

"Improve Your Bees and Beekeeping"

Presenters and Presentations

Presenter: Jo Widdicombe. Cornwall.



Jo Widdicombe is a bee farmer in Cornwall running over 100 colonies for honey production and queen rearing. He has selected his stock from local bees gradually refining the strain by working towards a near-native bee. He is the President of BIBBA and is the author of the book, "The Principles of Bee Improvement". He believes we have to strike a balance between maintaining genetic diversity within our bees and working within a strain that has some

uniformity. In this way we can produce robust bees in which the offspring produced resemble their parents. This allows continual and sustainable selection and improvement of our stock.

Presentation: "Improving Bees - What Works For Me"

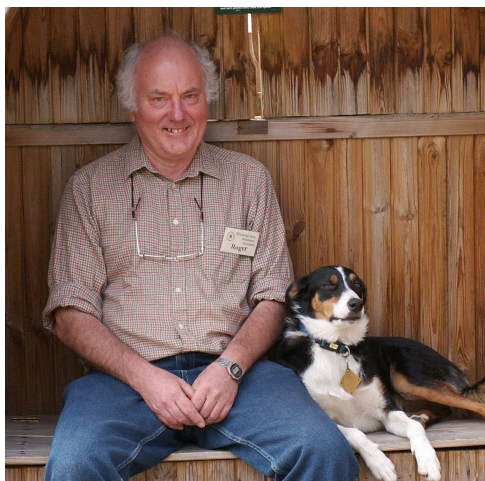
Jo talks about how he has developed a strain of bee from his local stock. The strain is uniform enough to produce offspring like its parents, but genetically diverse enough to be a sustainable and hardy population. He explains how imports of exotic strains of bee damage the development of local adaptation and undermine efforts to improve the quality of bees in Britain and Ireland.

He suggests ways in which we can move forward with bee improvement, whether by working in groups, by developing our local and near-native strains or through the development of local or regional mating stations.

Presenter: Roger Patterson. West Sussex.

An engineer by trade, Roger was brought up on a farm in West Sussex and started beekeeping in 1963. He travels widely speaking and demonstrating practical topics, where

his down to earth approach that is based on observing and handling a large number of colonies for over 50 years is appreciated. He is privileged to see different bees being kept



in different conditions. This tells him the usual "Beekeeping by Numbers" approach isn't always appropriate.

Roger encourages beekeepers to use simple management techniques and keep good tempered, healthy and productive bees that suit their locality. He presents the popular BIBBA "Bee Improvement for All" (BIFA) days and Bee Improvement courses.

He owns and manages Dave Cushman's website www.dave-cushman.net, that is accepted as one of the world's most comprehensive beekeeping websites. He is well known for his border collie Nell, who is probably the best known dog in beekeeping.

Presentation: "Keep Control of Your Colony Numbers"

Many beekeepers don't seem to have much control over the number of colonies they have, especially if their swarm prevention and control techniques are a little suspect. There is an excuse for beginners, but not those who have kept bees for more than a year or two. The usual reason for the number of colonies going out of control is because existing colonies swarm and there is no plan to deal with them, apart from buying more kit and filling more boxes with bees. This often means weak and unproductive colonies that may not have the required amount of care, resulting in heavy losses.

This presentation encourages beekeepers to decide how many colonies they want and gives ideas on how to manage their apiary to maintain those numbers. It will give some simple ways of colony increase and reduction and indicate the knowledge required to do so.

This presentation is new for the 2018 BIBBA Conference in Cirencester.

Presentation: "Small Scale Queen Rearing"

I have heard many "Queen Rearing" lectures where the presentation is about three levels higher than the vast majority of beekeepers are able to understand or need. The vast majority of amateur beekeepers have 5 colonies or less and I reckon that's about 75-80% of them, so what is the point of describing methods that will produce hundreds of queens? All it does is convince the ordinary beekeeper that queen rearing is complicated and not for them, so they don't bother and buy a queen, which may be unsuitable for their location.

This presentation will satisfy the beekeeper who wants perhaps 1-20 queens a year, yet the methods described will still suit those who may want more. There is little or no specialist equipment needed, all being part of the kit that most beekeepers have or can improvise. The use of natural queen cells will be described, together with some simple "artificial" methods. It will also take advantage of some common situations that beekeepers regularly face, such as a queenless colony or one with a failing queen.

If we are rearing queens they should come from good stock, so some simple selection techniques will be discussed. There is no point in raising physiologically good queens from poor stock.

