



Lee Bay BioBlitz 2017

Final Report



COASTWISE
NORTH DEVON

Written by Holly Baigent



“What a great success the Lee Bay BioBlitz was! Amazing & inspiring enthusiasm from huge range of experts! It was a privilege to be amongst it. Thanks!” – Robert Durrant



Buglossidium luteum (Solenette)

Lee Bay Bioblitz 2017

Introduction -

A Bioblitz is a multidisciplinary survey of wildlife in a set location at a set time. The main aim of the event is to make a snapshot of species present and ultimately, to raise public awareness of biodiversity, science and conservation.

This year's Bioblitz was held at Lee, a small village located near Woolacombe and west of Ilfracombe (*Fig. 1*). Lee is found tucked into Borough Valley along the North Devon Coast, with a huge array of flora and fauna found in its woodlands and grasslands as well as, a diverse rocky shore at Lee Bay. Surveys took place from 10:30 on Friday 22nd September until 15:00 on Saturday 23rd September. Over the course of the event, there were 12 different public-participation activities timetabled, which took place in various environments, including: woodland, offshore, freshwater, inter-tidal and grasslands. Around 324 people attended, including over 170 local school children from 3 different primary schools. A total of 732* species have been identified from the 1225 records received.

The event was the 9th marine/coastal Bioblitz to be organised by the Marine Biological Association (MBA), with partners. The 2017 event was led jointly with **North Devon Coast AONB** and **Coastwise North Devon**. Financial support was received from **the Heritage Lottery Fund** and **Fullabrook CIC**, with all partners contributing vital funding and support for the project. The event was also supported by 36 organisations and local businesses (listed at the end of this report) that led activities and along with many individuals, supported the event by giving up their time and loaning equipment. Books were also generously donated by local publishers **Wild Nature Press** and **Paul and Teresa Naylor** (pictured below), which were used as prizes in our 'guess the number of species competition' and the Bioblitz mini-missions/ Passport draw.

*Species records still being added and verified. Total as of 24/10/17.

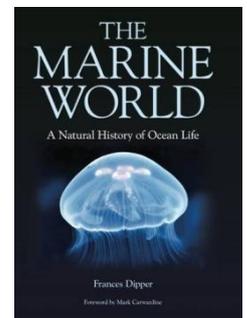
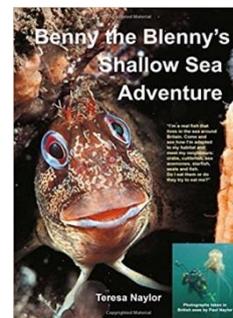


Figure 1. View of Lee Bay from the South West Coast Path

Event Overview

The Marine Biological Associations 9th annual BioBlitz was held at Lee Bay (North Devon), in partnership with North Devon Coast AONB and Coastwise North Devon.



28

Hours of surveying, activities and identifying



324

Participants



1225

Species records received



732

Different species recorded

Activities

Woodland walk

Under the microscope

Cetacean watch

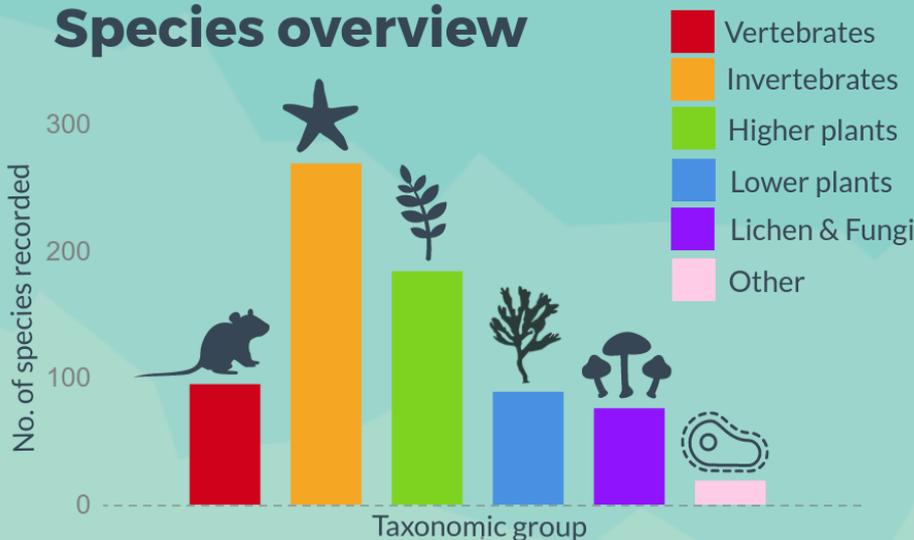
Small mammal surveys

Fish surveys

Moth traps

and many more!

