Spring Issue 9

NEWSLETTER
of the
Medlock & Tame Valley
Conservation Association

(Registered Charity Number: 504558)

"Spring is when you feel like whistling, even with a shoe full of slush". (Doug Larson)

Welcome to Springtime!

It's a wonderful time of year to enjoy, but we can't live in this part of the world without being touched by what is happening elsewhere. The natural disasters in New Zealand and then in Japan, and now with a supposed leak in three nuclear centres in the UK, has surely made us think of the loss of life and also about our current way of life. We all know of the predictions for climate change, the population explosion on the planet and the end of fossil fuels - but how does this affect the way we live and the decisions we make? The cost of nuclear power is a heavy one for this planet when natural disasters can and do happen. People, animals, water, land and food are affected for many years to come. Yet, with all the knowledge we have at our fingertips in this 'global village' through modern technology, we should be able to leave future generations with a healthy natural environment. Wind power, solar power and hydropower are all alternatives and supplementary means for energy for a safer environment, but our

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Government needs to continue to invest and research 'clean' nuclear power (nuclear fusion as opposed to the current practice of nuclear fission). This could provide all the energy we need and not produce waste that is harmful to sea beds, land, people and animals. If we all express our concern about current policies that affect our world, then politicians seeking election will have to take note and make these issues priorities in their future manifestos.

"As we watch the sun go down, evening after evening, through the smog across the poisoned waters of our native earth, we must ask ourselves seriously whether we really wish some future universal historian on another planet to say about us: "With all their genius and with all their skill, they ran out of foresight and air and food and water and ideas," or, "They went on playing politics until their world collapsed around them." (U Thant, speech, 1970)

UPDATE ON OUR H.Q.

INSIDE

The "Burlinson House" plaque on the wall of 5 Oaken Clough Terrace is now in place and looks really well. From now on, "Burlinson House" will be put on all communications which show our address. (For those new members to MTVCA, Mildred Burlinson was the lady who bought 5 Oaken Clough Terrace and bequeathed it in her Will to be the H.Q. of Medlock & Tameside Conservation Association).

The library is well underway with individuals donating books on all manner of wildlife and flora. The library will be for the use of members so please feel free when you are next in Burlinson House to have a browse. There will be a borrowing book on the bookcase for you to simply insert your name, the name of the book you are taking and the date on which you take it and books can be borrowed for up to 6 weeks.

The walls of both downstairs rooms have been stripped and we are ready to decorate the main reception room. Thank you to those who donated toward the cost of wallpaper/paste etc. We are currently obtaining samples of wallpaper/paint and will keep you updated!

The gable wall of the house is in a state of disrepair and needs the plaster chipping off and the brick work re-pointed and re-plastered. Costs estimates are being received for this and it is hoped to have this work undertaken before the onset of winter as we cannot afford to have further deterioration take place.

OUTSIDE

The garden has been a real success story with achievements all round this year. These include three wildflower beds being prepared and sown, a very successful bog garden now in place (and home already to some young newts) and the erection of the hide. Sincere thanks are due to Paul Heaton, our Grounds Manager, who has put in a lot of time and effort, outside of workdays, to ensure that the deadline for these projects was met.

It is intended during the course of the summer to prepare the small greenhouse at the side of Burlinson House to become a 'hotel for lacewings' so that all of the hard work by the pupils of Greenside Lane Primary School, will be put to good use by the lacewings this winter. Watch out for photographs of the "metamorphosis" on the website and in our next newsletter.

WILDLIFE HIDE

The hide is now in place! It's the big green wooden 'shed' in the middle garden! It has been painted inside and lots of identification charts are displayed.
The hide will be ready for use from June onwards and our members are invited to make use of it.

It can be used for wildlife observation/recording/photography/sketching and painting.

If anyone would like to make use of the hide then please contact one of the committee to 'reserve' a time slot and date of your choice, from June onwards.

Bryan, Paul Lythgoe and Paul Heaton put the roof on the hide.

Below: Jay helps prepare the ground outside for the wildflowers.

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SOIL AROUND THE WORLD (Part II)

There are numerous reasons why soils differ regionally. The most influential factors include the parent material (the rocks from which the soil has come), the climate and terrain of the region, as well as the type of plant life and vegetation present, and, of course, human influence.

Parent material - this refers to the original underlying rock upon which the soil formation takes place. Essentially, the nature of parent rock in a particular region will affect the type of soil that eventually develops.

