Oxfordshire Beekeepers Association Newsletter
February 2021

After some early signs of spring in late December and early January, winter has finally arrived. Although February has been mild for a few years, it is often our coldest month. While your bees are safely clustering, we have a few things for you to think about related to OBKA.

First, and most important, our Annual General Meeting (AGM) will be held on **Wednesday 17th March**. As a charity we have to run a meeting each year so that members can express their views on how the association is run. All members have a right to attend the AGM, to question officers (Chair, Treasurer, Membership Secretary and Secretary) and to vote on resolutions and changes to the constitution. OBKA is your association so if you want a say, this is your opportunity.

Because the AGM will be held online (rather than by email as last year) we have given you full instructions on Page 2 telling you how the meeting will be run and how the voting system will work.

We have also given a summary of the results of our apiary questionnaire on Page 3. There is clearly much demand for practical beekeeper training beyond that we provide to beginners. We will take these results and put together a training plan for the next few years with the objective of improving knowledge and skills among our members and, hopefully, allowing us to have greater success in BBKA module examinations and practical assessments. The questionnaire also showed that there is much interest to make better use of the apiary as a social hub and again, with your help, we will make progress in that area as well once we get beyond the COVID restrictions.

David Lord, who many of you will know from our training courses, has started a series of articles aimed at improving the knowledge of people planning to take the BBKA Basic Assessment. This is a practical assessment which can be taken by all beekeepers with at least one year's experience but it includes a short oral examination covering many aspects of beekeeping. David's articles will help potential candidates study for the oral questions and should be of interest to all beekeepers, whether experienced or novice.

Our training team, led by Helen Raine, has been working hard to prepare both the What is Beekeeping (WIB) and Beekeeping Beginners' Course. These courses will be run online and, subject to COVID regulations, we intend to run three apiary sessions for each group of trainees.

If you were a beginner last year and would like to join either What is Beekeeping or Beekeeping Beginners' Course please contact Carl Goodman as soon as possible. There is no charge for WIB and we have kept the fee for the Beekeeping Beginners' Course unchanged at £60.

training@obka.org.uk

Finally, if you have not already renewed your membership, please do so as soon as possible using the email link sent in December. If you have not renewed by 27th February your membership is deemed to have lapsed and all benefits are stopped, including BBKA membership and Bee Disease Insurance.

If you need to contact Daniel about your membership renewal, please use:

membership@obka.org.uk

putting your name and membership number (if known) in the email title.

Contents

Notification of the 2021 AGM

Our AGM will take place on **Wednesday 17th March 2021**, starting at 7.00 pm. The meeting will be held by Zoom and an agenda and all reports will be distributed to members by **Wednesday 3rd March 2021**. The AGM will receive reports and vote on proposals to change our constitution and any other resolutions that are received by **Monday 15th February 2021**. In addition, we will elect new Trustees and a President. Nominations for these posts require a proposer and a seconder and the closing date is **Wednesday 24th February**.

In preparation for the meeting please read the following instructions:

i. Our AGM will be held under a legal waiver issued by the Charity Commission that allows charities to hold AGMs and similar meetings online rather than face to face.

ii. The quorum for our AGM is ten members. If we are not quorate at the start of the meeting, we will cancel the AGM and try to run a quorate AGM at a later date.

iii. Our constitution requires us to have a minimum of three trustees, up to a maximum of twelve. We currently have five. At least one trustee has indicated a wish to step down. We really need two or three people to put themselves forward for election as trustee this year. Advice was given in the January newsletter.

iv. We have three nominations for the post of President but are happy to receive more. If you would like to nominate someone for the post of President, please refer to our January newsletter.

v. We ask that you read the reports from officers before the AGM. Each officer will give a short presentation bringing out the salient points in their report. Members will have an opportunity to ask questions after each presentation.

vi. Questions will be taken using the comment box in Zoom. You may, if you wish, request to address the meeting and present your question orally.

vii. Voting will use Google Forms and will take place during the meeting. Our constitution requires you to be present at the AGM if you wish to vote. There will be votes as follows:

   ⇒ **Trustee positions**
   This is a simple For/Against vote for each nominated person. A person is elected as a trustee if they get a majority of the votes cast.

