

Acid Grassland

a nationally important habitat in London



What is Acid Grassland?

Lowland Acid Grassland

is an important habitat for nature conservation throughout the Greater London area.

Areas of infertile soil, unsuitable for growing crops, were often used by our ancestors as common grazing land, supporting a mixture of heath and acid grassland rich in wildlife.

Today, some of these areas remain as commons and parklands, but the vast majority have been developed, converted into sports pitches and other amenity grasslands, or they have been neglected and allowed to develop into scrub and woodland.

The few remaining areas of heath and acid grassland in London are now under serious threat – we need everyone to understand and support efforts to conserve this precious habitat for the future.

In the UK there are many kinds of grassland, each with different characteristic species of grasses, wild flowers and other wildlife. These differences depend on factors like the nature of the soil, altitude and land-use; both now and in the past.

Lowland acid grassland develops on low-nutrient, acidic soils (pH 4 to 5.5) overlying acidic rocks or on the free-draining, gravelly and sandy soils found in many parts of London. It often occurs as an integral part of lowland heath landscapes, commons and parklands. Grazing (or cutting) is needed to prevent invasion by scrub and trees.



The main picture shows acid grassland in Bushy Park with well-developed ant hills. A diversity of grasses and wild flowers, such as germander speedwell (blue) and heath bedstraw (white), can be seen in spring.

OTHER GRASSLAND TYPES

Other types of grassland in London that are also important for wildlife conservation include the 'chalk grassland' found on alkaline (high pH) soils or on soils of medium pH, wildflower-rich 'neutral grassland'. When either these grasslands or acid grassland are degraded by nutrient enrichment or bad management, so-called 'rank' grassland develops. The delicate fine grasses and wild flowers are replaced by coarse grasses like cocksfoot, rye grass, common couch, Yorkshire fog and other plants like thistles, common nettle, dock, broad-leaved plantain and rosebay willowherb.



Chalk grassland



Neutral grassland



Rank grassland

Why is Acid Grassland important?

Main photo © Nigel Reeve.
Insets © Piers Eley and
Nigel Reeve

Wimbledon Common and Putney Heath (main picture) is a Site of Special Scientific Interest which supports the most extensive area of wet heathland in Greater London, with important areas of dry heath and acid grassland.

Acid grassland is a nationally important habitat

- Lowland Acid Grassland is a UK Biodiversity Action Plan habitat and as such is a top priority for wildlife conservation nationally.
- Several plant, invertebrate and bird species found in acid grassland are protected under the Wildlife and Countryside Act 1981.
- In England and Wales there are 271 Sites of Special Scientific Interest (SSSIs) that have this habitat as a principal reason for notification.
- A number of Special Areas of Conservation (SAC) are designated under the European Habitats Directive. These include Epping Forest, Wimbledon Common and Richmond Park, all of which include substantial areas of London's acid grasslands.



Acid grassland species you may see include (clockwise from above): mat grass, wavy hair grass, heath speedwell and Essex skipper butterfly



Insects in the Thames Terrace Invertebrates group include the bee-wolf wasp (above left) and many solitary bees and wasps. The bee above is feeding on mouse-ear-hawkweed

Acid grasslands are important in London

- In London there are an estimated 1,300 hectares of lowland acid grassland, which contributes about 4% to the national resource.
- The acid grasslands of Greater London, south Essex and north west Kent are an important home for a distinctive community of insects and spiders – many of which are nationally scarce. This community is collectively known as the 'Thames Terrace Invertebrates'.

Introducing the plants of Acid Grassland

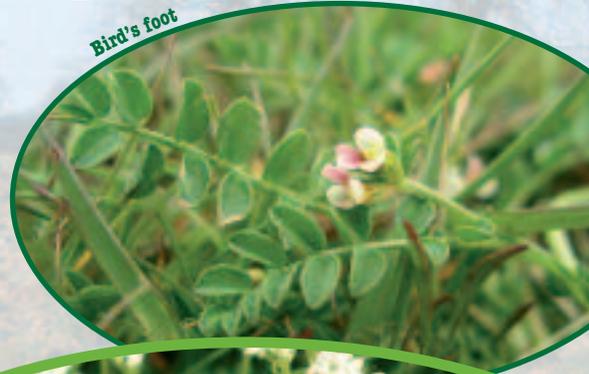
If you look closely, you will see that acid grassland contains a diversity of fine-leaved grasses. These include common bent, red and sheep's fescues, mat grass and others. Alongside the grasses grow wild flowers like sheep's sorrel, heath bedstraw, tormentil, harebell, bird's foot, common stork's-bill, heath milkwort and bird's foot trefoil.