This presentation is new for the 2018 BIBBA Conference in Cirencester.

Presenter: John Chambers. Oxfordshire.



In his tenth season of beekeeping, John maintains about 20 colonies. Starting with locally-caught swarms, he was struck by their diverse behaviours. A busy town-living professional with children, he loves how his bees immediately draw him into the vibrant ecological network on his doorstep. He attempts to interpret rather than inspect, believing observant beekeepers can

predict what they will find next time with reasonable accuracy. He does not feed his colonies during nectar dearth and is frugal with syrup after the honey harvest. Likewise, believing angry, weak or underproductive colonies to be so for reasons that have no place in his apiary, he does not spare the queens or unite such colonies. He rears more queens than required and chooses which of these to keep. By these means, he believes that he is developing a frugal, gentle, hardy and productive survivor stock that overwinters well.

Presentation: "The Use of Honey in the Management of Skin Wounds"

This presentation describes personal experience with honey in the treatment of bacterially contaminated skin wounds and the minimisation of scarring. It then considers the documentary history of the use of honey in the management of skin wounds over the last 2,500 years. The mode of action of honey in this context is then postulated. The presentation closes by reflecting upon what modern medical literature has to say on the subject.

Presentation: "Basic Honey Bee Genetics For Beekeepers"

There is nothing “basic” about honey bee genetics. Assuming DNA, chromosomes, alleles and Mendel’s single-gene inheritance theory to require no explanation, this presentation briefly explores quantitative trait loci; haplodiploidy and sex determination; genetic recombination, polyandry and the benefits of intra-colony genetic diversity; the fates of maladaptive, neutral and beneficial genes within populations; the perils of inbreeding depression; the transient nature of hybrid vigour; the ecological headache of outbreeding depression; the importance of selection pressure; and what we might infer from genetic bottlenecks. These genetic considerations and more should concern every bee improver, as explained in the context of three important questions. Firstly, is it possible or desirable to attempt the re-creation of pure *Apis mellifera mellifera* (*Amm*) strains and to entirely re-populate Great Britain and Ireland with them? Secondly, are *Amm* conservation areas likely to disappoint for obvious genetic reasons? Thirdly, might the simple pursuit of locally-adapted honey bees be preferable to the attempted re-creation of a subspecies? The presentation closes by explaining why further honey bee imports should be viewed as bad news and how we should be able to improve our local stock quickly, simply and optimally, using an augmented “bees know best” policy.

Presenter: Andrew Abrahams. Colonsay.



Andrew Abrahams has kept bees commercially on Colonsay for over 30 years and has wide experience of honey production and queen rearing. He holds the Scottish Beekeepers Association Master Beekeepers Certificate and has a BSc (Hons) Degree in Agriculture. He has teaching experience in both beekeeping and agriculture. Colonsay is home to one of Europe’s few populations of pure Black Bees (*Apis mellifera mellifera*) the UK’s native honey bee. The bees on Colonsay are managed for commercial honey production and queen rearing, but are also of

unique interest to honey bee conservationists and scientists studying bee diseases. The 50-60 stocks of Black Bees on Colonsay are self sustaining. Years of selection have produced a productive and gentle strain. In 2013 the Scottish Government passed an Order

under the Scottish Wildlife and Natural Environment Act (2011) WANE that will ensure Colonsay remains a Reserve for *Apis mellifera mellifera*.

Presentation: "Overwintering mini-nucs"

The importation of queens and packages into the U.K. brings with it the high risk of introducing new honey bee pests and diseases and the certainty of introducing non localised strains of viruses and bacterial pathogens.

In the U.K. the greatest demand for queens is in May and early June. Effective queen rearing, however, does not start until end May or June, and considerably later in the North. Conventional overwintering of nucs in 5 or 6 frame nuc boxes is very resource expensive. Can queens be successfully overwintered in mininucs? Some ideas from my 20 years of experience.

Presentation: "Supersedure a Darwinian Alternative to Swarming"

Swarming as a means of reproduction is, for the honey bee in Northern latitudes, biologically risky and often resource expensive, with 2/3ds of swarms failing to survive their first winter!

Supersedure provides our native honey bees with a heritable alternative to swarming. Is the current fashion of using small hive size and also the belief that swarming is natural and good for northern honey bees leading to a loss of valuable genes. These genes are the reward of millennia of true Darwinian selection!

Presentation: "Another Way to Predict Swarming?"