Climate – The world consists of a broad range of climatic regions, each with its own specific types of soil. A common example of this is tundra soil, which tends to occur mainly in northern-hemisphere areas such as the Arctic and Scandinavia, where the climate is often cold and hence the organic materials do not break down very easily and peat tends to form. In contrast, red and grey 'desert' soils which are found only in hot, arid regions, such as Africa and the Middle-East, contain very small amounts of organic material because it is rapidly oxidised under the warm conditions..

Terrain – this is another important factor in soil development. Areas with many slopes in the land tend to have more freely drained soils, as water can run off or percolate more rapidly. In contrast, regions with mostly flat areas of land can often be waterlogged, because of the lack of gradient to promote lateral or sideways flow.

Plants – The type of plant life and vegetation obviously varies according to a region's climate and other factors. Plants also have a strong influence on soil development. They take up nutrients from the ground, whilst adding organic material to the soil surface.

Humans – We should not forget the influence of man who has managed the land over the last few thousand years. Agriculture, in particular, has had a big influence on developing the soils we see today.

Soil Classification

Over the years, there have been numerous attempts to give names to soils and to group them into natural classes, in much the same way as plants are named and classified. Classification is important in order to allow comparison between the soils of different regions, and to facilitate information transfer and organisation of the growing knowledge about the main types of soil that occur around the world.

The first true soil classification was produced in the second half of the 19th century by Dokuchaiev in the USSR. Dokuchaiev suggested a theory of 'zonal soils', where soil types came from clearly defined geographical and climatic locations.

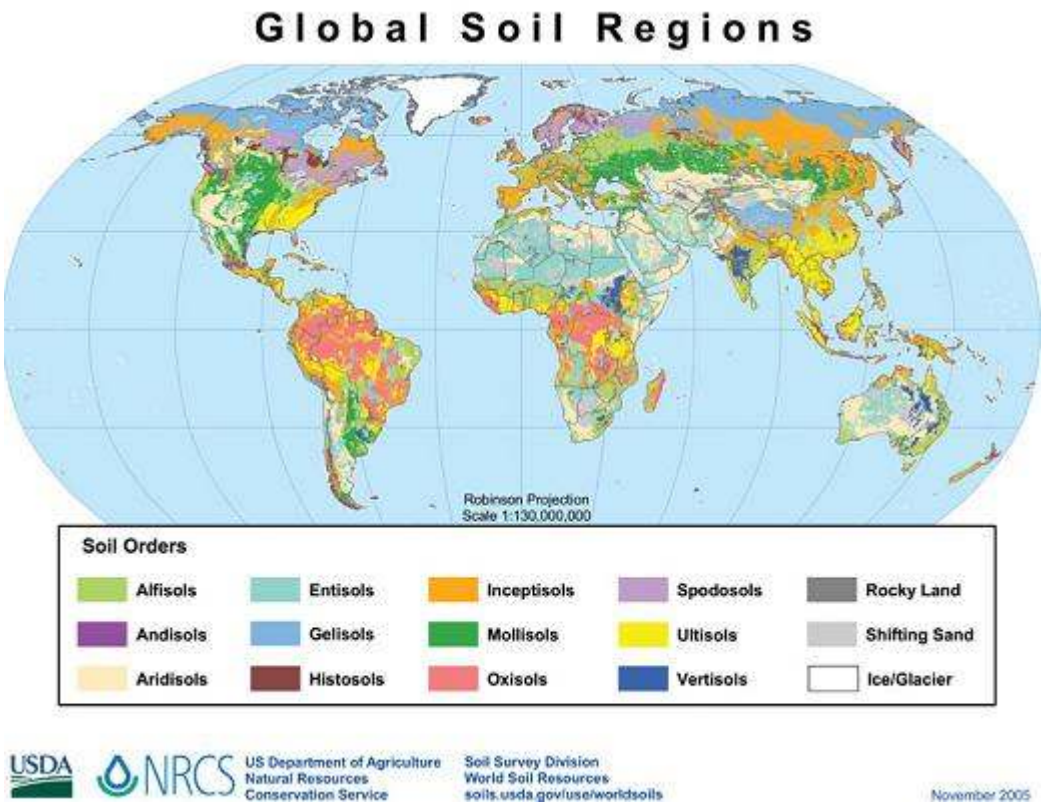
In 1953, Kubiena produced a system of classification that proved to be popular and is still widely referred to. His system consisted of 5 main soil groups (and many sub-groups), arranged according to specific horizon classes, as well the type of 'humus' present.