Species overview



With thanks to...

Our BioBlitz partners, North Devon Coast AONB and Coastwise North Devon for help with organising the event.

All the wonderful organisations, volunteers and experts that came along and supported the event.

We are also very grateful to our funders: the Heritage Lottery Fund and Fullabrook CIC.

The Survey Area -

The survey area was located within a radius of approximately 1 mile around the BioBlitz Base Camp at Lee Memorial Hall, including a large section of Borough Valley Woods and Higher Warcombe, Damage Hills and Lee Beach. The offshore survey boundary also included approximately a quarter of a mile out to sea, between Shag Point and Bennett's Mouth (Fig. 2). The beach at Lee Bay slopes gently down to the water's edge and when the tide is out, one of the most diverse rocky shores of North Devon can be explored. Survey zones are mapped in Figure 2, as well as the Base Camp and main car park sites.

Lee Bay lies within North Devon Coast Areas of Outstanding Natural Beauty (AONB), meaning it is part of a nationally designated area helping to protect and conserve the outstanding wildlife, landscape and heritage found in North Devon.

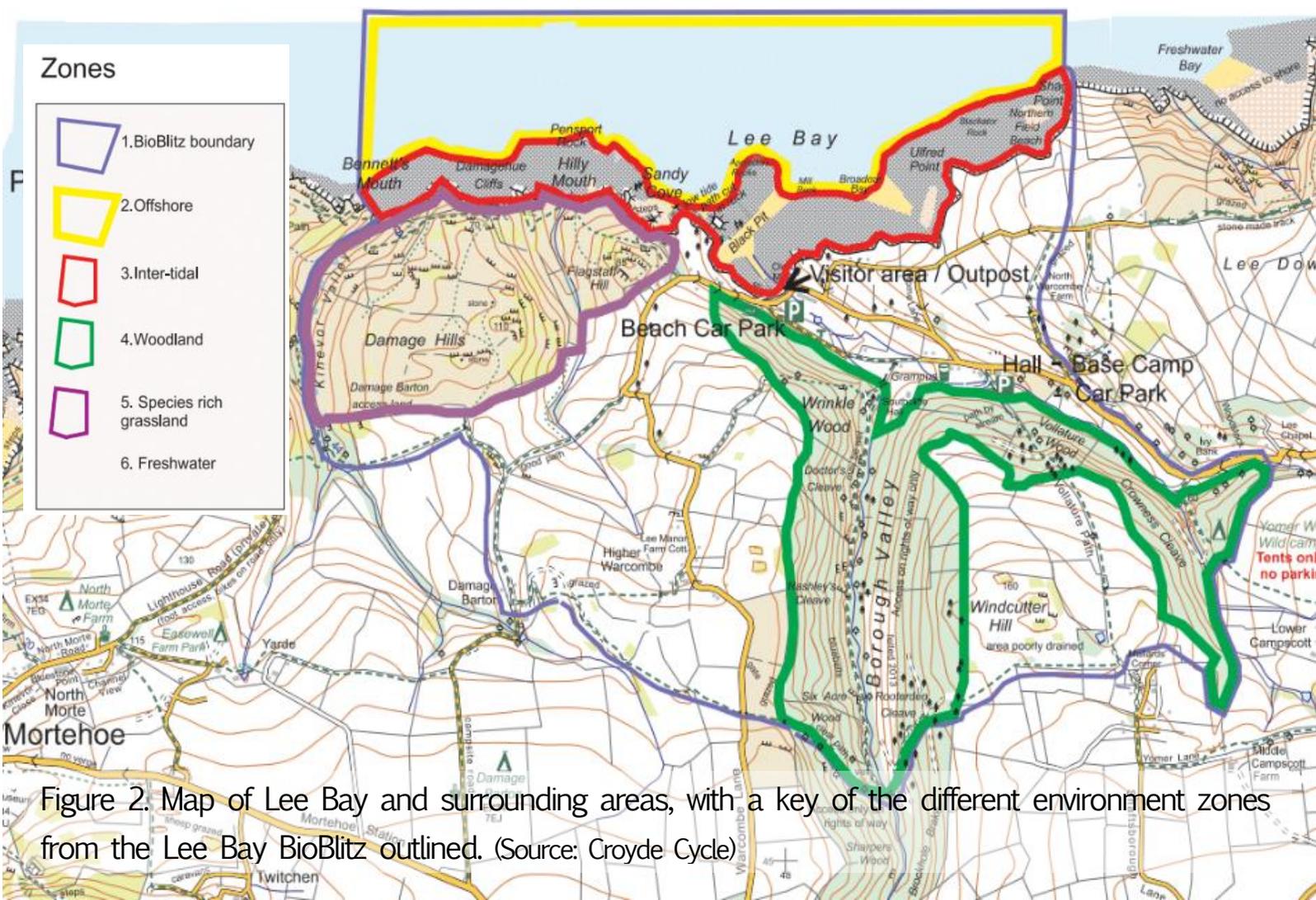


Figure 2. Map of Lee Bay and surrounding areas, with a key of the different environment zones from the Lee Bay BioBlitz outlined. (Source: Croyde Cycle)

Rubroamoena sp. nova.



