

Spiders

article by Paul Holmes

Spiders are a fascinating group of insects. In Britain and Northern Europe other members of the order Arachnida include ticks and mites, harvestmen, scorpions and pseudoscorpions.

In the UK spiders are a fairly large group of insects comprising 33 families with over 600 species.... not too large to overwhelm a budding arachnologist.

In comparison there are 900 macro- and 1600 micro-moths.



Pisaura mirabilis
is a nursery web spider

Spiders have four pairs of legs, usually eight eyes and only two body regions which are clearly defined and joined by the *pedicel*. Harvestmen have two eyes and the body regions are joined together. Within the order the spiders have the distinction that they have spinnerets with which to spin their silk. Silk is used to make an egg sac, wrap prey, make shelters and lifelines and, of course, to make webs.

Unlike insects, spiders do not undergo



The Garden Spider
Araneus diadematus
with the characteristic cross on its back

a complete metamorphosis. Spiderlings go through the egg, larval and nymphal stages within the egg sac, moulting as they grow, finally breaking out of the sac, sometimes with the help of the attendant female and emerge as miniature immature adults. Moulting continues during the spider's life in order for it to grow larger.

Spiderlings can disperse simply by wandering off but to move quickly to new areas they, and adults of smaller species, can take to the air. They climb to a nearby high point, tilt their abdomens skywards and let out a strand of silk. This strand can fall to the ground or become entangled but, if lucky, the strand will get caught in a rising thermal of warm air and carry the spider aloft. Although undoubtedly effective these balloonists can meet a sticky end. They can be eaten by birds, drown in water, freeze thousands of feet up or land in other unfavourable environments.

Gossamer is the discarded remains of

the silk left behind and is most obvious when there has been a heavy dew overnight.

continued on p2



Close up of the harvestman
Dicranopalpus ramosus
showing its two prominent eyes.

AGM.

Wednesday
18th May at 8.00pm
in the East Keswick
Methodist Church
Meeting Room

Followed by a
"A Year In The Woods"
A photographic record of
the Trusts activities by
Trust member
Terry Beddows.

Refreshments will be
served and everyone
is welcome.

Spiders

continued

Spiders have well developed senses. As with other arthropods, spiders' exoskeletons would block out information from the outside world so they have different types of hairs that can detect forces ranging from strong direct contact to very weak air currents. Other hairs on their legs have chemical sensors that can effectively taste and smell. Another of the spiders' senses is that of vision. In common with humans, they have "simple" eyes rather than compound eyes that have many facets. Most spiders have poor vision and will rely on tactile and chemical cues. Orb-web species (such as *Araneus*), have poorly developed vision; their main sense will be detecting vibration via the web. Those species that directly hunt prey (e.g. jumping spiders such as the 'zebra-spider' (*Salticus scenicus*)) have more acute vision and have evolved specialist eyes to detect and focus on prey. They can follow a moving object from a considerable distance, i.e. a few inches away – not bad for such a small creature.

Spiders' legs do not have extensor muscles. Instead they extend their legs by hydraulic pressure. As a result, a spider with a punctured front half of its body (called the cephalothorax) cannot extend its legs, and the legs of dead spiders curl up. Jumping spiders can jump up to 50 times their own length by suddenly increasing the blood pressure in the rear two pairs of legs.

All spiders (except one species from Central America) are carnivorous. After catching and paralysing prey using its fangs they feed by alternately regurgitating digestive fluids into the victim and sucking out the resultant liquefied

prey; or crush the prey in to a liquid mush. Mmm Mmm! There is nothing to fear from spiders in the UK. They do not attack humans and might try to bite only in self-defence. There are only about three UK species that are capable of penetrating human skin and the effects of the bite are usually very minor.

Spiders are relatively easy to see and catch and are easily identified to family level, although a good hand lens or even microscope is needed to identify to species level. In Ox Close a number of (for Yorkshire) scarce species have been recorded in 2010. These are pictured on pg.1; the spider *Pisaura mirabilis* and the harvestman *Dicranopalpus ramosus*. A nationally notable species *Tetragnatha pinicola* was caught by the County Recorder and is the first record for the vice-county

of mid-west Yorkshire (VC 64). Much more can be written about spiders' silk, and their different types of webs and hunting methods. For more information, two very good websites to look at are;

www.xs4all.nl/~ednieuw/Spiders/spidhome.htm and www.britishtspiders.org.uk

A good introduction to spiders and other Arachnids with excellent photos is 'Arachnids', by Janet Beccaloni.



Tetragnatha sp.