Much of the beekeepers work revolves around hive inspections and manipulations during the swarming period. Much research is being put into the use of modern electronics and acoustics (apidictor) to help beekeepers predict the onset of swarming. Perhaps the observation of honey bee behavior very early during the swarming impulse might lead to better predictions.

Presenter: Steve Rose. Denbighshire.



Steve keeps about 40 colonies of near natives honey bees in 8 apiaries in Denbighshire. One of the apiaries is remote enough to control mating sufficiently well to consolidate his programme of bee improvement. He also helps to co-ordinate the efforts of BIBBA groups in the region and represents both BIBBA and his local association (South Clwyd BKA) in collaborative work with the University of Bangor.

He has an interest in teaching beekeeping and regularly hosts BIBBA's bee improvement course at his smallholding in North Wales. He also teaches South Clwyd's intermediate course.

Presentation: "A Personal View of Swarm Prevention"

People often make the joke that bees don't read the books but often miss the point that the books might not always be correct. Beginners sometimes find that their efforts to prevent and control swarming fail despite following the conventional advice to the letter. Rather than look again at the advice they lose confidence in their own ability and wrongly question their own aptitude for the art. An event about 4 years ago threw particular doubt on some of the text book advice on the subject of swarming and led to the development of a subtle, but important, variation on the accepted practice. Steve later discovered that someone had come up with a similar theory about 100 years earlier which was probably a commonly held belief until queen substance was discovered. This talk describes how the queen substance discovery might have been better seen as complementing the older theory rather than displacing it wholesale.

Presenter: Brian P. Dennis. Northamptonshire.



Brian P. Dennis started keeping bees in 1976 and presently manages 20 colonies. He has served on the committees of the *Bee Improvement & Bee Breeders Association*, *British Beekeepers Association* and the *Northamptonshire Beekeepers Association*. He is a tutor and mentor on the local beginners' course. Several articles of his have been published in the beekeeping press and he has appeared in the *BBC* programme *Countryside Tracks* demonstrating

mead making – he has written *Good Health & Long Life*, a book on making mead and honey drinks.

After keeping bees for many years he is convinced that *"Those who know it all know nothing. Those who know nothing are wisest of all!"*

Presentation: "Winter through to Spring"

You don't plan to fail, you just fail to plan.

An account of what you need to do to enable your bees to survive the winter and be ready for the spring.

Presenter: Willie Robson. Northumberland.



Willie Robson has been a full-time commercial beekeeper for 55 years, keeping black bees in the traditional manner producing oil seed rape, heather honey and cut comb as well as cosmetics and polish. Chain Bridge Honey Farm is presently trading directly into 500 retail outlets, selling products that are produced from their bees that

are kept within 40 miles of Berwick - upon - Tweed. There is an extensive visitor centre on the banks of the River Tweed. Like many others we are currently experiencing difficult times with the bees due to queenlessness.

Presentation: "Siting Colonies Especially for Winter"

The siting of apiaries is the single most important issue during the winter. It is absolutely critical to get hives in the right place for winter, otherwise losses will be guaranteed even in a mild winter. No bees in spring means no honey in the summer.

Presentation: "Working Bees For Comb Honey"

There is an unrelenting demand for comb honey, which needs satisfying if possible. Comb honey production in our area of Northumberland on the Scottish border relies on a heavy honey flow, preferably nearer to the end of the season when colonies are sealing their honey combs. Colonies with smaller brood nests are useful in this respect.

Presentation: "Marketing Hive Products"

Good marketing promotes a brand and brings a greater return to the beekeeper, which is important when wages have to be paid or there is a glut. We produce 60 different products from our bees, the sale of which helps us to get through the difficult times.

Presenter: Malcolm Blake. Somerset.



Malcolm was an engineer officer in the Royal Navy and developed an interest in bees some 12 years before his retirement from the RN. The requirements of the bees and those of the RN needed careful planning and he was very well supported by his beekeeping partner; his wife Sharon. He started keeping bees in May 1984 having previously attended a beekeeping course. His 12 colonies are hived in Jumbo Langstroths and divided between a home and an out-apiary.

Malcolm has held a number of posts for his local association (i.e. Somerset): Year Book Editor (5 years), Delegate to the BBKA (3 years), Vice-Chairman (3 years), Chairman (3 years) and he was also Chairman (7 years) for his Division (Yeovil and District). He is currently one of Somerset's Vice Presidents. He supports the rearing of queens from locally-adapted colonies and joined BIBBA in 1997. He regularly lectures to beekeepers and the general public about the craft and gives beekeeping demonstrations.