“Big thanks to all who organised and ran the Lee Bay BioBlitz. Was a lot of fun watching the marine experts, whilst playing a terrestrial one!” – Matt Prince

Base Camp and Activities –

Around 20 local organisations set up displays and activities around the Lee Bay Memorial Hall and under marquees in the outside area, ran by volunteers and staff keen to engage with the public. The hall included spaces for microscopes, species identification and arts & crafts. At the front of the hall there was also a 24 hour information desk and data desk where records were collated. Close to the beach an identification station was set up which engaged people walking along the South West Coast Path.

Day 1

School activities

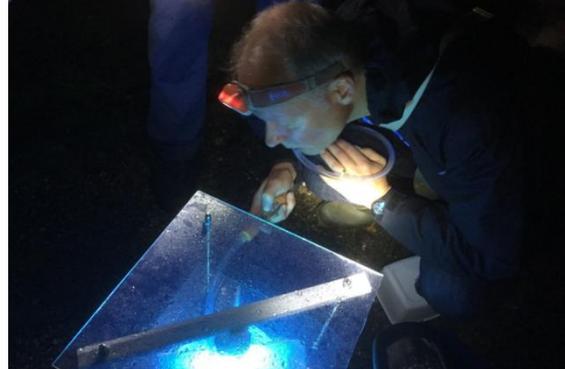
Over one hundred and fifty children from three local schools and ten home-schooled children partook in a variety of activities throughout the day. Each group was escorted by a BioBlitz ambassador and shown by the activity leaders how to find and identify creatures from the different habitats at Lee Bay. This included: seashore safari, freshwater surveys, tree detectives and a visit to base camp, where they were invited to visit stands of some of the participating organisations at this year's BioBlitz.

Woodland Walk

“The woodland walk took place along a steep wooded valley and began along the banks of one of the Borough Valley streams with a lovely variety of ground flora to look at as well as the trees and occasional birds. Within the first few minutes of the woodland walk both herb Bennet (*Geum urbanum*) and herb Robert (*Geranium robertianum*); dog lichen (*Collema crispum*) and the similar looking ferns (*Dryopteris filix-mas* and *Dryopteris dilatata*) found. The rain prevented us from seeing many invertebrates but keen members of the public were able to identify several birds and a surprising number of flowers for the time of year.” - Rose Roberts (Beach Ranger)

Fish Survey and Plankton Trawl

Seine nets and push nets were used to catch and record around 20 different fish species. These included: lesser weaver fish (*Echiichthys vipera*), long-spined sea scorpion (*Taurulus bubalis*) and sole (*Solea solea*). Later plankton nets were also used to take



a sample the zooplankton and phytoplankton found floating in the shallow water, to be identified later in the lab.

Creatures of the Night

“The Creatures of the Night activity was a great opportunity to see some of the nocturnal wildlife around Lee and learn from some experienced ecologists. The activity started just before sunset, by setting both Wellfield and Longworth traps around base camp baited with cat food ready to see what nocturnal species could be found. As the sun set, bat detectors were used whilst walking along the stream down towards the beach, where the frequencies from eight of the UKs eighteen species of bat including the rarer Greater Horseshoe Bat (*Rhinolophus ferrumequinum*) were detected. In a local garden the lights were switched on in the moth traps and everyone watched as a variety of moth species were drawn to the light.” - Cat Oliver (North Devon AONB)

Midnight Rock pooling

When the clock struck twelve, around thirty rock pool enthusiasts headed down the Lee Bay beach with high-vis jackets and torches, to explore the rocky shore after dark. The rocks, sand and pools teemed with life. Crabs were found foraging on nearly every rock and the scraping noises of feeding limpets could be heard clearly. UV torches were used to light up the glowing tentacles of fluorescent anemones such as, snakelocks (*Anemonia viridis*) and daisy (*Cereus pedunculatus*) anemones (see below).



