



# BOURNEMOUTH NATURAL SCIENCE SOCIETY & MUSEUM

Registered Charity No. 219585

Patrons: Chris Packham & Dr Jane Goodall

**Members at  
June's  
Geology  
Field  
Meeting**



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Dear Members,

Welcome to the winter newsletter for 2016/2017. And welcome to... me! As you will all know from the last newsletter, Katherine left the BNSS in October. My name's Dom and I've been recruited to fill her formidable shoes. If I haven't already I look forward to meeting you all at some point.

As always, autumn proved busy for the museum and the society. Inside you'll find updates on the Open Days and our activity for this year's Arts By the Sea Festival. You'll also find a report from Ray Chapman on this year's Geology Field Meetings, some notes from John Cresswell and a Madagascar update from Ashley Leftwich. Christmas is close upon us and there's news in this edition of extended opening hours for the Museum over the festive period.

I hope you'll find lots of interest in this newsletter. I'm slowly learning the ropes so by the Spring issue comes around I'll have lots of exciting features to include.

*Dom Kippin, BNSS Communications & Fundraising Officer*

November 2016

## Night at the Museum

Our courageous Young Explorers spent a Night at the Museum for Halloween this year. Many thanks to Steve, Bryan and Veronica for arranging the event.



## Arts by the Sea Festival 2016



Once again we were delighted to take part in the Bournemouth Arts by the Sea Festival. Now in it's eighth year, the BNSS is a proud supporter of this celebration of intriguing, spectacular and curious arts experiences.

As always the BNSS Open Weekend was held on the first weekend of the festival. This year's weekend had a slight to previous events. As part of the festival's theme of 'Visions and

Voyages' the Saturday became Astronomy Day and we were delighted to welcome back Bob Mizon and the Mizar Travelling Planetarium. Sunday was Insect Day with the ever-popular live insect displays. Over 700 people visited the Museum over the course of the two days and as well as raising the profile of BNSS their donations and purchases helped bring in over £1000.

We also worked with the Southampton University StoryPlaces project this year. Writers from the Southampton University Creative Writing department and other local authors visited the BNSS for inspiration and visitors to this year's festival were encouraged to use a phone app to read the work and visit the Museum. Author Philip Hoare chaired a discussion on 'Nature versus Culture' and gardener and writer Anna Pavord talked about her new book 'Landskipping'.

The 2017 Arts by the Sea Festival runs from 14th to 21st October with the theme, 'Plastic Beach' focusing on ocean, coast and maritime pollution and the environment around us. The BNSS Open Weekend will be on the 14th and 15th October. If you have any ideas for activities that reflect the chosen theme do let me know via email to [publicity@bnss.org.uk](mailto:publicity@bnss.org.uk).



## **Members' Christmas Party!**

This year the Members' Christmas party will take place on Tuesday 6th December. Like last year, there will be cake, mince pies, cups of tea and mulled wine galore! It will be a fun social gathering and a chance for the Trustees to say thank you for all your support over the last year. So we can get some idea of numbers please email [contact@bnss.org.uk](mailto:contact@bnss.org.uk) if you are interested in attending.



## **CHRISTMAS OPENING 2016**

Following the success of our extra opening hours during the summer holidays the decision was taken to expand the BNSS regular opening times over Christmas to allow families to visit during the seasonal break. The Museum will be open to the public on Tuesday 20th and 27th December and Thursday 22nd and 29th December. Once again great thanks goes to Ray and all the volunteers who have made this possible.



## Geology Field Meetings 2016

In April we went to Lyme Regis, parking at the top of the descent into the town and walking down the steps to the new sea defence wall. At the beach we headed east in the direction of Charmouth studying the large blocks at the base of Church Cliffs with their many ammonites, bivalves and bioturbated surfaces. We passed the site of the landslips where fossil and mineral material is mixed together with debris from the old landfill site started in Victorian times. Continuing east we were able to study the cliffs and the Black Ven slippage mechanism that makes this area the largest landslide in Europe, it has been moving for many hundreds of years. Little fossil material was found during the trip with the exception of some belemnites and fragile ammonites. Some calcite crystals were found but nothing spectacular. It was felt that the steps and the sea defence wall were a great improvement even if they did obscure some of the strata.



In May we visited Winspit, parking at Worth Matravers we walked down past Spyway Barn to the coast and up onto the disused quarry. The quarry operated from the 17<sup>th</sup> C up until 1950 when transport by sea became uneconomic. The strata is the Portland Freestone with the bed that is quarried being the Under Freestone, the rest of the strata being removed as waste as necessary. The Under Freestone sits on the Portland Cherty Series which forms the base of the quarry. The quarrying was done by quarry and stall method where columns of rock were left in places to support the roof, the quarry is very unsafe now with large fallen blocks in most of the galleries. Looking around the outside of the quarry we were able to see the moulds of large ammonites which had been dissolved away. The quarry floor on the sea side was suffering from cracking along prominent joints and parts of it were obviously soon to join the large

blocks on the lower surfaces. After a trudge back up to Worth Matravers a refreshing drink in the Square and Compass and a look at their fossil collection restored us.