   ⇒ **President**
   As there are more than two candidates, election of the President will use the Alternative Vote system. You will be required to rank the candidates in order of preference. If you choose to vote, you must rank all candidates. After the first round of voting, the candidate with the least number of first preference votes is eliminated and second preference votes are distributed to the remaining candidates. This process continues until one candidate has a majority. In the event of a tie, the meeting chair has the casting vote.

   ⇒ **Resolutions**
   To be adopted, a resolution requires a two thirds majority of the members present at the AGM.

   ⇒ **Changes to the constitution**
   To be adopted, a change to our constitution requires a two thirds majority of the members present at the AGM.

viii. To use the online voting system effectively at the same time as Zoom, you need either a second computer screen or a smart phone (iPhone, Android) that is connected to the internet. The minimum requirement is that you can see your email inbox and open and send an email.

ix. At the start of the meeting you will be asked to confirm your name. We will check that you are a registered member and issue you with a voting code. To ensure the integrity of the vote, you will be required to verify both your email and the voting code as you vote.

x. We will arrange one or two practice sessions a few days before the AGM so that everyone understands how the voting system works.

If you have any questions about this process, please contact the Secretary.

Woodstock Apiary: Survey of Members

We would like to thank everyone who responded to our survey on how we manage and use the Woodstock apiary. Sixty seven members participated, which is excellent. For those people who left their name, we will contact you at some point, prioritising people who offered to help followed by people who are seeking training.

Two people offered to act as our apiary advisors and, while no one volunteered to act as apiary manager, we have over ten people willing to assist with running the apiary and many more interested in helping from time to time as part of their beekeeping training and development.

Quite a number of members expressed interest in some of the proposed courses and we also had around twelve offers of help to deliver training. We cannot promise anything immediately, especially given the uncertainty of COVID, but hopefully over the next year or two we will significantly improve the range of training we are able to offer, especially to beekeepers who have been keeping bees for a few years.

As a personal view, it is possible some of you have misunderstood the level of commitment required to complete e.g. the BBKA General Husbandry assessment. Perhaps we need to ensure you have the full information before we go any further.

There was quite a lot of interest in using the apiary as a social hub and for buying / selling equipment. A number of people advised that we should not bring second-hand equipment, which may be contaminated, into the apiary so we will limit buying and selling to new equipment. You are, of course, free to advertise in our newsletter if you wish to dispose of surplus equipment.

	Willing to act as a trainer	Interested in training course
Training on other hive types	1	10
Making splits	0	27
Managing a nucleus colony	1	17
Queen raising	2	25
Swarm control methods	2	31
Asian hornet monitoring and protection	1	18
BBKA Basic Assessment	3	20
BBKA General Husbandry	0	16
Bee Health certificate	1	15
Bee Breeding certificate	1	8

Apiary Management	Expressions of Interest
Apiary Manager	0
Apiary team member	10
Apiary advisor	2
Apiary support team	18

Several people said the apiary was too far from where they lived for them to make a commitment to supporting it. This is a really difficult problem for us to address: Oxfordshire is a large county and when we tried to set up a second apiary in Witney a few years ago, it was unsuccessful. We would be happy to talk to anyone about setting up a second training apiary, but there must be strong local support and, critically, a suitable site with a long-term tenancy agreement. A few people asked about training in topics that were not part of the survey, such as beginner training and preparing honey for sale. One person expressed the view that OBKA is not an inclusive environment and does not encourage diversity among its membership; that the apiary is inaccessible, and that more should be done to improve outreach to the public.

Any comments welcome!

Richard Stansfield

secretary@obka.org.uk

The Apiary in February

Other than checking the hive weight from time to time and feeding fondant as required, there is little to do in the apiary in February. On warmer days, bees may be spotted on cleansing flights or even collecting pollen from early spring flowers such as snowdrops. However it's much too early to open hives and remove frames.

There are several useful things you could do this month such as checking your equipment is clean, and repairing or replacing anything that is damaged. Probably the most useful thing to do is to spend a little time looking over last year's hive records, deciding what worked and what was less successful, and make plans for the year ahead. If you plan to raise queens from your own stocks, use your hive records to decide which are your best breeding queens. For most hobby beekeepers, good temperament and health, including varroa resistance, should be the most important criteria, with low tendency to swarm a close runner up.