Nationally scarce plants found in London's acid grassland include clustered clover, upright chickweed and autumn squill.

In areas that are less well drained, you will see tussocky grasses, along with a range of sedges and rushes. On the soil surface you may find a range of mosses and lichens.

Acid grasslands are also important for their fungi, in particular various coloured waxcaps (below) – but conditions are rarely good enough for these in the London area.

Bird's foot



Heath bedstraw



Heath milkwort



Harebell

Tormentil

Waxcap fungi



Grasses and rushes, like dense-headed heath woodrush (left) are typical of acid grassland. However, a huge range of tiny, yet spectacularly beautiful, wild flowers thrives in the acid grassland habitat. If you look carefully, you will often be rewarded by finding delicate blooms like those on these pages.

Habitat structure

The infertile acidic soil means that the grasses and flowers are generally small and grow close to the ground.

Patches of bare soil are very important because they warm up quickly in the sun, which is good for a range of insects, spiders and reptiles.

Although invasion by scrub and trees is a serious threat to our acid grassland, occasional patches of scrub, including gorse and heather, add structure and valuable diversity to the habitat – providing shelter as well as pollen and nectar for insects.

Grazing animals do a much better job of maintaining an ideal structure than the use of mowing machines. Their trampling and browsing helps to control scrub and creates a natural patchwork of plant heights and bare areas.

Highland cattle (right) are hardy grazers that control scrub and bracken, create structure in the vegetation and help to restore grasslands

Dwarf gorse adds to acid grassland habitat

Rabbits have exposed the earth (below), providing a welcoming warm-up patch for common lizard (right)

© Nigel Reeve

© Susanne Blankemeyer



Common green grasshopper

Roger Key/English Nature



Wolf spider with her eggs

© Nigel Reeve



© Nigel Reeve

What animals might I see?

Meadow brown (top left) and small copper (top right) butterflies, the bee-wolf wasp (below left) and many species of tiny solitary bee are among acid grassland's residents.

A huge array of animals can be found in acid grassland...

● Small mammals such as shrews, mice and voles (above right) forage in dense grass.



● Common lizards may bask in sun-warmed patches of bare soil.

● Kestrels (top left) and tawny owls (left) hunt many of these creatures as prey.

● The large range of invertebrates attracts many other birds such as the green woodpecker, meadow pipit and skylark.

● In undisturbed areas, meadow ants create distinctive mounds (ant hills) among the grass (right).



● Characteristic butterflies include the small heath, meadow brown, small copper, small, large and Essex skippers.

● The Thames Terrace Invertebrates include many species of burrowing bees and wasps. The red-banded sand wasp is a flagship species for acid grassland in London. The mining bee *Andrena florea* and the bee-wolf wasp are endangered and nationally scarce species found in London's acid grassland.



What can we do to conserve it?

The conservation of acid grassland depends on appropriate management and the co-operation of visitors to the sites. Neglect allows the habitat to become invaded by scrub and woodland so that it loses its special wildlife value. The addition of nutrients by fertilisers, dog-fouling or from atmospheric pollution from vehicles, are all very damaging; as is the use of lime either to 'improve' the grassland or in stone chippings used in car parks and paths. Tree planting, even just one tree in the wrong place, will increase shade and can cause significant destruction of this vulnerable habitat.

An important aim of grassland management is to ensure a continuity of cover and food supply for wildlife throughout the year. For example, many insects spend the winter as eggs or larvae in standing dead plant stems. So it is vital never to cut or graze an entire area, but to leave a percentage untouched in each parcel of land as a wildlife refuge.

Ideally acid grassland is maintained by carefully-managed low-intensity grazing with livestock; usually hardy breeds of cattle, sheep or ponies. However, if grazing is really impractical, as it is in some urban areas, a programme of cutting and scrub control is necessary.