Influenced by Kubiena's ideas and other previous classifications, two international soil classifications have been developed since the 1960s, the American '7th Approximation' classification system published in 1960, and the Food and Agriculture Organisation classification in the 1970s.

These have been many attempts to provide a unifying classification as a basis for technology transfer, but this has been hindered by the use of new, often complex terminology for describing

soils. For example, the American class names in their system include the terms 'entisols', 'inceptisols', 'aridisols', 'mollisols', 'spodosols', 'alfisols', 'ultisols', 'oxisols' and 'histosols', which to the layman may not mean very much! Although the American and FAO systems are widely discussed and referred to, many countries still use their own national classification systems by preference.

It is incredible to think that there is still so much that is unknown about soil types, and that new discoveries are continuously being made all the time. Unfortunately, there is still currently no universal standard for soil classification, although the recent World Reference Base (WRB) for soils may address this in the future.



HYDROPONICS

You may have seen posters in and around Manchester inviting you to find out more about Hydroponics but what is it? Hydroponic, comes from Latin and means "working water". **Simply put, it is the art of growing plants without soil.** When most people think of hydroponics, they think of plants grown with their roots suspended directly into water with no growing medium. This is just one type of hydroponic gardening known as N.F.T. (nutrient film technique). There are several variations of N.F.T. used around the world and it is a very popular method of growing hydroponically. What most people don't realize is that there are countless methods and variations of hydroponic gardening.

Plant growth is a real and natural happening. Plants require basic, natural things for normal growth. Hydroponics supplies the plant with what it needs, when it needs it. There is no genetic mutation that takes place inside the equipment nor are there any mysterious wonder chemicals introduced to plant roots

that trick them into thinking they're on steroids.

Growing medium is the material in which the roots of the plant are growing. This covers a vast variety of substances which include Rockwool, perlite, vermiculite, coconut fibre, gravel, sand and many more. The growing medium is an inert substance that doesn't supply any nutrition to the plants. All the nutrition comes from the nutrient solution (water and fertilizer combined). The strength and pH of the nutrient solution is easy to adjust so that the plants receive just the right amount of food.

The watering/feeding cycles can be controlled by an inexpensive timer so that the plants get watered on schedule, as needed. As with any method of crop cultivation, hydroponics has its advantages and disadvantages. Whether it is right for your lifestyle may simply be a matter of your personal taste. Many partake in hydroponics gardening as a hobby because it can be fascinating and satisfying, however the many intricacies of hydroponics can make it a difficult and frustrating skill to master.

Commercial greenhouses and other large hydroponics operations are able to grow fruits and vegetables for profit, but, for the average individual, hydroponics gardening is more expensive than maintaining a traditional, soil-based garden.

Here is a breakdown of some of the most significant pros and cons associated with hydroponics gardening:

Pros

- No soil is needed.
- Most plant diseases are eliminated.
- Weeds cannot grow.
- Outdoor pests are not a concern.
- As a result of the last two points, fewer pesticides and herbicides are needed.
- Less water is required. No water is wasted.
- Plants can be grown year-round.
- Plants grow faster and have bigger yields.
- Some studies have shown that hydroponically-produced plants are more nutritional and better-tasting.
- Gardeners have much more control over the nutrient amounts their plants receive.
- Less space is required, as plants can be placed closer together than they could in soil.

Cons

- Some plants cannot be grown hydroponically.
- Hydroponics requires more technical knowledge and training than soil cultivation.
- Setup costs can be very expensive.
- Crops must be maintained more frequently.
- If the watering system fails, plants will dry out and die rapidly.
- If being sold for profit, hydroponically-cultivated plants usually provide less of a return on investment.
- Some methods require the purchase of a soil-replacement medium.
- Plant uniqueness is minimized, so diseases will affect all plants to the same degree.

The Pharaohs of Egypt enjoyed fruits and vegetables grown hydroponically. One of the Seven Wonders of the Ancient World, The Hanging Gardens of Babylon, was believed to be a hydroponic garden. In India, plants are grown directly in coconut husk.

(extracts taken from Hydroponics own website/information)

DIARY DATES

CONSERVATION DAYS in and around Burlinson House

Sunday 1st May and Saturday 15th May commencing around 10.30. Bring a packed lunch and stay for as long as you can.

