

# Materials Unknown

Action Pyramid

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**A new multichannel sound work created solely using sound sources beyond classification.**

The recordings that make up the compositional material of this piece were mostly captured using tools which by their nature do not disclose the sound's origin.

Hydrophones dipped into freshwater ponds, rivers, canals, intertidal and oceanic habitats, eavesdrop on human and more-than-human soundscapes. Submerged out of sight, floating in a space where cues of directionality, proximity and our human centric 'two-ears-on-our-head-in-the-air' modes of listening are rendered inadequate, these devices relay surprising and often undefinable sounds. They serve as a lens through which we can 'pierce a sensory barrier'<sup>1</sup> but also within which we are often unable to identify an individual species' calls and exchanges. Only recently have scientists and creative practitioners begun to pick apart the complex sound worlds of popular study subjects such as whales, dolphins, and some fish. But there are still

many unknowns in marine and freshwater contexts, with a multitude of other aquatic organisms now being recognised as using sound as an integral part of their existence.

Further mysteries are found above water with the deployment of vibrationally sensitive contact microphones; pin one to a humble bramble stem in the warmer months and chances are, if you listen long enough you will begin to hear a strange and bewilderingly diverse array of melodic, rhythmic and surprisingly characterful signals. Amazingly these largely uncategorized, often insect-based vibrational communications occur inside the stems and leaves of many common plants, and even within the soil itself. Such sounds are still understudied, and feature frequently throughout this composition. They have existed for millennia just out of earshot, created by organisms which make up what researchers are dubbing 'vibrational communities',

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sonic ecosystems in acoustic assemblages of such complexity we struggle to define each signal in relation

To collect species-specific information has historically required the practically and sometimes ethically problematic capture and isolation of an organism, followed by the expectation for it to behave and vocalize as though it were still happily existing within its habitat.

While biological sound archives are integral to furthering understandings of the world, it is important to consider how these sounds can also become data. Machine learning is fast growing as an effective analysis tool into which countless months of environmental sound recordings can be fed and soniferous species can be efficiently detected, but by processing rather than listening we risk losing the emotive, relational and experiential qualities of sonic attentiveness.

**Materials Unknown** serves as a prompt to consider our innate desire to name and prescribe meaning to our world. With a decoupling of context and method, using combinations of recordings informed more by their tonal, textural and rhythmic qualities the piece aims to celebrate the capacity for our acoustic imaginations to conjure our own interpretation of sounds which currently exist on the periphery of understanding.

Soil at Wimbledon Common

Jetty at Scottish Centre for Ecology and the Natural Environment, Loch Lomond.

Bramble stem on Walthamstow Marshes

Nocturnal grass from Eoligarry, Isle of Barra, Outer Hebrides

River Chelmer, Essex

Mile End Ecology Park pond

Soil recordings at Cookley, Suffolk

Nettle stem on Claypits nature reserve, Glasgow

Vegetation at Rothamsted Research 'Park Grass' experiment site, Hertfordshire

Bramble stem at Winks Meadow nature reserve, Suffolk

Vegetation at Waterworks nature reserve, Lea Bridge, London

Underwater where The River Lea meets The Thames

Reservoir at Walthamstow Wetlands, London

Loch Eishort, Isle of Skye

1 Sounds Wild and Broken, by David George Haskell

2 Hay meadow vibroscape and interactions within insect vibrational community, by Rok Šturm, Behare Rexhepi, Juan José López Díez, Andrej Blejec, Jernej Polajnar, Jérôme Sueur, Meta Virant-Doberlet.

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Part of Microscope's summer programme exploring contemporary landscape and ecology practices, in special extension of **Echolocation** sound-and-place series.

Microscope is a tiny testing ground for art and ecology. Hosted by Periscope, curated by Kirsty Badenoch and Daniel Rea.