

# Nature Detectives Investigate..



## *The Craigs Nature Trail*

**LEVEL 3 RED**

**WORKSHEETS 1-8**

**Using your investigative skills, find the missing clues from information around the site, to complete these mysteries.**

# **THE CRAIGS NATURE TRAIL**

## **Level 3. Red**

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### **INDEX**

**Wasps**

**Bats (Pipistrelle)**

**Buzzard**

**Kestrel**

**Owls (Barn Owl & Tawny Owl)**

**Horse Chestnut & Sweet Chestnut**

**Norway Spruce & Sitka Spruce**

**Holly**

# Wasps



The various species of wasps fall into one of two main categories: [redacted] wasps and [redacted] wasps. Adult solitary wasps live and operate alone, and most do not construct nests (below); all adult solitary wasps are [redacted].

By contrast, social wasps exist in colonies numbering up to several thousand individuals and build nests. In some species however, just the queen and male wasps can mate, whilst the majority of the colony is made up of sterile [redacted] workers.

Wasps are critically important in natural biocontrol. They are increasingly used in agricultural pest control as they prey mostly on pest insects and have little impact on [redacted].

Many wasps are predatory, using other insects (often paralyzed) as [redacted] for their larvae which are parasites. A few social wasps are omnivorous, feeding on a variety of fallen fruit, nectar, and carrion. Some of these social wasps may scavenge for dead insects to provide for their young. In many social species the larvae provide sweet secretions that are fed to the adults.



In parasitic species, the first [redacted] are almost always provided by the animal that the adult wasp used as a host for its young.

Adult male wasps sometimes visit flowers to obtain nectar to feed on in much the same manner as honey bees.

Occasionally, some species, such as yellowjackets and, especially [redacted], invade honey bee nests and steal honey.

The type of nest produced by wasps can depend on the species and location. Many social wasps produce nests that are constructed predominantly from [redacted] pulp

The kind of timber used varies from one species to another and this is what can give many species a nest of distinctive colour.

The size of a nest is generally a good indicator of approximately how many female workers there are in the colony and some hornets' nests eventually grow to the size of beach balls.



## Bat (Pipistrelle) *Pipistrellus pipistrellus*



When the pipistrelle is flying fast in the dark, it can avoid bumping into obstacles and track down prey by using a system of [redacted] [redacted] similar to the radar-scanning equipment used in ships and aircraft.

The bat frequently emits very high-pitched (ultrasonic) [redacted] which bounce back from any solid object into its ears. The bat is able to interpret the time taken for the echo to return and 'see' its surroundings.

The [redacted] hunts over a regular beat, flying at between 2 - 13 metres a second, usually up to 6 metres, above the ground. A bat eats several [redacted] insects every day.

Although the pipistrelle is the most common bat in Britain, it has been declining over the years along with all other bats. The [redacted] species of British bat are all protected under the Wildlife and Countryside Act.

If any of them have made a home in your roof it is against the law to interfere with them. They do no harm to you or your property - so there is no need to worry if you have resident bats!

A bat probably carries a sound picture of familiar territory, comparable to the visual memory of people.



**Size :** Length : [redacted] (head and body), Wingspan : 19-25cm, Weight : 3-9g

**Life-span:** Average life is 4-5 years. Maximum life-span recorded is [redacted] years.

**Distribution:** British Isles and continental Europe (except the far north), south west Asia, north-eastwards to Korea and Japan and east to Kashmir, and also Morocco.

**Food:** A wide variety of small, flying insects.

**Habitat:** A wide range of habitats, including mature woodlands, wetlands, grasslands, farms, parks and gardens. Often seen flying low over [redacted].

**Description:** A tiny body, short legs, broad flat head; short, broad ears, fairly narrow wings and a short tail. Adults vary in colour from place to place, some colonies are mainly orange-brown and others mainly pale grey-brown. Ears and muzzle are dark.

**Habits:** The bats sleep lightly during the day and usually begin streaming out from their roost [redacted] minutes before [redacted] to hunt for insects.