Towards the end of February, beekeepers in oilseed areas often feed pollen substitute to boost brood production leading to a stronger foraging force in May when OSR flowers. Without this boost, a colony will not achieve its full strength until June or July, after the OSR flowering period. For health reasons, pollen substitute is preferred over natural pollen unless the pollen was collected by your own bees. Beekeeping suppliers sell various kinds of pollen substitute, usually made from soya and other protein rich foodstuffs, which are placed on top of the frames much like feeding fondant. Pollen starvation is a common problem at the end of winter and a boost at this time may help any colony. However, it stimulative feeding may lead to early swarming. Of course, once the willows and crocus flower, the bees will collect all the pollen they require.

Feeding pollen patty—Michigan State University

The National Bee Unit advice leaflet on feeding pollen to bees is found at:

Feeding Bees Pollen

Online talks

Several beekeeping organisations are providing talks aimed at beekeepers this winter.

BBKA: Wide range of talks, around one per month, found on the following page:
https://www.bbka.org.uk/Pages/Events/

National Honey Show: Videos from the 2019 and earlier lecture series:
https://www.honeyshow.co.uk/lecture-videos.php

Central Association of Beekeepers (CABK): A series of lectures linking beekeepers with the latest scientific research. These include lectures in conjunction with Bee Craft magazine, the first being about using accelerometers to monitor honey bee colonies.
http://www.cabk.org.uk/events

BIBBA—Bee Improvement and Bee Breeders Association. Extensive programme of online events:

Spring 2021 webinars
These webinars are free to attend. Their purpose is to offer beekeeping education and training to all beekeepers in . For information on our 40+ Spring 2021 webinars click here .

Prospective Beekeepers
Whilst we all support our members as best we can, we can also cater for prospective new members. A couple of the webinars in the Spring programme are very much for those people thinking of keeping bees. The 30th January event is around about an hour in duration and is free to attend. The second event (March 13th) is an all-day offering based on a successful event that has run for 15 years. A small charge of £15 is requested for this individual event. Tickets are on sale via Eventbrite. click here for more details.

Monitoring hives in winter

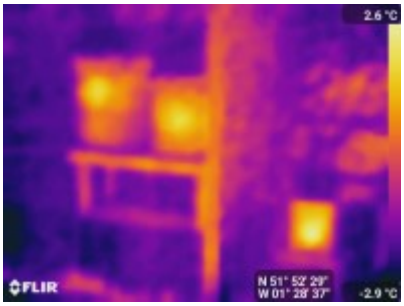
Members Ric Goodman and Gordon Cutting have been busy monitoring their hives using thermal imaging techniques.

Ric observed frost melt on his hives, showing that the colony inside was healthy. Careful observation of a hive at any time of year gives valuable clues to what is going on inside without having to disturb the colony.

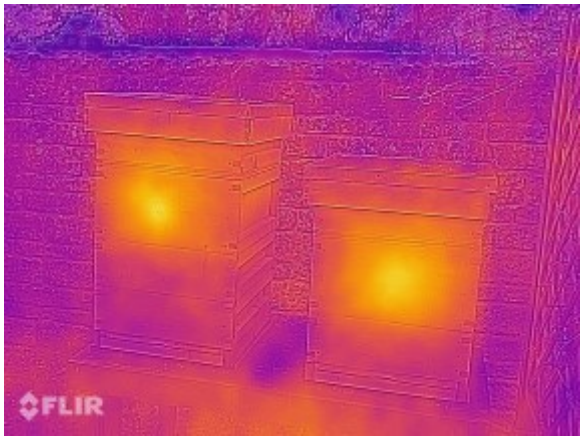
Gordon used a slightly more sophisticated technique, which he explained as follows:

“Please find attached IR and visible spectrum images I took with my CAT S61 yesterday morning, together with a composite image that I produced using the FLIR editing software supplied with the phone.

