



Suitable for
Ages 8+

Time
Required:
1 hour

Excavate An Owl Pellet!

Background



As archaeologists, we take environmental samples and process them through sieving to recover seeds, charred plant remains, snail shells, and small bones of fish, small mammals, and amphibians, known as microfauna.



By studying and categorising what comes out of environmental samples we can learn a great deal about what sorts of species of animal and plant were living and growing near archaeological sites in the past.

Owls eat small mammals, predominantly mice, voles, and shrews. They swallow them whole and cough up the indigestible bits, like fur and bone, in small ball-like pellets. These owl pellets contain microfauna like environmental samples do, and by looking at the bones they contain we can find out what an owl was eating and what kind of environments it was hunting in.



We sometimes find evidence of ancient owl pellets and owl roosts on archaeological sites! Large assemblages of microfauna have been found when excavating the Roman baths in Caerleon, Newport and in a room of Roman villa near Gatehampton, South Oxfordshire. When humans abandoned these buildings, owls came and used them as a roost.





Health and Safety

Pellets need to be sterilised prior to dissection. The Barn Owl trust recommends the following method:

Wrap pellets individually in aluminium foil. Place in pre-heated oven at 325°F (163°C). Bake for 40 minutes – this is hot enough to kill E. coli and Salmonella. Let them cool, then unwrap.

All fresh owl pellets should be stored in an airtight container for at least 2-3 days to minimise the risk of any virus transmission. Pellet analysis should be done within one day.

Maintain good hygiene and make sure to wear gloves and wash hands thoroughly after touching pellets. Do not dissect pellets in areas used for eating food and do not eat or drink during the activity. Disinfect activity areas and equipment immediately after with paper towels and throw them away after use.



Further information can be found on the Barn Owl Trust website:

<https://www.barnowltrust.org.uk/barn-owl-facts/barn-owl-pellet-analysis/>

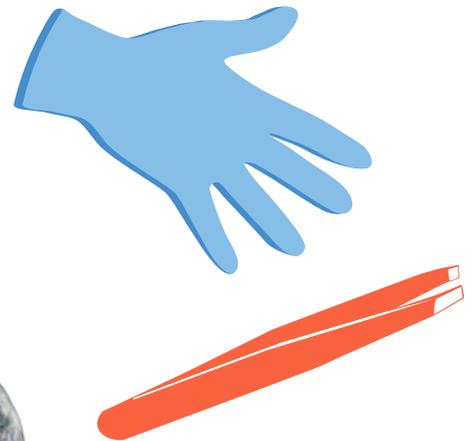


You will need:

- Tweezers
- Gloves
- Owl pellet (these can be bought from the Barn Owl Trust online shop)
- A paper plate or similar to use as a sample tray.
- Plastic finds bags to bag up the disaggregated pellet.
- Identification guides (Free guides can be found on the Barn Owl Trust website)



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Methods:

1. Using the tweezers, pull apart your pellet.

2. See if you can identify any of the bones, using the rat skeleton diagram and the identification guides for help. The jawbones, skulls, and pelvis are easiest to find, can you see any other bones you recognise?

3. Using the identification guides, work out what animal your skulls and jawbones belong to. Barn owls mostly eat mice and voles, but you can also find shrews and young rats.



4. How many animals do you have in your pellet? Count the skulls; count all the jawbones and divide by two; count all the pelvises and divide by two. Which gives the highest number? You can also work out from the skulls and jawbones how many mice, voles, and shrews you have.

5. Where do your animals like to live? See if you can find something out about their habitats and write a description of where your owl might have been hunting.