Presentation: "Bees Need Beespace But How Is It Provided?"

This talk was prompted by my observations, many years ago, of the difficulties encountered by some beekeepers in inspecting their colonies, particularly in the brood chamber. I wondered why!

Revd. L. L. Langstroth is widely credited with recognising, in the 1850s, that bees leave spaces between and around their combs to allow them to access the cells and to provide air circulation routes. By incorporating suitable space (and commonly referred to as 'beespace') around his hive components he was able to create a hive in which the colony could be more easily examined and it became the basis of the modern moveable frame hive that we know today.

With further investigation I concluded that it was the poor regard to providing and maintaining the beespace that led to the observed inspection difficulties.

My lecture will identify how the bees provide beespace in a naturally constructed nest. Explain the methods used to obtain it in a modern hive and stress the need to be able to reinstate the beespace following a hive examination. A number of examples will be used to show how hive design and construction can both help or indeed hinder the provision of beespace and of the effect on the beekeepers ability to minimise the disruption to the colony caused by an examination.

Commencing with and maintaining the correct beespace in your hives will make colony inspections easier for you and less traumatic for yourbees.

Presenter: Mike Saunders. Herefordshire.



Professional engineer in the Royal Navy then in industry, finally Principal Scientific Officer in a government research agency. **2006**: started keeping bees. **2007-9**: started bee improvement via small-scale rearing of first-cross Carniolan queens. **2010-13**: persuaded and helped by Steve Rose, set up a local Bee Improvement Group, and started to breed from "nearish-native" local bees using remote mating stations. **2014-17**: coordinated the Group's efforts to develop the capability for full-scale selective breeding,

including bulk queen and drone-rearing, use of natural mating and instrumental insemination, and methods for colony assessment and colony evaluation and selection, culminating in the commissioning of a breeding centre and insemination lab.

Presentation: "Evaluation & Selection of breeder queens and drone mothers in order to improve local and initially mongrelised bees"

The topics to be discussed are:

- ***The place of Evaluation & Selection*** in the breeding cycle, and the importance of bee Improvement Criteria.
- ***The nature of Evaluation***: a clerical process using colony Assessment data to rate each colony against each of the Improvement Criteria.
- ***The nature of Selection***: an intuition-led process using the colony-ratings to choose breeder queens and drone mothers.
- ***How Evaluation & Selection success can be measured*** by the use of historical colony-ratings averaged across the whole breeding population, to reveal the extent of whole-population improvement, year on year
- ***Some issues***:
 - *How many Improvement Criteria to use?* A trade-off between beekeeper effort, number of colonies in the breeding population and their cost and likely rates of bee improvement.
 - *Whether and how to use the computer?* To reduce beekeeper effort and to facilitate the Selection process.

- *Is DNA testing affordable and worth the money?* Will it reduce colony assessment effort, and/or improve Evaluation & Selection and so increase the rate of bee improvement.

Presenter: Pete Sutcliffe. Cheshire.



Having grown up in Yorkshire with bees in the garden, Pete Sutcliffe has been keeping bees in his own right for over thirty years – first in Suffolk and latterly in Cheshire. He started with two home-made WBCs inherited from his father and now looks after upwards of 20 colonies in the Dane Valley in Cheshire. After about twenty years of resistance, his wife finally gave in and they now work the bees together.

After a brief foray into the national beekeeping scene – as a member of the BBKA Examinations Board, then Trustee and Chair of the Education Committee – Pete is now concentrating on trying to improve the bees, and the beekeeping, locally.

Having edited the Cheshire Beekeeper magazine for several years, he is presently County Education Secretary and Chairman of his local Branch. He is currently involved with several training initiatives and a county-wide working group on selective bee-breeding.

Presentation: "Beekeeping kit you don't need"

Some of you might share my fascination with gadgets that will supposedly help us keep bees. Sadly, most of these are a waste of time and money. Some of them were perhaps worth a try, some the product of genius and some the product of lunacy, and some the product of someone wanting to make money out of gullible beekeepers.

This talk should save you money and time by sparing you the effort of proving to yourself that you didn't need to buy a particular article. While we are at it, we might stray into one or two items that are worth getting!

Presenter: Jess Kevill. University of Salford.