The time of cutting is also important. A summer cut may remove food from some insect species at a critical time. Cutting before the end of July may also affect ground nesting birds like

skylarks, meadow pipits and others. It is generally best to delay cutting for as long as possible into the autumn, although the availability of the appropriate machinery and wet weather may mean that timing has to be flexible. Whenever the cut occurs, it is best to remove all the cuttings to avoid putting the nutrients back into the soil. Sometimes an acid grassland or heath in poor condition requires radical treatment such as major scrub clearance, or the removal of an area of secondary woodland.



Low-intensity grazing by hardy traditional breeds of livestock like Welsh ponies (above) and placid Longhorn cattle (below) is ideal for acid grassland wildlife.



Scraping a living for wildlife

One effective remedial treatment is to scrape off an area of nutrient-enriched topsoil and either remove it, bury it or pile it into a bank. Rather than re-seed, the site is usually left bare to recolonise naturally, so the area may look a bit bare for a while.



The area above was scraped clear of rich topsoil (above). Seventeen months later, the ground was being re-colonised by pioneering acid grassland plants and animals (left).

The ground can look a bit ugly to the general public and may lead to complaints. However, the bare ground will be colonised by specialist pioneer species, the acid grassland habitat will recover to a better standard than before and the wildlife of the site will benefit greatly in the long term.

How you can help – a user's guide

- Always observe the bylaws of the sites you visit and respect the needs of wildlife and other visitors.
- Please clear up after your dog – otherwise you are adding nutrients to the soil and these encourage the growth of coarse grasses, dominant weedy plants and eventually will allow scrub to take over.
- Please do not drop matches or have a barbeque on these grassland sites. They are very easy to set fire to in dry weather and burning is very damaging.
- Please keep to pathways. Moving off paths can result in the trampling of many of the creatures we are trying to conserve.
- Please avoid disturbing wildlife and do not pick, uproot or damage plants and fungi.
- Support land managers carrying out conservation management, whether this is bringing-in grazing, mowing, scraping, scrub clearance or removing trees that are threatening the habitat.
- Why not enquire about conservation volunteering? There may be opportunities to join in with everything from practical land management work to helping with education and interpretation.

All photos © Nigel Reeve.

London's Acid Grassland Habitat Action Plan

The London Biodiversity Partnership (LBP) was established in 1996 in response to the UK Biodiversity Action Plan. The LBP aims to protect and enhance the capital's habitats and species for the benefit and enjoyment of future generations. There are now 31 action plans:

11 habitats, 12 species, plus 8 Generic Action Plans that address broader issues. Each action plan tackles key issues such as conservation and education and is implemented by a working group made up of a partnership of public, private and voluntary organisations and also individual enthusiasts.

The Acid Grassland Habitat Action Plan Working Group works alongside other action plans for heathland, chalk grassland, reptiles and others. Our main aims are:

- To ensure the protection and optimal management of acid grassland in Greater London.
- To improve on existing knowledge of its ecological value in the regional context.
- To develop a more universal appreciation of the habitat and its wildlife, and secure the involvement of Londoners in its conservation.



Main picture: Hounslow Heath is an extensive area of acid and neutral grassland. Heathland is developing where restoration has encouraged natural regeneration of heather. It is home to many other special plants and animals that need heathland and acid grassland to survive in. Among the common species you may see are the field grasshopper (above) and six-spot burnet moth (below).

Want to know more?

- Ask your site manager about whether there are any nature-trail or information leaflets, guided walks or talks you can attend so that you can learn more about acid grassland, adding to your enjoyment of the sites you visit.
- Use the internet to visit www.lbp.org.uk to see the full acid grassland biodiversity action plan for London. You can also download an advisory booklet *Acid Grassland Conservation in London (2005)* containing more detailed guidance for land managers.
- Visit www.ukbap.org.uk to see the national plans for acid grassland (upland and lowland).
- Visit the London Wildweb website for detailed information on wildlife sites in London. <http://wildweb.london.gov.uk>

Some Acid Grassland sites you can visit in Greater London

Twenty seven London Boroughs out of 33 have some acid grassland.
Some key sites for acid grassland conservation in London that you can visit are listed here.



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