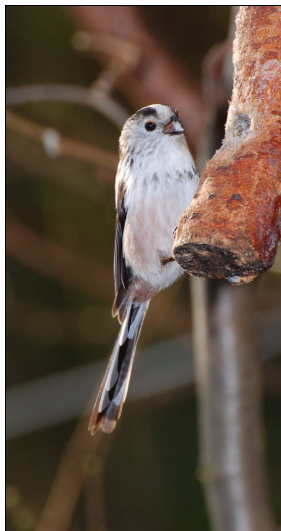
Seasons' Summary

by Paul Holmes

It's been cold!

This winter has exceeded last winter's records in terms of cold temperatures and duration. A large area of high pressure blocked usual air flows, bringing down cold winds from the Arctic instead. Most of the precipitation was in the form of snow but despite all this December was one of the sunniest on record. Nonetheless, there have been the usual sightings in our reserves. We've seen Roe Deer, foxes, Buzzards, Woodcock. 7-spot Ladybirds could always be relied on being seen. There have been the uncommon

winter visitor Bramblings and, the more usual, Siskins. In the Marsh there have been flocks of a dozen or so Bullfinches and flocks of Long-tailed Tits in Ox Close.



Long-tailed Tit

--- Who was lucky enough to see the Waxwings? As I write this in early March the weather seems to have turned the corner and Spring is definitely on its way. Already during warm sunny days there have been Small Tortoiseshell and Peacock butterflies, recently out of hibernation, flying around habitation, although as yet there is not much about

for them to lay their eggs on. As usual this is the time of year that we look forward to with excited expectation.....

What are we going to see this year?



Waxwing, a regular but elusive winter visitor from Scandinavia.

Aliens are coming

by Paul Holmes

In fact they're already here!

An alien, non-native, exotic or simply introduced species is one that has arrived by human activity either by accident or deliberately. Some are benign, such as the Evening Primrose, but many are not and can be harmful to the environment and human health and be costly to control.

These harmful, invasive species can spread uncontrollably because they have been introduced in the absence of their natural pests, predators and pathogens which would normally keep the species in check.

The alien that concerns us the most in and around East Keswick is the Himalayan Balsam *Impatiens glandulifera*. Introduced into the UK in 1839 this plant can grow over 2m tall. It is shade tolerant and also shades out other vegetation killing off lower growing plants. Its pretty pink flowers produce a lot of nectar so are very attractive to insect pollinators, including bees, and this, coupled with its explosively opening seed pods that can scatter seeds up to 7m away, make this plant such a problem.

Fortunately, to eradicate the plant, it is easily pulled up from the damp

earth that it grows in. We have a number of "balsam bashing" sessions during the year at which the Scouts, Guides, Cubs and Brownies all get stuck in to see which group can get the biggest pile of pulled plants! Our heartiest thanks go to all those that have joined these work parties. Alien species can be costly.

The total cost to Britain of invasive species is estimated at £1.7bn borne mainly by agriculture and horticulture. The Rabbit (population circa 40 million) is Britain's costliest pest causing damage to crops, grassland and infrastructure estimated at £260m annually.

For some species, such as the Rabbit and Grey Squirrel, control may be fruitless. Other species such as the North American Signal Crayfish are similarly well established and newcomers such as the Asian Long-horned Beetle may prove impossible to control.

The most recent alien is *Dikerogammarus villosus* - a bit of a mouthful - otherwise known as the Killer Shrimp. It has a voracious appetite, killing many native aquatic animals including native shrimp,

young fish and insect larvae and often does not eat its prey. Originating from the Black- and Caspian Seas, it has already spread to nearly all major rivers in western Europe outside the UK and in 2010 was discovered in Grafham Water, Cambridgeshire and Eglwys Nunydd Reservoir in S. Wales. Anglers and boat owners are being urged to make sure their equipment and boat hulls are cleaned and dry before transferring to another water body.

This is one species we really don't want to spread!

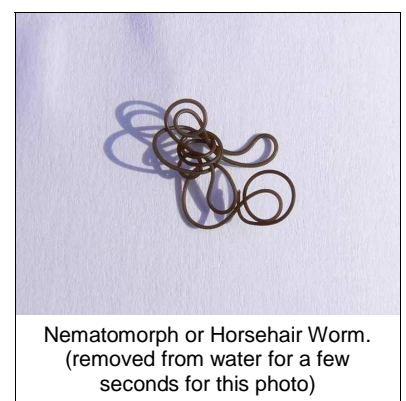


Himalayan Balsam

Changes in Ox Close

Any recent visitor walking along the middle ride in Ox Close won't have failed to notice that many of the trees either side of the path have been cleared (See Reserves Report, p.4). The resultant improved habitat is already reaping rewards: There are many more flies, ladybirds, bumblebees and butterflies than there ever were when this area was heavily wooded.

The "wet flush" has been dug out to form a bit of a pond and again, just a month after, there are pond skaters, three species of water beetle and nematomorphs (horsehair worms). The larvae of these worms are parasitic and some species use land based insects as hosts. Somehow they induce their living host to drown in water where the adults emerge from their host to mate and continue their life cycle.