Day 2

Dawn Bird Walk

“As the sun rose keen participants started a 5km walk through a variety of habitats where birds were beginning their morning bird song. Birds were identified through sight and their song, including a quick glimpse at some gannets (*Morus sp.*) circling over porpoises at sea. It was a wonderful way to start the day!” - Cat Oliver (North Devon AONB)

Moth and Small Mammal Trap Reveal

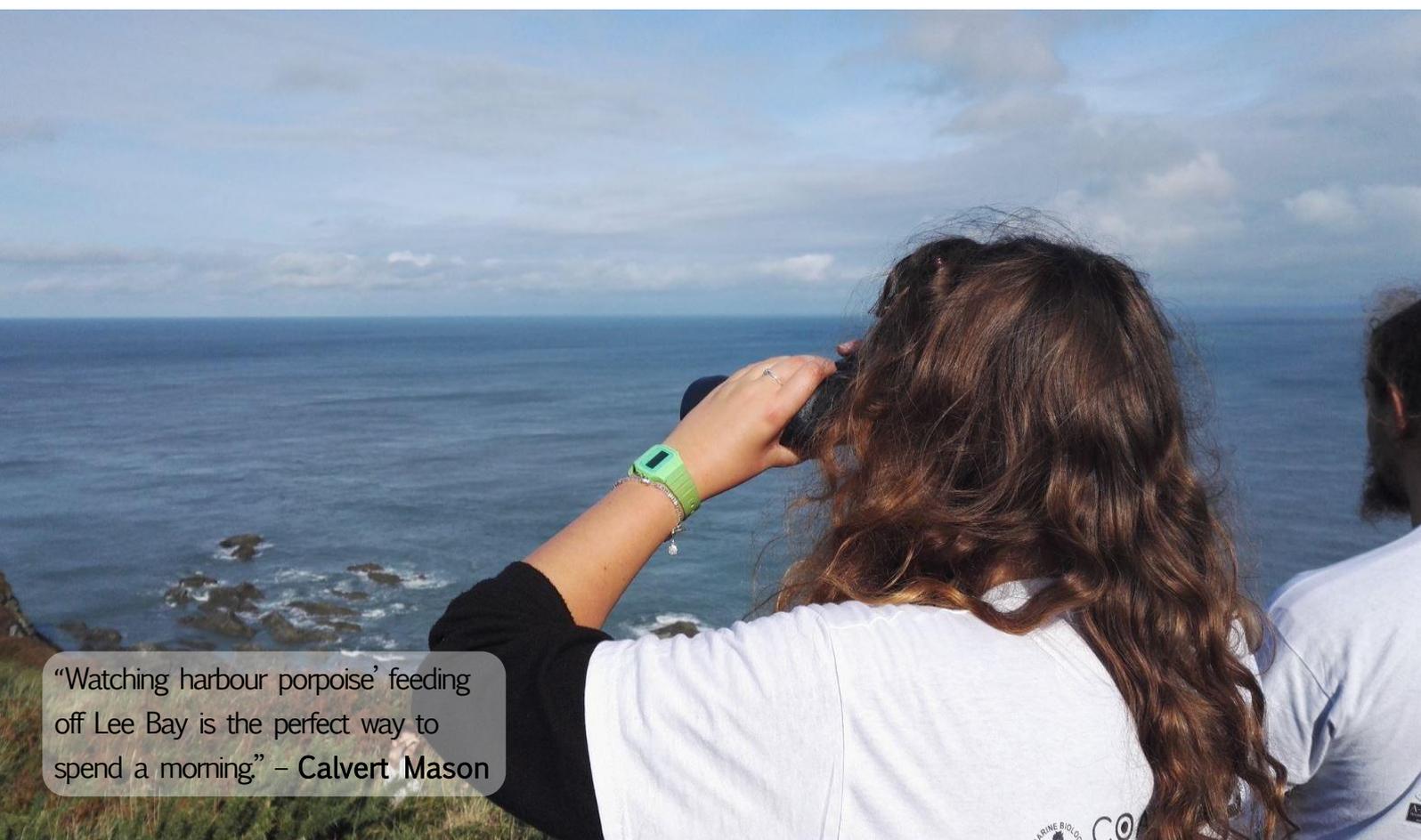
“The Wellfield and Longworth traps which were set up overnight were opened up on Saturday morning, which was particularly satisfying for those who had helped to set them out the evening before. Wood mice (*Apodemus sylvaticus*) were found in both the mammal traps along with several large slugs (which had triggered the trap mechanism), with over individual 100 moths found in the moth traps. Many of the moths were the same species including the common Light Emerald (*Campaea margaritaria*) and Silver moths but there were a few rarer species including the illusive micro-moths.”
- Cat Oliver (North Devon AONB)

Cetacean Watch

After breakfast on a sunny Saturday morning, a large group of participants walked along the South West Coast Path to a grassy spot overlooking Lee Bay. The group took turns to use binoculars which helped spot the bright white gannets (*Morus sp.*) circling above the water on the outside of the bay, it was assume the cetaceans were likely feeding below them, however they were initially out of sight. After a while the gannets slowly started to move closer and two feeding harbour porpoises (*Phocoena phocoena*) were spotted below.