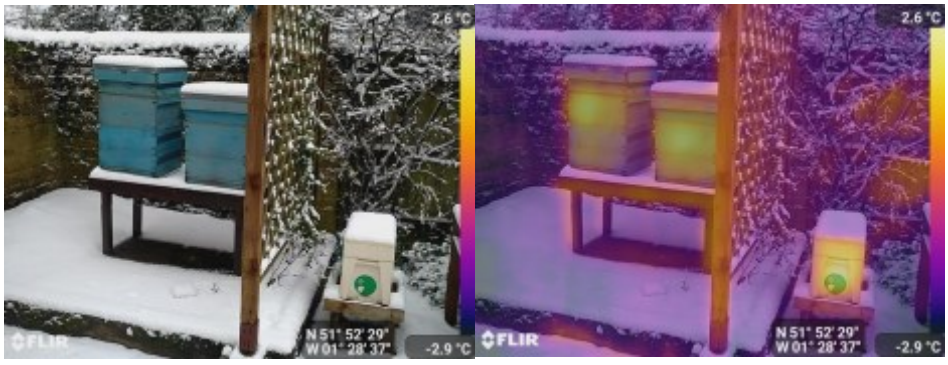
Note the temperature scale on the right. While the CAT S61's thermal camera can run from -20°C to 400°C, it will adjust the coloration to run from the maximum in the image to the minimum, and readjusts the scale every few seconds, meaning what looks toasty warm may just be the warmest thing in the picture and not very warm at all. It is possible to adjust the settings, so that the scale is fixed, but I haven't bothered to do that with my phone.
At 978x733 pixels, the picture is clearly not as high definition as the visual camera on the device would take on its own (which is 4608×3456 pixels), but for a thermal imaging device, 978x733 pixels resolution is fantastic for the price, when you consider you get a very practical and tough as old boots phone thrown in for good measure. The newest version, the CAT S62 PRO sells for £599 at the moment.
Obviously, there are other thermal imaging cameras available, including ones that can plug into an iOS or Android smartphone. A quick search online will furnish anyone with prices for comparison.



Interestingly, I posted the composite image not just in OBKA's Facebook group, but also in another beekeeping group, and got a comment from one member who'd used the same or similar technique to image her hives and found two heat blooms in one of them. She asked me what I thought she found on checking the hive, and I speculated that maybe she'd kept a QE and super on top and the higher cluster was a forage party that had gone up to get some fondant. Turned out that when she checked the hive, she found the mouse guard wasn't quite fitted properly and some field mice had set up home! They were apparently instructed to find other lodgings and the mouse guard was refitted properly.”



Many thanks to Ric and Gordon for the excellent photos and article.



Visual and infrared images of three hives

Preparation for the BBKA Basic Assessment

Over the next few months I will provide help and insight for those planning to do the BBKA Basic Assessment. It will serve as a useful refresher for those of you who have already taken the assessment and give others an understanding of the expected level of attainment.

The objective of the assessment is as follows:

> *"To provide new beekeepers with a goal which will give them a measure of their achievement in the basic skills and knowledge of the craft. It is hoped that it will be a springboard from which to launch into the more demanding assessments. A pass in the Basic Assessment is a prerequisite for entry into all other assessments." It is a requirement that you have kept bees for one year before taking the assessment."*

Although it can be somewhat daunting when reading through the syllabus, it will only take a little extra effort to achieve Basic Assessment Certificate and the first step on the road to better understanding of your craft. Be assured, the Basic Assessment is not just for the new beekeepers: it's for all of us and has been taken by beekeepers of many years standing. If you have completed the OBKA Beginners' Course you are well placed so demonstrate the knowledge you have gained.

The assessment itself usually take place at the OBKA Apiary in Woodstock. A BBKA accredited assessor from another branch spends about an hour with you, which passes very quickly. While undertaking a few practical tasks such as finding the queen and identifying brood, you will be asked question from the syllabus. I will try to cover key points you should be familiar with.

NATURAL HISTORY AND BEEKEEPING – ORAL QUESTIONS

> *To be able to give an **elementary** explanation of the development of the Queen, Worker and Drones in the honey bee colony and the time spent in their four stages of development (egg, larva, pupa and adult).*

- A **worker** egg hatches after three days into a larva. Nurse bees feed it with secretions from glands in their head. It's capped on the ninth day and becomes an inactive pupa. During its 12 days as a pupa, sealed in a capped cell, it grows into a **worker** (female) **bee**, emerging on the 21st day. The adult bee lives for about 6 week in summer and 6 months in winter.
- A **drone** egg hatches after three days into a larva and is feed as per worker larvae but for one day longer. It is capped on the tenth day, spends 14 days as a pupa to emerge on the 24th day as a **drone** (male) **bee**. Drones live until the mating season is over when they are ejected from the hive and die.
- A **Queen** egg hatches after three days into a larva and is feed over 5 day on a different mixture of brood food (Royal Jelly) to the drones and workers. The larva is capped on the 8th day and emerging as a new virgin Queen on the 16 day. She will be ready to mate within a week and can start laying shortly after. Queen can live up to 5 year but are often superseded after 2 or 3 years.