**Winter:** Pipistrelle bats hibernate during the winter, from about [redacted].

# BUZZARD



## Overview

Now the [redacted] and most widespread UK bird of prey. It is quite large with broad, rounded wings, and a short neck and tail. When gliding and soaring it will often hold its wings in a shallow [redacted] and the tail is fanned. Birds are variable in colour from all dark brown to much paler variations, all have dark wingtips and a finely barred tail. Their plaintive mewing call could be mistaken for a [redacted]

## Where to see them

Greatest numbers in [redacted], Wales, the Lake District and SW England, but now breeding in every county of the UK. Found in most habitats; particularly [redacted], moorland, scrub, pasture, arable, marsh bog and villages. May even be seen in towns and cities. Look for birds soaring over wooded hillsides in fine weather, or perched on fence posts and pylons. In some areas they are known as the tourists' [redacted], often being mistaken for this larger bird of prey.



## When to see them

All year round. Birds soar, display and call most in spring.

## What they eat

[redacted] birds and carrion. And even [redacted] and large insects when other prey is in short supply.

## Estimated numbers

Europe	UK breeding*	UK wintering*	UK passage*
-	31,100-44,000 territories	-	-

# KESTREL



## Overview

A familiar sight with its [redacted] wings and long [redacted], hovering beside a roadside verge. Numbers of kestrels declined in the 1970s, probably as a result of changes in farming and so it is included on the Amber List. They have adapted readily to man-made environments and can survive right in the centre of cities.

## Where to see them

Kestrels are found in a wide variety of habitats, from moor and [redacted], to farmland and urban areas. The only places they do not favour are dense [redacted], vast treeless wetlands and mountains. They are a familiar sight, [redacted] beside a motorway, or other main road. They can often be seen perched on a high tree branch, or on a telephone post or wire, on the lookout for prey.

## When to see them

All year round.

## What they eat

[redacted] mammals and [redacted]



## Estimated numbers

Europe	UK breeding*	UK wintering*	UK passage*
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-	[redacted] pairs	-	-
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\* UK breeding is the number of pairs breeding annually. UK wintering is the number of individuals present from October to March. UK passage is the number of individuals passing through on migration in spring and/or autumn.

## Owls (Barn & Tawny)

**Barn Owl:** *Tyto alba*    **Tawny Owl:** *Strix Sylvatica* or *Strix Aluco*



In appearance the [redacted] owl is very distinctive. It has a body length of up to 36cm (14") and has handsome buff-coloured plumage mottled with grey on the upper parts of the body and wings. The heart-shaped head and the underparts of the barn owl are white. The eyes are large and, as with all owls, the head can be turned [redacted] to permit it to look directly backwards.

Of the [redacted] species of owl which breed in Britain the barn owl is becoming much less common generally - and in some places, rare. A recent report suggested that there might be between 4,000 - 5,000 pairs of barn owls living in the British Isles. This is fewer than half the number resident here just [redacted] years ago; although great efforts are now being made to protect the species.

**Size:** Up to [redacted] cm (14").

**Habitat:** Heaths, woods, fields and hedgerows.

**Voice:** Shrill shrieks.

**Food:** Insects, shrews, mice, voles, rats, small birds, [redacted] etc..

**Eggs:** 4 - 7 (white).

**Distribution:** British Isles generally



The **Tawny Owl** or [redacted] Owl is a stocky, medium-sized owl commonly found in woodlands across much of Europe & Asia. Its underparts are pale with dark streaks, and the upperparts are either brown or grey. The nest is typically in a tree hole where it can protect its eggs and young against potential predators.

