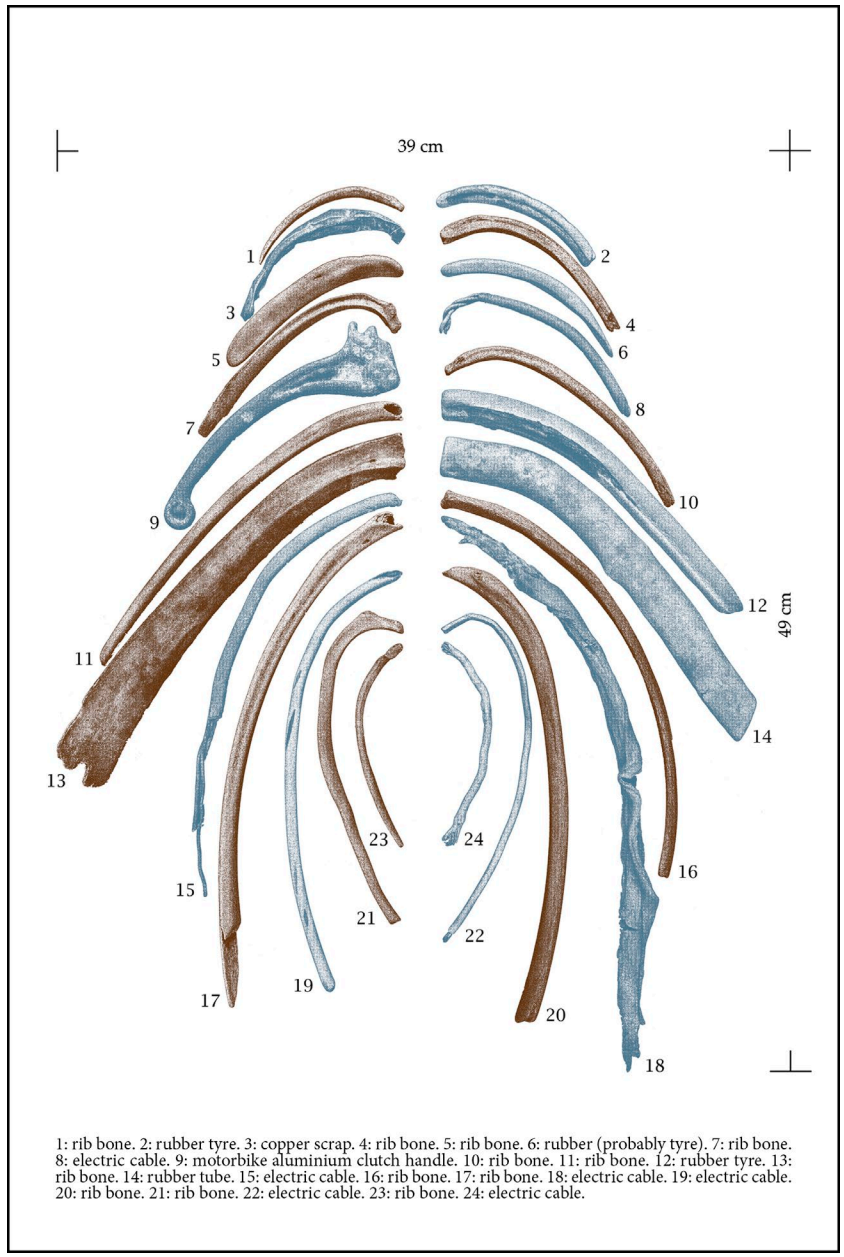


Diagram differentiating "bones" in orange and "artefacts" in blue with legend.