If you are unsure of the directions to Burlinson House, 5 Oaken Clough Terrace, just ask one of the committee (some phone numbers are included in this newletter). Oaken Clough Terrace is a continuation of Oaken Clough. When you turn in from the main Oldham Road opposite the Dog & Pheasant (or "Top Dog") pub, then proceed to the end of the lane and either walk across the front of the terraced houses or turn right and approach the end house, no. 5, from the rear. (Owing to restricted parking, when attending events, please park at the Oldham Road entrance to Oaken Clough. Please respect the privacy of our neighbours when walking across the front of the terrace).

QUOTES ON THE ENVIRONMENT

"Our environmental problems originate in the hubris of imagining ourselves as the central nervous system or the brain of nature. We're not the brain, we are a cancer on nature." ~Dave Foreman, Harper's, April 1990

"Soon silence will have passed into legend. Man has turned his back on silence. Day after day he invents machines and devices that increase noise and distract humanity from the essence of life - contemplation, meditation... tooting, howling, screeching, booming, crashing, whistling, grinding, and drilling to bolster his ego. His anxiety subsides. His inhuman void spreads monstrously like a grey vegetation." ~Jean Arp

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TAXONOMY

Taxonomy is the science of identifying and naming species and organising them into systems of classification.

What's in a name?

The names taxonomists give to species don't just tell us what they are called, but also tell us about how they are related to one another. This can help us to identify patterns in nature, and decide how best to protect the individual species that are part of the world's biodiversity.

Who is involved?

The scientists who practice taxonomy are called taxonomists. Their work is crucial for all our efforts to conserve biodiversity.

How many species are there?

Scientists believe there may be as many as 30 million species of plants, animals and micro-organisms living on the Earth today. Every one of them plays a part in the global ecosystem. Taxonomists have only identified and named approximately 1.7 million of them so far.

How does it help conservation?

Taxonomists use their knowledge to help produce lists of names and identification tools in the form of species databases, field guides, collections and reference works. These tools help conservationists understand biodiversity and develop ways to protect it.

What about taxonomy across the globe?

In the UK, we have a relatively limited biodiversity. However, the UK has a long-standing, globally recognised excellence in the field of taxonomy. Many developing countries are home to amazingly rich biodiversity, but they have only very limited local taxonomic support.

What is the Global Taxonomy Initiative?

The Global Taxonomy Initiative of the Convention on Biological Diversity is helping to address the shortage of taxonomists and taxonomic expertise.

ANTS

Taxonomy:
Class: Insecta—insects
Order: Hymenoptera—bees, wasps, ants
Family: Formicidae—ants

Ants can be found almost everywhere, except probably at the polar caps. There are something like 15,000 known species of ant which have been described, and these are adapted for widely varying conditions. Common to them all is the fact that they are all social. Technically speaking, they all belong to the Superfamily Formicidea of the order Hymenoptera and there are about 47 British species. The winged ants which are about in summer, are just normal ants which grow wings for what is known as the nuptial flight. This is where the young queens are fertilised. As soon as this has happened the queen breaks off her wings by biting them and becomes your normal ant again, being ready to start her own nest where she can continue to lay eggs for up to 15 years. The males

usually die soon after mating. There are carnivorous, herbivorous and omnivorous species, but in a lot of species their favourite food is honeydew, which they milk from Aphids. This has a high sugar content. When an ant finds a food source it will lay a pheromone(scent) trail back to the nest, where it will communicate with other workers by tapping antennae and also giving some of the food from it's crop, these workers in turn will then be able to locate the food.

The ant's body, like most insects, has a hard outer covering called the exoskeleton, or cuticle. It functions as armour, protection against dangerous solar waves, an attachment base for internal muscles, and also prevents water loss. It is divided into three main parts; the head, thorax, and abdomen, as shown below. There is also a small segment between the thorax and abdomen called the petiole, and is either in one or two parts according to species. The antenna are the most important sense organs that the ant possesses and are jointed so that the ant can extend them forward when it wishes to investigate an object. They are the ant's nose, ears, and eyes. Although ants do have eyes their eyesight is generally very poor; some ants, such as some of the tropical army ants are totally blind. Like all insects the eye is "compound", meaning that it is made up of many eyelets called ommatadia. The number of these eyelets varies according to species.