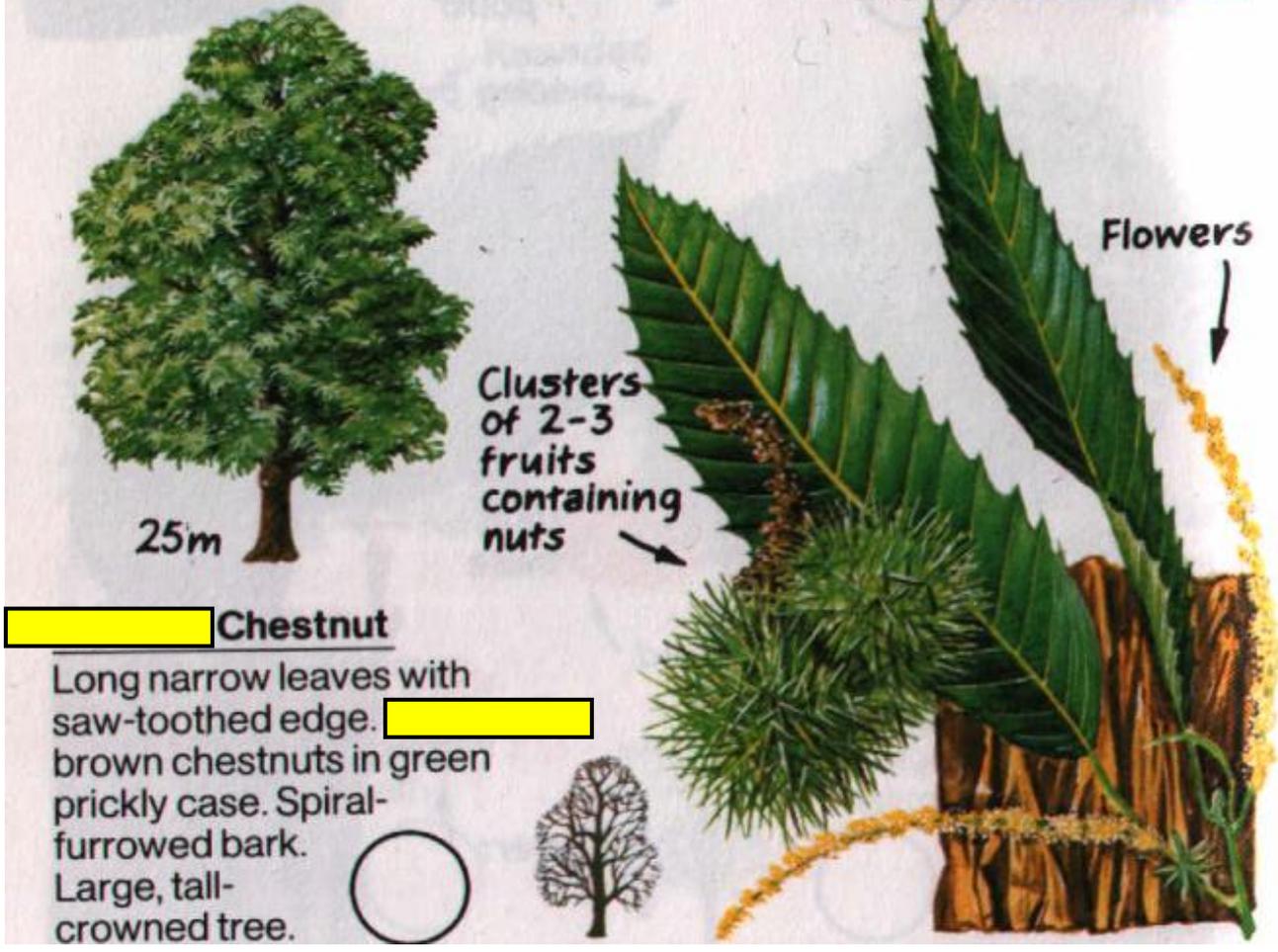
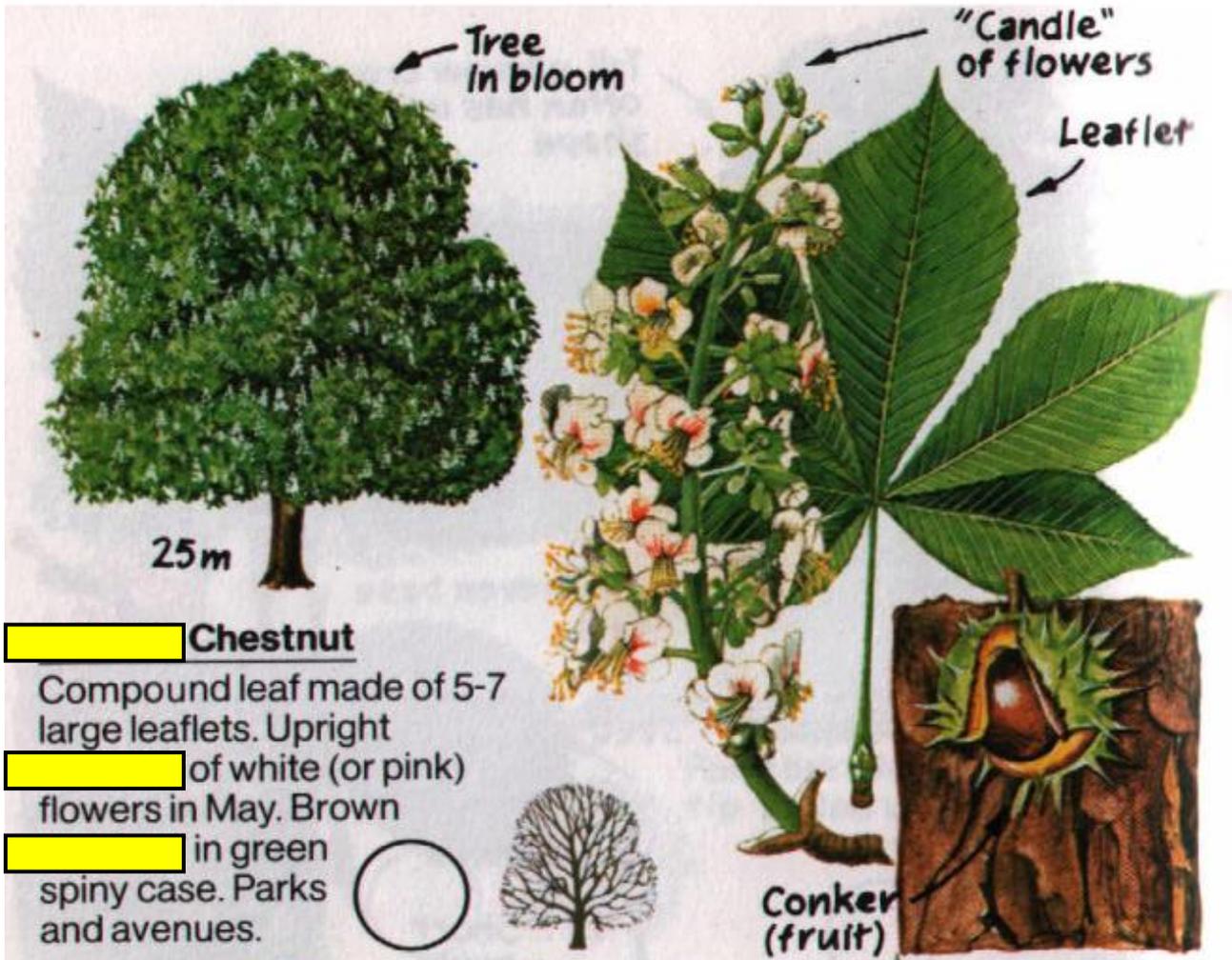