You should familiarise yourself with the different types of brood and the stages of brood development from egg to larva to pupa. Most beekeeping books give a good explanation of the changes the larva undergoes once it is capped, becomes a pupa and finally emerges as an adult bee.

> *To be able to name the main local flora from which honey bees gather pollen and nectar;*

In our area:

- **Early spring** flowering plants include snowdrop, crocus, aconite, dandelion and hawthorn. Willow and hazel provide abundant pollen at this time of year.
- **Summer** provides the main crop including flowers from urban gardens and trees such as lime, horse chestnut, maple and elder. In rural areas, flowering field crops such as field bean, rape, borage, brassicas provide the main crop.
- **Autumn** Most garden flowers have passed their best but late sources of forage include ivy and buddleia if the weather permits. In rural areas, field mustard can give a good late crop.

Some beekeepers move their hives to major nectar sources such as orchards and oil seed rape fields in spring and heather in autumn. An interesting activity would be to make a record of the main sources of nectar and pollen in your area throughout one season and work out when your main nectar flow occurs.

To be continued ….

If you have any questions please contact:

David Lord

Winter floods

Daniel, our Membership Secretary, sent us a few photos, taken on 27 December 2020, of one of his out apiaries which is situated on an island in the river Thames near Oxford. Daniel writes:

"The apiary site is on the banks of the Thames river at a place called Rose Island. The stands are on concrete blocks and I have a flood warning app. If the river level is increasing above the flood line, I evacuate the hives to another apiary. At this point the river was just below the flood line and decreasing. I keep a maximum of 4 hives to make evacuation easier."

OBKA Talk—Bees for Development

Twenty two members listened to an interesting talk by Nicola Bradbear, founder of Bees for Development, a charity that promotes beekeeping as a means of poverty relief in under developed countries. The charity provides education and support during the early years, and in particular helps people develop a local market for their hive products, not just honey but also beeswax. They work in many countries but the projects discussed were in Ethiopia, in particular in some of the forested highland areas. People use locally produced hives, typically cylindrical hives that are held off the ground to prevent ant infestation or put in trees if larger predators are a problem. The bees are prolific but swarm or abscond frequently as they respond to the changing seasons. Empty hives are used to collect swarms and, other than collecting honey, there is no other intervention.

Beekeeping in Ethiopia
Bees for Development

The hive products are in high demand, especially the beeswax on account of its purity. It finds it way into high end cosmetic products and attracts a premium price.

You can watch the talk again by following this link to the member's area of our website. The talk will be available for a few weeks.

OBKA Videos

Thanks to Elly for organising this event.

OBKA Talks: February 2021

Our next talk on 12th February 2021 at 7.00 pm will be given by Ged Marshall. Ged, a local commercial beekeeper specialising in queen raising, will give a talk entitled: Queen Rearing.

Full details of the talk and speakers, including the Zoom link, will be sent out a few days before the event.

Elly Pattullo

events@obka.org.uk

Bee Behaviour: Thermoregulation or temperature control

Honey bees are unique among insects living in cold climates in their ability to regulate their temperature and remain active during long cold winter periods. For insects that originally evolved in Sub-Saharan Africa, this is a major adaptation affecting many aspects of their biology and behaviour, including nest selection, food storage in preparation for winter, clustering and method of generating heat.

For bees with brood, the nest temperature is kept at a constant 35°C with little variation. A related problem is regulating humidity of the brood nest which is also tightly controlled. If there is no brood present, the nest temperature is reduced to around 18°C at the centre, falling to around 7°C at the edge of the cluster. Insulation is provided by tightly packed bees on the periphery, with more space in the centre of the nest to allow nurse bees to tend the brood. In this condition, bees are able to survive external temperatures well below -20°C. Bees cooled below 8°C for long periods eventually die.

