

bags of knowledge

Ages 8+

Contains Informative Skeleton Charts!



Build Your Own Bird

Skeleton Pellets

Pellet Contains an Entire Bird Skeleton!

DuneCraft

Contains One Sanitary Synthetic Owl Pellet

Complies with the requirements of ASTM F963-03 for toy safety.

Visit www.dunecraft.com for more information

Magnifying Glass, Ziploc Bag, Bone Sorting Chart and Skeleton Chart also included. Safe and Non-Toxic

WARNING: CHOKING HAZARD - Toy Contains Small Parts Not For Children Under 3 Years



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Skeleton Pellet Made in China. Printed and Assembled in the USA.



Owl pellets found in the wild are masses of bones, teeth, hair, feathers, scales and insect skeletons. They are produced and regurgitated, not only by owls, but also by hawks, eagles and other raptors which swallow their prey whole or in large pieces.

Your "Skeleton Pellet" will always contain an entire skeleton inside. Owl pellets from the wild are ecosystems, providing food and shelter for communities which may include clothes moths, carpet beetles and fungi. Your "Skeleton Pellet" will not contain any insect components.

The "Skeleton Pellet" included in this bag contains an entire Starling skeleton! The Starling, or *Sturnis vulgaris*, is a common menu item in the barn owl's diet. The Starling skeleton reveals special structural adaptations which enable flight. Their design has been molded by nature to provide support with a minimum amount of weight.



Where are Barn Owl Pellets Found in the Wild?

Wild owl pellets can be collected most easily in old barns. Owls will roost in the rafters of open barns. They hunt at night and regurgitate their pellets the next day. Hundreds of pellets can be found on the floor beneath the roost of a family of barn owls.

Barn owls are most commonly found in areas of open meadows and fields. The barn owl depends upon a large number of mammals that are active at night when the owl hunts.

In areas where open barns are not abundant, barn owls may roost in groves of trees or in other abandoned buildings. Because the barn owl is a cavity dweller they often use pot holes in cliffs or sheer banks. They also nest and roost in the dead fronds of various palm trees in areas of California. Pellets that are dropped in the wild do not last as long as pellets that are found in barns and other buildings. Rain, snow and insects quickly break down the pellets.

Fun Facts

- In the Pacific Northwest, the barn owl preys primarily on the common field mouse, it makes up more than 90% of the barn owl's diet. It takes hundreds of mice to supply a single barn owl with its energy needs for one year. The barn owl also preys on meadow voles, moles and small birds.
- Animals such as barn owls, their prey, and humans have an endoskeleton of bone and cartilage surrounded by soft tissues. This skeleton is living tissue which grows and repairs itself, provides structural support and protection for vital organs, as well as enables movement by functioning as a sturdy system of jointed levers powered by contracting muscles.
- Since the barn owl occupies the highest level of its own tropic pyramid, it may be used as a biological indicator. A study of the Tyto alba's past and present population may well disclose the apparent health of the ecosystem. Changes in the availability of a primary food source due to drought, pollution, or other environmental stresses are reflected in the population size of the predator.

Owl Pellet Dissection: Starling



Discoveries:

- The study of the owl pellet will reveal the particular diet of the barn owl.
- This pellet will reveal the bones of a Starling.

Included Materials:

- Owl Pellet
- Magnifying Glass
- Ziploc bag to hold the bones
- Bone Sorting Chart
- Starling Skeleton Chart

Other Materials (Not Included):

- Toothpicks or Forceps
- Dark-colored Tagboard
- White Glue

Studying the Pellet:

Observe what the owl pellet looks like once it has been unwrapped. Examine the pellet closely.

Dissecting the Pellet:

When you unwrap your pellet, remember to be careful when pulling the bones out of the pellet so you do not break or destroy the bones. Gently pull apart the pellet with your fingers and toothpicks or tweezers. Toothpicks will be helpful to pull the fur away from the skulls and vertebrae. Study the bones closely with your magnifying glass. Make sure you have found all the bones inside the pellet and put the bones aside in your container.