Minibeast Safari

“The minibeast safari was an excellent introduction to common invertebrates found in the garden. Led by knowledgeable and experienced naturalists Matt Prince and Paul Bowyer, the group were shown different types of spider’s webs (lace, funnel and orb) and how to coax a spider from its web using a tuning fork to mimic an insect struggling. Participants then tried their hands at using pooters (a bug capturing device which involves sucking through a straw to get the bug into a jar) and bashing bushes and trees, catching and inspecting what fell out in umbrellas. It was an absolutely fascinating way to spend an hour and a great activity for families.” - Cat Oliver (North Devon AONB)



“Watching harbour porpoise’ feeding off Lee Bay is the perfect way to spend a morning” - Calvert Mason

Stream Dipping

“Armed with kick nets, sampling trays and spoons, the group delved into the stream to see what lives there. Peter Jollands showed us the technique for kick sampling in the stream (which involved putting a long handled net in the water and disturbing the river bed with your feet) and showed us some of the animals that live in the stream. After the quick equipment crash course everyone got to have a go and were delighted to find so many aquatic creatures including: mayfly nymphs (*Aeshna mixta*), fresh water limpets (*Ancylus fluviatilis*) and midge larva (*Diptera sp.*).” - Cat Oliver (North Devon AONB)

Rock pool Ramble

The last activity on the BioBlitz timetable brought all the BioBlitz partakers down to the rocky shore for a final time, where everyone had a last attempt to find some extra marine species in the diverse marine habitats found at Lee Beach. After an hour and a half of rummaging through rock pools and seaweed, some more species were found to add to the overall list, including stalked jelly fish (*Calvadosia campanulata*) and a few exciting species of nudibranch (*Aeolidia papillosa*, *Rubroamoena sp. Nova*, *Doris montereyensis* **and**).

Final Species Count and Competition Winners

The event finished on Saturday 23rd September with a brief note to thank all attendees, funders and participating organisations. Finally the winners of the ‘guess the number of species competition’ and the BioBlitz mini-missions/ Passport draw were announced, who won books kindly donated by Wild Nature Press and Benny the Blenny. The day finished with a total of 505 species entered into the system, with recording sheets and data from notebooks still to be added.



“Just when I thought I'd done the best activity, the next one is even better!” – Georgeham primary school pupil



Data Collection and Results –

Data was collected using paper recording forms during personal surveys and during organised activities. We also recorded species via the iRecord app, a new smartphone tool that allows a person to create an activity and add records with photographs directly to it. This new tool was utilised by a few of the local experts and the data team, speeding up the data entry process.

A total of 1225 records were added to the iRecord database with 732* unique species identified from a wide range of taxonomic groups (see figure 3 & 4). Of the species recorded, an outstanding 614 were new records for the Lee Bay area in the National Biodiversity Network (NBN) Atlas. Finally, ** were found to be non-native species and ** species of conservation

*Species records still being added /verified. Total as of 24/10/17.