June was a visit to Studland to study the end of the Cretaceous Strata and the beginning of the Palaeogene. Parking in the Bankes Arms National Trust car park we walked along to the beach and headed west towards the Chalk. Unfortunately due to a higher than expected sea and fallen trees on the beach caused by the cliffs slipping we were unable to get to the fault that brings the sands and clays of the Palaeocene and Eocene over the Chalk. We were able to view from a distance the solution pipes and flint layers in the chalk. Walking east we

studied the sands and clays and noted the lack of stratification and the tendency to slippage. At the Redend Sandstone, now called the Broadstone Sand, part of the Poole Formation, we studied the red and orange apparently random

patterns. Caused by the iron in the sand oxidising they do not correspond to the bedding which dips to the north.

There are also limonitic pipes passing through the sands probably caused by oxidation of pyrite that already formed pipe sin the sand. Apparently they are still forming in the bay. Being unable to get round the pill-box we took the cliff path passing and examining Fort Henry and going on to the other side of the bay to examine an organic rich bed containing fossil leaves and tree fragments, these are inundated with water and when dried are liable to turn to dust. We made our return via the cliff path. After lunch we walked to Studland Heath, passed through the woods to the open area and followed the rather wet and boggy tracks to the Agglestone. The Agglestone is in the Poole formation formed by a large river flowing to the

## Geology Field Meetings 2016

west, it is formed from iron cemented quartz gravel of varying size and in places cross-bedding can be seen formed by variations of flow in the meandering river. In July we visited Imreys Clay pit at Furzebrook this lays on the sands and clays of the Poole Formation Delta when we were at about 40°N, the climate was extremely hot and plant material may be found in the clay. The pit has been dug through the sand levels and palaeosols above to reach the kaolinite/illite clays the lower levels being the best quality equivalent to china clay. The clays were deposited in a lake fed by a river that would have had its source in Cornwall. After our guided tour of the pit we were shown around the storage facilities where the freshly dug clay of different grades is stored before despatch, large bays contain large heaps of clay fragments run in a long line. The clay is sold in different forms, as clay fragments of a particular clay or mixed as an additive to other materials or it is ground to a fine powder, bagged and sold as different grades of quality. The product is sold all over the world. August took us to Worbarrow Bay. Parking at Tyneham, the deserted village still used by the MoD we walked to the beach. Starting at Worbarrow Tout we went to Pondfield Cove on the north of the Tout. The strata here are late Jurassic to early Cretaceous. At sea level is the Portland Chert series with the Portland Stone above. Then the Purbeck series laid down in a lagoonal environment. Having studied the sequence we retraced our steps and decided that climbing the other face of the Tout to see the dinosaur footprints and the evaporites was unsafe for our group we walked to the Wealden strata consisting of coloured sands, clays and quartz grits. Laid down in a river environment the strata dip to the west. They consist of river deposits, overbank deposits, channel plugs and coarse graded quartz grit, in many places lignite can be seen sometimes as large tree trunks as seen on the trip. We headed west studying the sands and clays and particularly the quartz grit which as it was

not rounded had not travelled far in the river. We reached the Chalk at Cow Corner and studied the various strata in spite of the large amount of slippage. There were also small exposures of the Gault Clay and the Greensand both fossiliferous with small fossils.

September saw us assembled at Bournemouth Pier for a walk to Southbourne. First from the pier we discussed the location of Bournemouth on the edge of the Hampshire Basin situated on the Eocene beds with the chalk some 600m beneath our feet although it cropped out at Studland and the Isle of Wight and also north of the New Forest. The Bournemouth Cliffs are formed from river sand, this was a large meandering river that had ox-bow lakes and channel plugs where clay lenses formed. These lenses trapped the leaves from the forest that surrounded the river and until the grading of the cliffs were readily found. Heading east we came to the first exposure of the strata, Branksome sand with little of note. Further on we came to the site of the cliff fall which damaged the lift, discussing the mechanism for the slip we decided it was a combination of a variety of events and similar falls had occurred a little to the west in the past. Further on there is a large exposure of river channels cutting across each other and truncating the channels. There we also slumped sands caused by wet sand collapsing into contorted structures. Near Boscombe Pier there was a good example of planar bedding in the Boscombe Sand caused by linear constant flow of the river. Past Honeycombe Chine where Nippa fruit and fronds used to be found we came to a pebble bed, unfortunately building works prevented us getting too close but it was visible in the cliff, this was a pebble beach and the water was energetic as could be seen by the impact marks on the flint pebbles, the source of which is unsure. A little further and the strata was covered until Hengistbury was reached so we returned to the start. *Ray Chapman, November 2016*

## We're Off to Madagascar Again!

The third BNSS Expedition to Madagascar will take place in December 2016, and will be the most ambitious one to date. It will be a joint collaboration with Bournemouth University, working with their tropical ecology lecturer and a group of her students.