Much of the inside of the ant head is occupied with the muscles that close the jaw. The muscles that open the jaws are a lot smaller. The brain, though tiny, is a very complex organ and allows the ant to learn and react to its surroundings. It can remember things such as colony odour, navigation, and where it has placed a certain object. There are also several glands in the head that secrete various substances such as those responsible for the digestion of food. Another gland within the head produces a digestive chemical and, in some species, an alarm chemical. This chemical is used to alert nearby ants of impending danger and any ant that detects this alarm will automatically go into "battle mode." If you crush an ant you will release a huge blast of this chemical and you are, in effect, declaring war on the colony.

The thorax contains muscles that operate the legs and wings and also the nerve cells that co-ordinate their movements. Also contained in this part of the body is the heart and oesophagus. The heart is a long tubular organ running the entire length of the body, from the brain to the tip of the abdomen. Fluids bathe the internal organs and are circulated by the heart. The pharynx, which is part of the gut, is controlled by six muscles and pumps food into the oesophagus. Ant debris in the food, such as dirt, is filtered before it enters the oesophagus and is collected in a tiny trap known as the infra-buccal pocket. When this pocket becomes full the ant empties it into an area within or without the nest that is designated as a waste products area.

The abdomen contains the stomachs, poison glands, ovaries in the queen, and the Dufour's gland among other things. Ants have two "stomachs"; a dry, social stomach in which they can store food and later regurgitate to larvae, the queen and other ants. This is separated from the stomach proper by a small valve. Once food enters the second stomach, it becomes contaminated with gastric juices and cannot be regurgitated.

Generally, ant brood develop through 4 stages: egg to larvae to pupae (or, in some species, cocoon*)* to adult.

Eggs

Ant eggs are tiny at approximately 0.5 mm in diameter and weighing about 0.0005g, and are kidney shaped. They have a smooth sticky surface which enables them to bond together in a mass which aids adult ants to move them about more quickly. In case of emergencies, for examplem, it is easier

and quicker to carry many eggs in one go rather than having to pick each individual egg up.

Larvae
After about 7 to 14 days of cell division the larvae will emerge from the eggs looking very much like tiny maggots. The larvae have no legs but they are capable of some very small movements such as bending their head toward a food source and, in some species, they can move along very slowly if necessary. When they feed they suck up the juices of solid foods brought to them by the adult worker ants, or they can receive regurgitated food from them.

Pupae/Cocoon
After about another 24 to 27 days, once the larvae have gone through all of the skin moults, they change into one final stage which is the pupae. Pupae look like white waxy ants that lay with their legs and antennae folded up against their bodies. Some species, such as Lasius niger, do not have a pupa stage but the larvae will spin themselves a cocoon in which it will metamorphose into the adult ant.

Adult Ant
Approximately, a further 13 to 28 days (about a total of 8 to 12 weeks from egg to adult ant), and again this varies according to species and ambient temperatures, the adult ant emerges looking very pale and soft.

The particular job that each worker does within the colony depends on its age. New ants tend the queen and brood within the security of the depths of the nest. As the ant gets older it will change jobs which take it nearer the surface of the ground until, nearer the end of its life, the ant will leave the safety of the nest and forage outside.

Perhaps the best known ant in this country is *Lasius niger*, the common black garden ant. A newly born Lasius niger ant is almost white at first but after a few hours it will darken to black and its exoskeleton will harden. It certainly is known by our gardeners and household owners due to its tendency to enter houses. It tends to nest under pavements, in soil, along the edges of lawns, in fact almost anywhere. It is a very quick, robust and prolific ant, using formic acid and its jaws as a means of attack/defence. They eat insects, nectar, ants from other colonies and even their own dead. They are also very fond of sugary substances. They are perhaps one of the easiest ants to keep in captivity due to the fact that they are harmless and possess no sting. Another common ant found in gardens is *Lasius flavus*, the yellow meadow ant. These ants build small mounds in our lawns and are often mistaken for red ants due to their yellow-orange colour.

There are seven species of the *Myrmica* family found in this country. These ants tend to be a deep red in colour and can deliver a painful sting, the most common of the seven species being *Myrmica ruginodis*. They are aggressive and seem to be happier attacking than running away. Another common British ant are those belonging to the species **Formica**, also known as the wood ant. These ants are large, aggressive and attack by biting and spraying formic acid very effectively if disturbed. The largest ant in the UK is **Formica sanguinea** and is a slave-raider. It raids colonies of other Formica species and steals their brood, taking them back to their own nest where they raise the hatching workers as their own. **Formica rufa** are polygynous and can have hundreds of egg laying queens in one nest. They are found in Southern England as well as other European countries and are commonly known as the Horse Ant. This ant is a small black stinging ant.