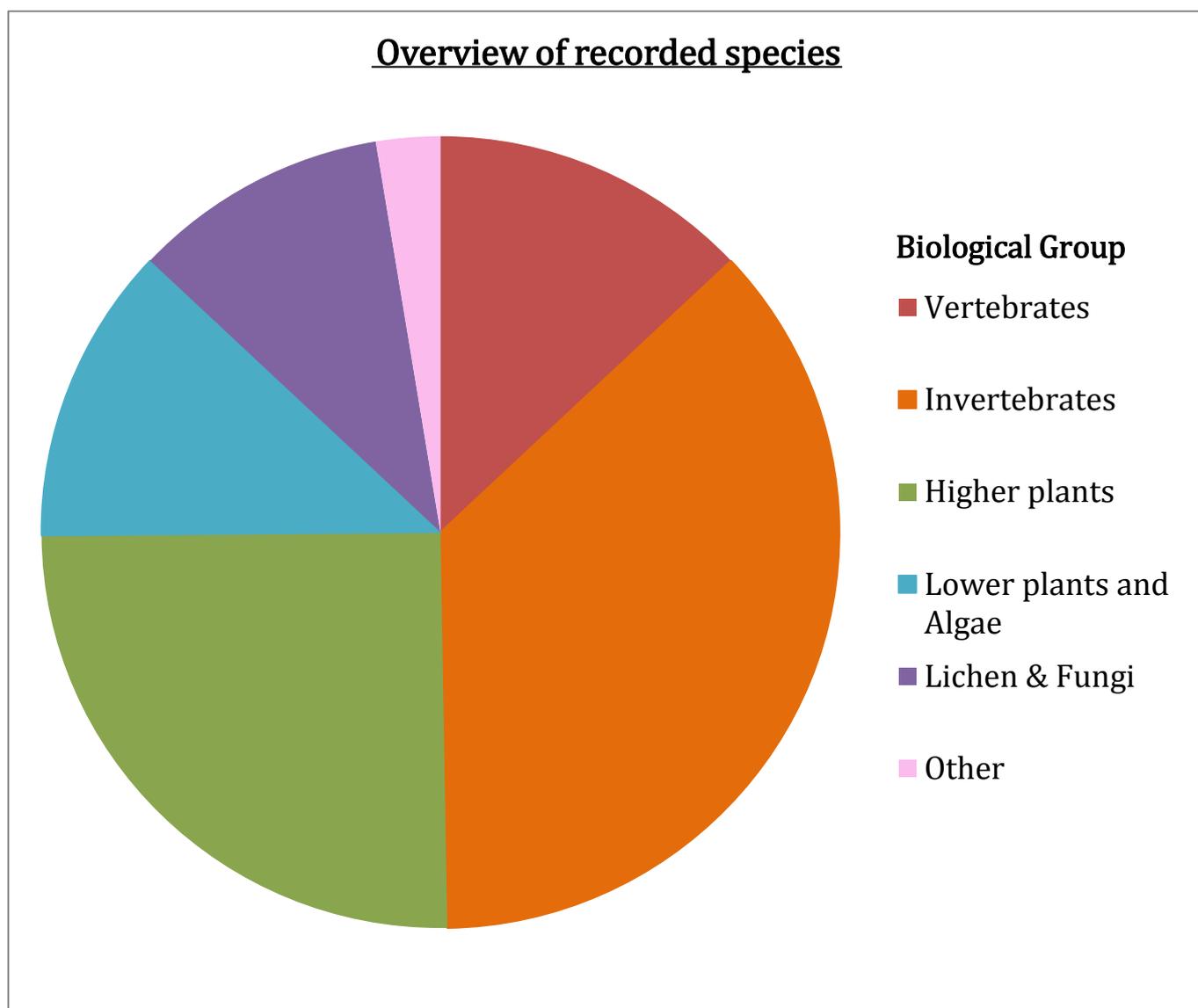


Figure 3. The total number of species recorded (732*) at the Lee Bay BioBlitz, put into different biological groups.