I am a third year PhD. student, studying the role of resistance to *Varroa destructor* and Deformed wing virus in European honey bees. My research has primarily concentrated upon DWV and honey bee survivorship. Prior to starting my PhD, I studied an honours degree in Wildlife and practical

conservation at the University of Salford. I have always enjoyed nature and have been fascinated with insects, especially social insects since I was a small child. I started to keep my own bees over 7 years ago which motivated me to conduct research into the pressures they face, notably with Deformed wing virus.

Presentation: "The role of resistance to Varroa destructor and Deformed wing virus in European honey bees"

European honey bee (*Apis mellifera*) populations have experienced high overwinter mortalities in temperate regions since the global spread of parasitic mite *Varroa destructor*. *V. destructor* is an effective vector of several honey bee pathogens, of which Deformed wing virus (DWV) is evidenced to be a major factor behind colony losses. Three master variants of DWV are formally identified (variant type A, B, and C). Type A is considered lethal, type B has been found in colonies which survive without any Varroa treatment but is deadly to adult bees when experimentally injected in the lab, and little is known about type C. Each variant of DWV can invade the same host cell, allowing for viral recombinants to emerge. Recombination is an important aspect of viral evolution and can completely alter the pathogenicity of a virus. The effects of the master variants and recombinants of DWV are currently under-researched, therefore we have developed and utilised methods of detection for both.

Honey bee samples from managed Varroa treated, untreated and feral colonies surviving with Varroa infestation were collected from across the UK and USA. The viral load of each DWV variant and recombinants were calculated. A clear difference in DWV diversity between the UK and USA populations of honey bees was witnessed, with DWV type A dominating the USA samples and Type B dominating the UK samples. This data provides an insight as to why the USA suffers from higher losses of honey bee colonies when compared the UK, and may provide a solution to the problem of unexpected overwinter colony losses of European honey bees.

This presentation is kindly sponsored by Bee Diseases Insurance Ltd (BDI).

Presenter: Tony Jefferson. Yorkshire.



Tony is the middle of 3 generations of Jefferson beekeepers, he describes his beekeeping as, “a hobby that got out of control a long time ago”. Up to 150 colonies have been managed between Father Allan, Tony and Nephew Richard in the weather challenged North East coast around the Whitby area. Tony now heads up the empire, whilst still working full time as a high voltage engineer. Through many years of practical observations, using WBC hives for winter, limited use of Queen Excluders, use of brood and half,

Glass Quilts and own design of floors, all based on simple techniques the beekeeping practice is all based around 2 weeks of good weather in August for the prized heather crop. Bee breeding and active selection of drones as opposed to Queen rearing is his passion, especially concentrating on the progression of the black local bee.

Presentation: "Never waste a queen cell"

Far too much emphasis is placed upon Queen rearing and not on the wider aspects of bee breeding, such as the selection of quality breeding stock. Bees have far more years experience producing good quality queen cells than we have, so why not keep things simple and let them produce their own queen cells? The talk will discuss the importance of positive selection of breeding stock, primarily drones, consider that during the summer months every beekeeper destroys many good quality cells in their efforts to control swarming, not having equipment to utilize the spare cells.

Hopefully it will lead to questioning why it is perceived as difficult to produce queens.

The main issue is how to use surplus queen cells, get the queens mated/laying and then evaluating them for performance, then deciding how/which ones to use to build up into productive colonies.

This talk will explain in simple and practical methods how to select good quality breeding stock, the use of simple non specialist equipment that does not rely on keeping to dates/timetables, the difficulty on the NE coast due to unpredictable weather in the key breeding time in May

Presentation: "Heather Honey Production"

The North East Yorkshire Heather Moors are abundant in Ling heather during August. The heather honey is a prized and high value product, so why spend 50 weeks of the year working for 2 weeks of good weather in August?

Tony will explain with this window being so short and unpredictable how the bees have to be set up correctly to maximize the crop.

From the spring onwards colonies are operated to concentrate on producing bees. How to operate hives without Queen Excluders or as Tony refers to them “Queen restrictors or Honey Excluders”.

The development of local black bees and manipulation of brood through the "June gap" to maximize foraging bees for August, then setting up strong colonies prior and just before moving will be discussed. Experience with moving colonies and what to do when things go wrong will be shared, leading onto what to do with them whilst they are on the moors, how to bring them back home safely and sort out the (hopefully) prized product. Then setting the colonies up for the winter.

Presentation. Seminar: “Queen mating in simple 3 compartment, 3 frame nucs”.