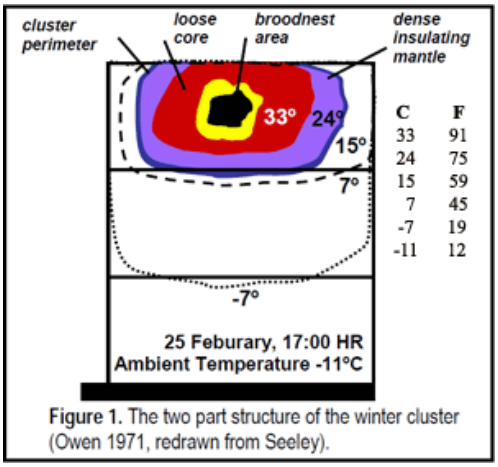


Figure 1. The two part structure of the winter cluster (Owen 1971, redrawn from Seeley).

Heat is produced when the bees contract their large flight muscles in such a way that their wings remain stationary. (Isometric contraction—the muscles are contracted but there is no movement). The heat output, or power, of bee flight muscles is around 500 W per kg, just a little lower than the motor in my Audi A3 but far exceeding that produced by the most energetic human athletes, for example Olympic rowers. Not surprisingly, bees in flight get very hot, but they also need to warm their muscles before they can fly. If their temperature falls below 18°C they are unable to do this.

In natural hives, typically inside trees, heat losses are very low. Wooden hives allow heat to escape easily, which has to be compensated for by a greater consumption of honey and, presumably, reduced lifespan of bees involved in generating heat. Insulating hives in winter and polystyrene hives may help reduce this stress.

Of course, in summer the opposite problem arises: the need to keep the brood nest cool. Letting the nest temperature rise even a couple of degrees above 35°C has a significant effect on brood development. Above 40 °C wax starts to loose its strength which could be disastrous. Bees regulate the nest temperature by fanning at the hive entrance and, if that is insufficient, specialist water carriers deposit water on the combs. This cools the hive by evaporation, a process similar to sweating.


Bees fanning at the hive entrance in summer

Which brings us to questions of hive design, wood vs. polystyrene, to insulate or not, to ventilate or not: endless questions with no definitive answers ...

Reference

Thomas Steely. The Lives of Bees. Princeton University Press. 2019.

Derogation of Neonicotinoid Ban

The Government has derogated (partially withdrawn) the ban on use of neonicotinoids for sugar beet crops subject to various safeguards. While honey bees do not collect nectar from sugar beet, the insecticide remains active in the soil for many years and could affect future crops such as OSR or field beans that are visited by honey bees, other bee species, and many insect pollinators. BBKA has made representations to the Government, following an emergency vote at the recent ADM, and we await the outcome. There is similar pressure from OSR growers to allow neonicotinoids to be used on that crop which would have a more immediate impact on beekeeping.

If you are familiar with the issues and would be happy to advise our members on this topic we would be grateful. It's a difficult area with many conflicting viewpoints and no one on our committee is familiar with either current farming practices or the issues surrounding neonicotinoid use.

Classified

Apiary Site—Leafield (5 miles NNW of Witney)

Lady offering site for bees in two fields at edge of village. Rural location with extensive woodland close by.
If you are interested please contact the Secretary for more information.
secretary@obka.org.uk

Bee suits for sale

Separate trousers and jacket with hat and veil suitable for a child or young teenager at £20 each.
Jacket with zip on hat and veil suitable for an adult medium size. £30
White zip up adult medium boilersuit £20
All in one bee suit with hat and veil adult medium £50.
Please contact Paul Jovanovic.
07773 05 65 98

OBKA Events Calendar

Annual General Meeting: 17th March 2021 at 7.00 pm

OBKA Talks

All talks are delivered by Zoom or similar. The Zoom link will be sent by email a few days before each talk.

12th February 2021 at 7 pm – Ged Marshall - Queen Rearing

26th March 2021 – Andy Pedley – Food Hygiene for Beekeepers

Elly Pattullo is interested in your ideas for future talks. If you know a speaker or would like to hear a talk on a specific beekeeping topic please contact Elly on:
events@obka.org.uk

OBKA Contacts

Oxford Beekeepers Association

Joint Chair	Christine Eaglestone
	Mike Fleming

Contact via Secretary

Secretary	Richard Stansfield
Tel:	07821647135
Email:	secretary@obka.org.uk

A full list of contacts may be found on our website

Oxford Beekeepers Association is a registered charity Number 1005846.

Visit www.obka.org.uk to see details of future events, links to other useful sites and other relevant information.

Please forward information for inclusion in the news letter to Richard Stansfield.

Join us on Facebook by clicking the link above