This nocturnal bird of prey hunts mainly [redacted], usually by dropping from a perch to seize its prey, which it swallows whole.

Vision and hearing adaptations and silent flight aid its night hunting.

The Tawny Owl's hearing is [redacted] times better than a human's, and it can hunt using this sense alone in the dark of a woodland on an overcast night. But the patter of [redacted] makes it difficult to detect faint sounds, and prolonged wet weather can lead to [redacted] if the owl cannot hunt effectively







Buds

Cone scales are tightly closed

30m



**Spruce**

Prickly, dark green needles. Small brown buds. Peg-like bumps left on brown twigs when needles are pulled off. Cone-shaped tree. Used as



tree.



35m

Cones have papery scales with crinkled edges



Buds



**Spruce**

Very prickly, blue-green needles. Plump yellow buds. Small knobs left on yellow twigs when needles fall off. Narrow, cone-shaped trees.



Grey, scaly bark flakes off in

## Holly (*Ilex aquifolium*)

The botanical name *illex* was the original Latin name for the Holm ( *Quercus illex* ), which has similar foliage to common holly, and is occasionally confused with it.

Hollies are often used for the spiny leaves make them difficult to penetrate, and they take well to pruning and shaping.

They can grow up to m tall and have a cone shaped crown.

Many hollies are widely used as ornamental plants in gardens and parks.



The leaves are thick, and stiff, glossy dark green on the upper side - paler on the underside.



In many western cultures, holly is a traditional decoration, used especially in .



Between the 13<sup>th</sup> and 18<sup>th</sup> century, before the introduction of , holly was used as winter fodder for cattle and sheep.

Less varieties of holly were preferred, and in practice the leaves growing near the top of the tree have far fewer spines, making them more suitable for .

In , holly is used to symbolise .