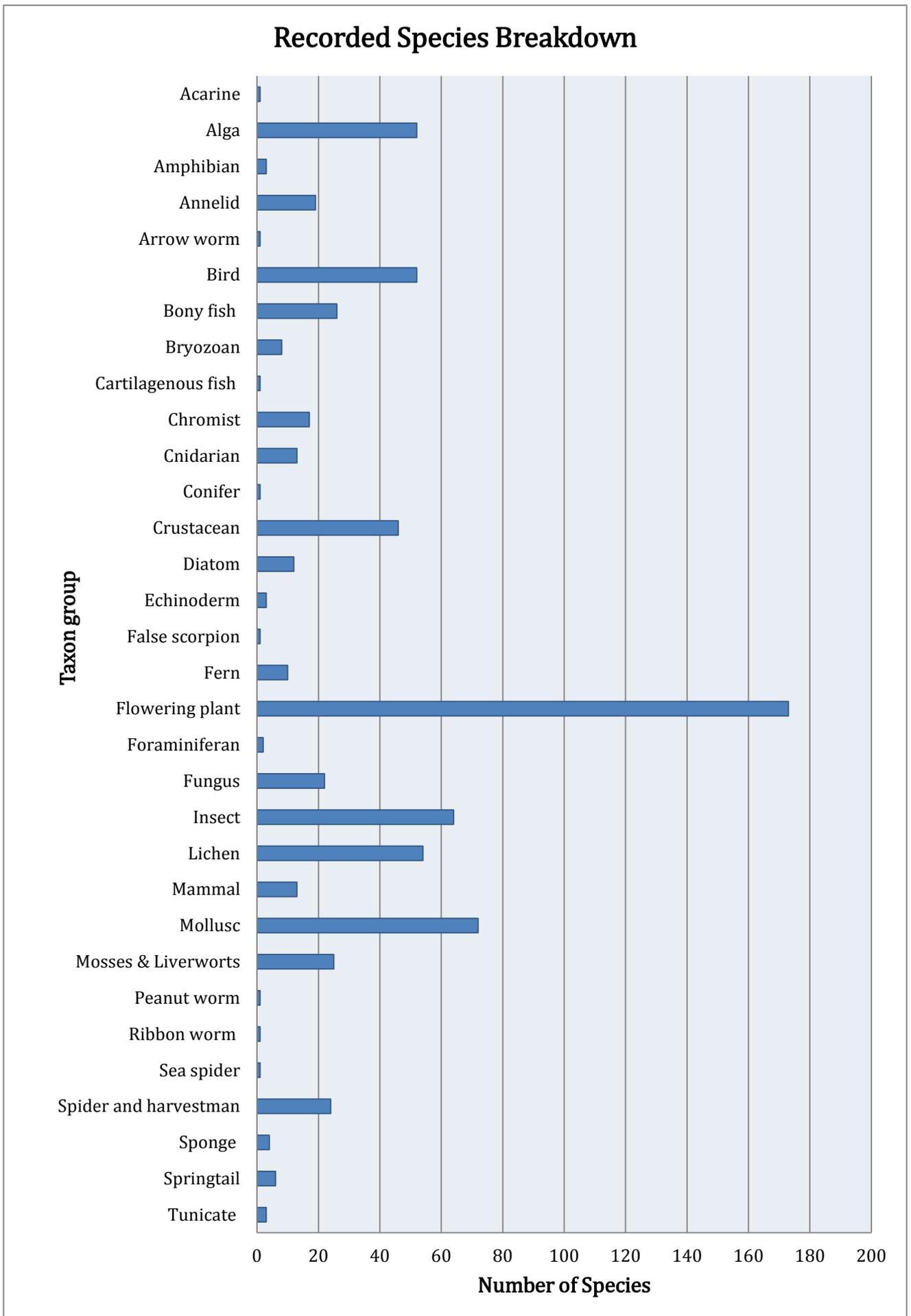


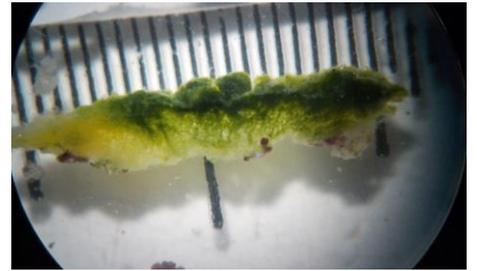
Figure 4. A breakdown of the Lee Bay BioBlitz recorded species * into the taxonomic groups represented in iRecord.

Species highlights –

Participants were asked for their species highlights from the event. These are some of the responses;

Jo Corke (naturalist)

“A parasitic green alga (pictured to the right), shown to me by Dave Fenwick and let me have the specimen to take home.”



Bas Payne (Conchological Society)

“A dead shell of the small periwinkle (*Melarhapha neritoides*) turned up in the weed washing sample. It's uncommon, restricted to the SW, lives mainly in caves near high tide.”

Jack Sewell (Marine biological Association)

“There were many highlights from the event, including several stalked jellyfish and nudibranchs. Particular highlights were finding a prawn infected by the parasitic flatworm *Fecampia erythrocephala* and finding an abundance of the non-native creeping sea squirts *Perophora japonica*.”

Cat Oliver (North Devon Coast AONB)

“The highlight for me was seeing all the lesser weaver fish (*Echiichthys vipera*) which were caught during the seine and push netting activity. They are a particularly striking fish (pictured to the right) and I had no idea that they were so abundant.”

Dave Edgcombe (North Devon Coast AONB)

“During the Creatures of the Night event after we put the bat detectors away we saw a long eared bat (*Plecotus auritus*) up close whilst looking at the moths in a garage. It was particularly interesting as it was positioned right above 100s of moth wings scattered below.”

Dave Conway (A-P-H-O-T-O wildlife image libraries)

“*Volvox sp.* was found in plankton samples taken in the bay on both days. It is actually a fresh water algae so it was a bit surprising to find it in the sea and in good condition. On the same theme there was also a brackish water copepod in the samples that were included in my list, *Eurytemora affinis* (pictured to the right). This is really an estuarine species, so it was unusual to find it in a small bay with only a small volume of freshwater entering.”



Leoni Adams (Capturing our Coast)

“My highlight was finding the barnacle *Verucca stroemia* on open rocks, as opposed to under boulders where we usually find them.”