In British species of ant there are three distinct castes, or class; Worker, Male and Queen. In some tropical species there is also a fourth caste; Soldier. The Soldier caste is not found in British species

of ant. Examples of species in which soldiers can be found are; various army ants, some Leaf Cutters, and Messors. Male ants are quite often the smaller of the three castes and have only one role in life - to inseminate a virgin queen during the mating flight. Once they have performed this task they die within a few days. Male ants are produced from unfertilised eggs normally laid by the queen. Their antennae are not jointed as are the other castes, though they have perhaps the best eyesight of all castes.

SPECIAL FUNDRAISING EVENT

"TABLE QUIZ"

Friday 10 June 2011

Tickets £4 including a free draw for a bottle of wine and buffet supper

In "Burlinson House", 5 Oaken Clough Terrace, Ashton under Lyne, OL7 9NY

Commencing at 7.30 pm. Teams to consist of 4 team members so start gathering your team!

Tickets can be obtained from any committee member - see telephone numbers below to book.

USEFUL CONTACT NUMBERS

Bryan Stringer: 0161 620 2496; Susan Stewart 0161 3309959; Jean Lythgoe 07711 388468

ROOKS

ROOK

Corvus frugilegus

Length: 45 cm (18")

Wing Span: 80-90 cm (32-36")

Weight: 460-520 g (1-1¼ lb)

Breeding Pairs: 850 000

Present: All Year

Description

The Rook is about the same size as the Carrion Crow but is more untidy in its appearance. The plumage is all black with a reddish or purplish gloss but around the base of its beak - nostrils and chin - is bare skin. The untidy appearance arises from the slightly peaked head and the thigh feathers, which look like baggy trousers. The bill and legs are black. The Rook's bill is longer and more pointed than that of the Carrion Crow. Just to add to the confusion, juvenile Rooks do not have the bare skin around the base of the bill and so look very much like a Carrion Crow, but purplish gloss to plumage and baggy trousers remain diagnostic.

Occasionally, leucistic (i.e. pale) Rooks can be seen. These generally have brown plumage or even cream plumage and pink legs and bill. It is often said that if you see a flock of crows that they will be Rooks. This is not strictly true because Carrion Crows do form flocks. What is true is that Rooks nest in close-knit colonies but Carrion Crows do not.

Voice

Rooks are rarely alone and so their raucous caws can become overwhelming.

Feeding

The Rook's diet, like most crows, is diverse and includes insects, worms, carrion and seeds. They will visit bird tables for scraps and fruit.

Nesting

Rooks nest in a colony called a rookery. The nest is built high in a tree close to other nests. The nest is bulky and made from twigs bound together with earth, lined with moss, leaves, grass, wool, hair, etc. Previous years' nests may be renovated and reused. The hen lays and incubates eggs that are smooth, glossy and light blue, greenish-blue or green with dark spots. The eggs are about 40 mm long. Both parents feed the young after they have hatched.

Breeding Data

Breeding Starts	Number of Clutches	Number of Eggs	Incubation (days)	Fledge (days)
March-April	1	3-9	16-20	30-36

Movements

Rooks in Britain are mostly sedentary apart from juveniles dispersing from their natal sites, when they may travel up to 100 kilometres (60 miles), and some movement from the uplands to lowlands for the winter. In the winter, the British population is joined by birds from Scandinavia and the near-continent, such as Germany and Holland.

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Conservation

The Rook seems to be doing well with the population increasing slightly year-on-year and so seems to have adapted to the various changes in agricultural practices that many other species have been adversely affected by.

APPEAL

Do you have anything on the list below which you could donate to MTVCA? If so, please let us know and we can arrange to collect from you if necessary!

Garden furniture
Bird table
Bird feeder
Wildflower seeds
Garden plants
Bookcase
Carpet tiles
Binoculars
Cushions (for the seats in the hide!)
Garden utensils
Flower pots
Or anything else you think we could use in the house or garden!

We would appreciate any and all donations and even if your items are in a state of disrepair we will bring our skills to bear to restore to their (almost) former glory!

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