Flying out separately from Heathrow Airport, we will first assemble in the Andisibe forests some four hours drive from the capital. Here we aim to study forest regeneration, a key to healing the damage caused in this area from indiscriminate logging. Various projects are trying to re-link the forest fragments, their funding used to produce nursery-grown trees and to pay villagers to plant these into targeted areas. Once established, there is a tipping point when the trees are large enough to out-shade the ground cover of invasive scrubs. However, the plots need to be managed until this point is reached or all this hard work will be wasted. We aim to provide an insight on whether these projects are successful.

We then hit the tarmac road and



on the east coast, then onto dirt tracks to a ferry terminal, before heading north by boat. We sail overnight, dependant on the weather and tides of the Indian Ocean into the Baie D'Antongil surrounded by coral reefs, sea-grass and forested mountains. On the way we will pass Ile Sainte Marie, once the most important pirate island in the world, where Captain Kidd once lived during the 17<sup>th</sup> and 18<sup>th</sup> centuries.

When we disembark into the sleepy village of Maroantsetra, our party of nine will expand to include National Park guides and we will camp along southern shores of the vast Parc National de Masoala – the biggest National Park on the island at 210,000ha. Inland the forests range between coastal lowland, flooded, humid evergreen and montane types; while beyond the sandy beaches are marine habitats with sea turtles, dugong, whale shark and humpback whales. A true paradise with a prodigious

concentration of wildlife, of which

a significant percentage has yet to be described.

Our group will have a collecting permit to study moths and spiders, and I will also continue my surveys on crane flies. Since 2014 we have found over 50% of the known crane fly species on the island, and have found over 40 new species. The BNSS Wallace Room now holds the most comprehensive collection of Malagasy crane flies in the world. Who knows what other species we will find – lemurs, birds, tiny *Brookesia* chameleons and *Mantella* frogs, giant stick-insects, the list just goes on.



After Christmas spent on the island of Nosy Mangabe, showering in waterfalls and hoping to watch Aye-Aye at night, we fly back to the noise and bustle of Antananarivo to complete our paperwork and return to the UK on New Year's Eve. If you would like to see our finds and photographs, or would like to get involved with future expeditions, then please contact me at

[ashley.l@ashpartnership.co.uk](mailto:ashley.l@ashpartnership.co.uk).

## Some notes from John Cresswell

### Request for Volunteers

Our loyal membership has always been the strength of our Society, both in generous financial contributions and in the many volunteers taking on the various tasks. We are facing changing situations, and we desperately need to harness this willingness from amongst our members who understand how we operate.

The Programme is the main reason for joining the Society. With an excellent array of a wide variety of topics given by invited lecturers and our own members, it makes great value. These talks are arranged by a handful of Sectional Chairmen, to whom we proffer much gratitude. Two of these Chairmen (of Ornithology and General) wish to retire after their recent stints, and there is a need to replace them. It may also be that other Sections could be introduced or reintroduced, to bring in other sectors of the population into the Society. There is great scope for newer members to contribute their talents and ideas..

There has been much discussion about tea after lectures. I personally think socialising is what a society is all about. There used to be a Tea and Social Committee who ensured the members had time to meet up with their friends. This Committee has dwindled and we are relying on the goodwill of just a couple of members (and Steve, our ever-resourceful Caretaker) to keep these teas operating. Save Our Teas! Roll your sleeves up!

Now that we are opening more as a Museum to the public, it would be helpful if we could increase the number of volunteers available on whom we could call to assist during these public events.

### Joint Meetings

We have several occasions when the Lecture Hall is hired out to another specialist group. They pay for the Hall, but allow our members to share their

meeting. Sometimes it is free (or nearly free), but sometimes they charge because they are paying for hall hire. May we encourage members to join in with these events: not only are they usually super presentations but we get to meet people who share our aspirations to enjoy Nature, History, or whatever. We have another such event coming up in January (Friday 20<sup>th</sup>) – come along, and don't begrudge paying. It's worth it.

### The Society's New Logo

During its first hundred years the Society did not have a Logo. In the days of typeset documentation, any artistic embellishment required the production of an expensive metal printing block.

Now that documents can be produced electronically, any artwork can be zoomed in and out to fill the required space. Of course we can exist without a logo, but its object is to promote instant non-verbal recognition of the organisation.

Our first attempt at a logo was a drawing of the President's badge. A major step came around 2010, with an exquisitely executed roundel which included a carbon atom, the bust of Nefertiti, butterflies, a radio telescope and other animals within a flower. Unfortunately, it lost the detail when reduced, and it used a second colour which did not reproduce on a photocopier.

When she started Katherine put the design for a new logo out to tender. The requirements were it should somehow embrace all the many facets of the Society, yet be versatile enough to morph into related objects. A nearly-there suggestion was a hexagon with a 'BNSS' strap. The hexagon graphically signifies the carbon ring, and carbon is fundamentally (on this planet, anyway) the basis of all organic life. Several attempts were made to utilise the shape and we have adopted the multi-coloured version which now decorates our documents.





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