Comments/public response –

North Devon Journal

Thanks to Coastwise North Devon the event received coverage from the North Devon Journal (pictured to the right), with a short piece highlighting the variety of activities that took place at the event as well as, getting across the main aims of a BioBlitz. There was a section on the school group activities and the different habitats they learnt about over the course of the event. The article also had quotes and highlights from a range of participants and experts on their favourite moments from this year's BioBlitz.



Georgeham primary school – School website blog

“Class 3 and class 4 had an awesome day at Lee Bay taking part in a BioBlitz to try and record the range of species found in the area. We had the chance to do some rock pooling and pond dipping. We also learnt how to identify different trees and how to use a microscope.

It was a fantastic day with one child saying “just when I thought I’d done the best activity, the next one is even better”. The staff and volunteers were so helpful and informative.

Everyone seemed to have such a great day, same again next year please!”

Ranger Rose blog - Rose Roberts

“Heading back to the village hall with friends I was just in time to wave off the coaches taking the kids back for the end of the day and to have a much needed cuppa while looking at other people’s finds which had been brought up from the shore to the microscopes for more detailed analysis. I also had a nice chat with the girls on the recording desk, got a ‘BioBlitz’ badge from one of the stalls and filled a page of my notebook with ink stamps of marine creatures.

A huge thanks to the BioBlitz organizers... that is one of my favourite ways to spend my day off!”



Social Media –



chlowittheflow Some of the lil animals I made friends with this weekend ☐☐☐ plus a v accurate drawing of the sea spider I found and dropped before I could get a piccy ☐
#LeeBayBioBlitz #porcelaincrab #shorecrab #anemone



Adorable male wood mouse found at the #LeeBayBioBlitz! What a little charmer! 🐭



What a great success #LeeBayBioBlitz was! Amazing & inspiring enthusiasm from huge range of experts! A privilege to be amongst it 😊 Thanks!



We're so lucky to have this just 15 minutes from school #GreatDay #LeeBayBioBlitz #Devon 🐟🐙🐚🦀🦎🐛🌳



Thanks for my bag&book for guessing no. of sp! @thembauk @CoastwiseR @Jackapod Fab day with #LeeBayBioBlitz 🌲🐟🐝



joesniffff Cetacean watch with @thatcalvertguy for #leebaybioblitz. Treated to our first UK porpoises! Thanks @nationalmarinaequarium for sending us!
joesniffff #work #coast #sea #devon #ocean #nature #porpoise #sunshine



Thanks and Acknowledgements -

We would like to say a massive thank you to all the individual volunteers who helped with the organisation, planning and setting up of this year's event, as well as the following organisations and projects:

Sponsors

- Fullabrook CIC.
- Heritage Lottery Fund

Participating partners and organisations

- A-P-H-O-T-O WILDLIFE IMAGE LIBRARIES
- Benny the Blenny
- Bishop Group
- Braunton Countryside Centre
- British Arachnological Society
- Capturing Our Coasts
- Coastal Creatures
- Coastwise North Devon
- Combe Martin Sea School
- Conchological Society
- Crab Watch
- DASSH (The Data Archive for Seabed Species and Habitats)
- Devon Birds
- EcoLogic Consultant Ecologists
- Environment Agency
- Exmoor National Park
- Georgeham Primary School
- Ilfracombe & North Devon Sub Aqua Club
- Marine Conservation Society
- National Biodiversity Network
- National Marine Aquarium
- National Trust
- Natural England
- North Devon Biosphere
- North Devon Coast AONB

- Plymouth University Biology Society
- Plymouth University Marine Biology Society
- Plymouth University Marine Institute
- Plymouth University Marine Science Society
- SAHFOS
- Sea Change Project
- The British Myriapod & Isopod Group
- The British Naturalists' Association
- The Devon Wildlife Trust
- The Marine Biological Association
- Wakame Watch
- Wild Nature Press
- Woolacombe School

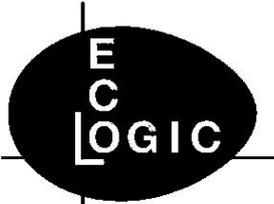
Image credits

- Catherine Oliver
- David Fenwick
- Holly Baigent
- Jack Sewell
- Jan Whittington
- Leoni Richardson
- Peter Thursfield
- Richard Ticehurst
- Sea Life Survey
- Sue Austin

Visit <http://www.mba.ac.uk/citizen-science#b18> for full species list and for additional information about the event.

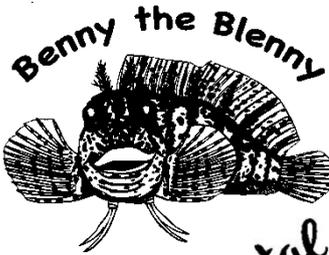


Devon
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