



NOVEMBER MEETING

Wednesday 9th November, 8pm: 20.00GMT. Via Zoom (link available on request)

"Almost like being there: new approaches to deciphering animal behaviour from trace fossils"
Jon Noad (Stantec Consulting; University of Adelaide)

Traces are structures produced in rocks and sediments by the life processes of organisms. They include footprints, burrows, skin impressions and many other weird and wonderful signs that tell stories of the behaviour of animals through time. Ichnology is the study of trace fossils in ancient rocks, but what this talk aims to show is that we should also be looking at modern traces, to help to identify their analogues in the fossil record.



After an introduction to the simple worm burrows most commonly found as trace fossils, we will make our way through the animal kingdom phyla by phyla, looking at examples of the fascinating traces left behind by both ancient and modern animals. What is so special about traces is that they record animal activity, rather than body fossils which merely reflect that once upon a time a particular animal was alive. Deciphering what these traces mean is all part of the fun.



Shrimps, insects and arthropods begin our tour, including giant termite nests that cover half a block, and lobster trackways showing that little has changed in the mangroves over the last twenty million years. Modern fish nests discovered in Japanese waters, perhaps the most beautiful traces ever created, are compared to their simpler fossil counterparts, as well as feeding traces and *udichnia*, or fish fin drag marks formed at low water. A variety of dinosaur traces are presented, including some classic “muddy boots” splodge prints and even the first recorded dino burrows.

More reptilian trackways are complimented by

some unique bird feeding structures, and you will discover the link between their modern analogues and a group of French maids. I will demonstrate how snow provides a perfect canvas upon which bird behaviour may be recorded, and we will round off with mammal tracks ranging from surfing squirrels to early hominids. We will even squeeze in some “bathroom” traces, not for the faint of heart. Contrasting the many modern traces with the ancient will hopefully convince even the sceptics amongst you that neoichnology has an important role to play in interpreting ancient spoor, and I suspect that many of you will be looking down, scouring the ground for footprints, following this talk.



HARROW & HILLINGDON GEOLOGICAL SOCIETY

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goose resting traces

Biography:

Jon Noad graduated in 1985 and started working as a mining geologist in South Africa. He returned to the UK to work in marine cable laying and completed a Masters in Sedimentology at evening classes. This led to a full time PhD, working in eastern Borneo, after which he joined Shell International working Middle East exploration and several production roles. He moved to Shell Canada in Calgary, followed by senior geoscience roles at Murphy, Husky and Gran Tierra (Colombia). Jon started a consultancy in 2017 and now runs field trips and courses for industry as well as teaching at several universities. He is also heavily involved in palaeontological site monitoring.

Jon will be joining us on Zoom from Canada.