After the pellet has been dissected look at the provided chart and try to identify the bones inside your pellet. Observe the size of the Starling that was inside the pellet.

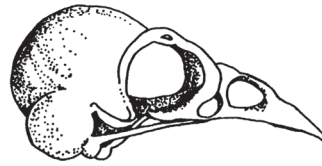
Making a Skeleton from the Pellet Bones:

Use a dark-colored sheet of tagboard to construct your skeleton.

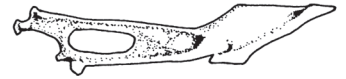
Pour the skeletal remains onto the tagboard and classify the bones by their shape using the provided chart. Observe the different types of bones inside the pellet and locate particular bones such as the femur, pelvis, ribs, skull etc. You may also want to compare the human skeleton with the bird bones from the Starling.

Using the Starling Skeleton Chart, try to reconstruct the bird on your tagboard. Once you are satisfied with your skeleton, glue the bones onto the tagboard. Display your skeletal creation for all to see!

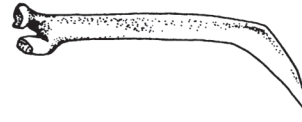
Starling Bone Sorting Chart



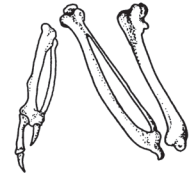
Skull



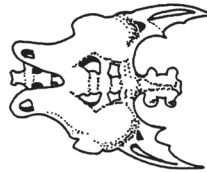
Jaws



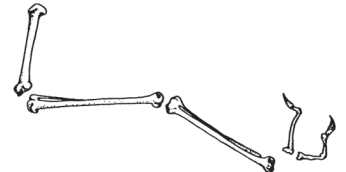
Shoulder Blades



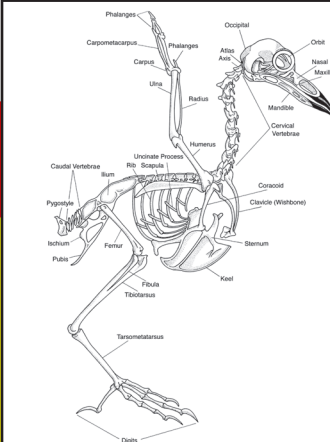
Wings



Hips



Hind Legs



Full Skeleton



Assorted Ribs



Assorted Vertebrae

How it Works

Owl pellets found in the wild are masses of bones, teeth, hair, feathers, scales and insect skeletons. They are produced and regurgitated, not only by owls, but also by hawks, eagles and other raptors which swallow their prey whole or in large pieces. The soft parts of the prey are dissolved by proteolytic enzymes (protein digesters) and strong acids which occur in high concentrations in the stomachs of raptors. The relatively weak stomach muscles of the bird form the undigested fur, bones, feathers, etc into wet, slimy pellets. In this process, even the most fragile bones are usually preserved unbroken. Because the pyloric opening of the stomach into the intestine is narrow, only finely divided materials pass into the intestine. As a result, tiny bones only occasionally pass through the digestive system. Each whole owl pellet

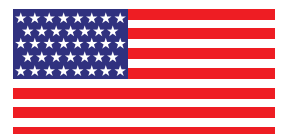
from the wild contains virtually complete skeletons of the animals which the owl ate for a meal the night before the pellet was formed.

Many schools include owl pellet dissection using real owl pellets in their lesson plans. There are some downsides to the use of real owl pellets. They can be unsanitary and there is no guarantee that you will find an entire skeleton inside a real pellet. We here at DuneCraft realized there was a high demand for synthetic owl pellets because of those issues. Our "Skeleton Pellets" are 100% synthetic, making them completely safe and sanitary to dissect. They also include a whole skeleton that you can reconstruct. You don't even have to wear gloves to dissect them!

Visit our web site www.dunecraft.com to:
Locate retailers near you!
Learn more about your product!
Learn more about other products!

Email sales@dunecraft.com or
call 1-800-306-4168 with questions

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Pellet Made in China. Assembled in the USA.