Nematomorph or Horsehair Worm.
(removed from water for a few seconds for this photo)

Reserves Update by David Smith

The funds resulting from the continued support of the 100 plus members of the Trust have enabled us to spend more money and employ a contractor. More conservation management has been done on our reserves over the past 12 months than any previous year in order to improve habitat and access to all three of our reserves, as well as working on an additional site within the Parish.

In **Keswick Marsh** we have been removing the invasive

Himalayan Balsam for several years but this year we were able to employ a paid contractor to work for four days to trim and cut back the large patches of Balsam which have been swamping the native flora. Volunteers were also active with Scouts, Guides, Cubs and Brownies continuing their annual visits to remove the Balsam. In 2011 we are hopeful that we may be able to eradicate completely the plant from most of this reserve.

.....continued

Reserves Update

continued

Ox Close Wood for which the Trust owns the freehold has been the area where most of this year's work has taken place. For the last 20 weeks most Fridays a group of between 3-10 volunteers with a paid contractor have been opening up the middle ride by coppicing the scrub and trees either side of the path, creating an open ride with glades. This work will produce a better edge habitat and allow more light to the woodland floor which should improve the habitat and diversity within the woodland, it will also improve access. In 2011 a grant of £5800 from the lottery fund will help us to complete this work and fund several other planned projects within the woodland.

Frank Shires Quarry and Field.

Light grazing of the quarry field by the Trust's small flock of Hebridean sheep has continued through the winter. Volunteer work parties have opened up the access track and cut back bramble thereby improving the areas of scrub habitat.

In 2009 a family, who once lived in the village and own a one acre plot of land within the Parish, contacted the Trust

to see if we would help to manage the land to improve its wildlife value. Several meetings took place to discuss management and work commenced in 2011. The owner provided a small grant which has now been spent to remove dumped rubbish and to make the site more accessible for future conservation work. Trust volunteers spent several days working on the site and hope to continue with this habitat improvement in 2011 as well as drawing up a management agreement to look after this site on an annual basis. No subscription monies will be used.

Conservation Volunteers are welcome. We need you. Please come and help us in 2011-2012. We have now up to 10 regular volunteers working on conservation projects on most Fridays on our reserves within the Parish.

Also during the year the Trust undertakes a number of Natural History Surveys looking at e.g. birds, bumblebees, flowers, dragonflies. These are usually arranged with at least two weeks notice. If you would like to join us (the more eyes the better) please call Melanie or David Smith on 01937 574140 or email me at paul@ox-close.co.uk and we will include you on our list of contacts for these events. No previous experience is required.

The brief business of this year's AGM will be followed by

"A Year in the Woods"

...a photographic record of EKWT activities compiled by Terry Beddows and interspersed by brief talks focusing on diverse aspects of our work from chair making and coppicing through to sheep-shearing and mammal trapping.

For anyone interested in joining EKWT, this will be an excellent introduction to its aims and activities.

Forthcoming Events 2011

Bluebell Walk. Wednesday 4th May.

Meet at Crabtree Lane car park 7 p.m.

AGM. Wednesday 18th May.

In the Methodist Church Meeting Room 8 p.m.
Slide show of EKWT events compiled by Terry Beddows.
See page 3 for further details.

Breeding birds survey. Sunday 15th May.

Meet 10.30am outside Post Office.

Charcoal burn. Saturday 21st May

Meet 2pm at the kilns. Please phone 01937 574140 prior to the day to confirm the event will run.

Balsam Bashing

We will be holding regular work parties to control the Himalayan Balsam in Keswick Marsh. The Girl Guides will

be there on 29th June and the Scouts on the 30th June. Everyone is welcome, please call 01937 574140 for details.

Charcoal burn. Saturday 23rd July

Meet 2pm at the kilns. Please phone 01937 574140 prior to the day to confirm the event will run.

Timber extraction Friday 9th September

in Ox Close Wood. Meet at Greenfields at 9am.

Autumn Talk, Wednesday 16th November

In the Methodist Church Meeting Room. 8pm, Ox Close... "Past Present and Future". An illustrated talk by members of the Wildlife Trust.

Fungus identification.

Dates and other details are still to be arranged. Keep a look out in the village website and notice board and in the Ox-Close website. www.ox-close.co.uk

We need your help... no experience is needed!

Volunteers are needed for conservation work, even if you only have half an hour to spare your help would be invaluable.

Please contact us if you would like to be involved in any aspects of the Trust's work.

For Updates of our events on the Web visit

www.eastkeswick.org.uk then click on **Wildlife Trust.**

Newsletter Editor tel: 01904 738854 or e-mail: paul@ox-close.co.uk

For more details of any of the Trust's activities: tel. 01937 574140

Registered Charity No. 1013950