Why is it that there are so many designs types and sizes of nucleus hive on the market? Surely this is just to make our beekeeping even more complicated and encourage us to spend even more money on yet more bits of complex kit. What happens if you don't have sufficient conventional nucleus hives but have some other spare equipment?

Tony uses spare or old, conventional national brood boxes, but converted into 3 compartments each capable of using 3 frames, each compartment with its own entrance. They have been proven over many years to be so simple to use and move around. They can be made cheaply (after all - he is from Yorkshire). The benefits regarding the simplicity of use for maximizing queen cells and queen mating by having essentially 3 nucleus hives in one box will be outlined. He will also explain the pitfalls experienced during the development as well as the practical advantages, with opportunities to ask lots of questions.

Presenter: Anne Rowberry. Somerset.



After a career including instructing Outdoor Pursuits in Yorkshire, Head of Physical Education in Singapore and BANES, gaining an MEd at Bristol University and a Diploma in Counselling at Reading University I moved from teaching to work for a charity involved in sustainable agriculture in Africa. It was then I got my first hive and with Ted Hooper's book in one hand investigated the boxes. I joined a club and increased my knowledge working through the BBKA

modules, microscopy and husbandry exams to gain the Master Beekeeper qualification. I now have around 20 hives, enjoy teaching beekeeping to pupils at a local school where I maintain an observation hive, chair Avon County BKA and also Frome BKA in Somerset . I am also a Trustee for the BBKA

What I love about bees is that they do not read the books and keep us on our toes.

Presentation: "Honey Bees; Foraging and Feeding"

A brief look at why bees forage, what they bring back to the hive and how they collect it.

We will look at the collection of pollen, the effect on the flowers visited and the communication within the colony to recruit and direct others to the task.

The talk will also consider the important role of the beekeeper and how he/she can assist the bees.

Presenter: Peter Jenkins. Cardiganshire.



Peter Jenkins has kept bees since the age of 14, a period of over 50 years. He now keeps around 40 colonies of near native bees in and around the marginal areas of Cardiganshire.

Spending most of his working life as a Chartered Engineer working around the world on marine and naval projects has meant that, for many years, he had little time for regular 10 day

hive inspections as advised in text books. Nevertheless he has harvested at least average crops of honey year on year using bees improved over lifetime by his father, a process he is now continuing following his father's death in 2009.

Presentation: "The KISS Approach"

Many problems in beekeeping are caused by beekeepers reading books and listening to other people who read books, then rigidly following what they are told without understanding what the bees are trying to do. When things go wrong, as they often do in beekeeping, they blame the bees for not reading the book! With a little experience the more astute beekeeper will soon realise that much of what they have been taught in their early days of beekeeping as "fact" may not always be so.

"The KISS Approach" has been developed over many years of finding practical solutions on the hoof to some of the many beekeeping problems that all beekeepers face. Following the books often gets you into trouble but they aren't very good at getting you out of it. Things that can work or get you out of trouble are rarely covered in standard books, so you have to

work solutions out for yourself, but you need knowledge and experience to do it. In short, this presentation is about how to achieve maximum output for minimum input.

Presenter: Lynfa Davies. Aberystwyth.



Lynfa lives in Aberystwyth and has kept bees with her husband, Rob, for 13 years. During this time she has worked her way through the BBKA assessments to become a Master Beekeeper. She now enjoys sharing the information she has learned with other beekeepers and takes an active role in teaching new beekeepers in her local association. Lynfa is a regular contributor to the BBKA News magazine.

Lynfa currently has approximately 15 colonies which she mainly manages for honey production, something which often proves challenging in a wet West Wales! In addition she raises her own queens and uses these to produce nucleus colonies and to replace her own stock.

Presentation: "The Mystery of Mating"

Mated queens are something we tend to take for granted without giving too much thought as to how this "magic" happens. Understanding when queens are ready for mating and where the action takes place is essential if we want to progress to queen rearing and bee breeding. In addition the role of the drone is often overlooked and little consideration is given to them. This talk will not cover the complexities of bee breeding but instead will set the scene and describe what happens, where it happens and how we can influence it for our needs.

Presentation: "Comb - How and Why Bees Make it and How to Manage it"

Comb is the basis of our honey bee nests. It is strong and versatile, performing several functions but over time it becomes dark in colour and could potentially harbour disease pathogens. Comb management is an important skill that all beekeepers should learn to benefit their beekeeping and to maintain the health and productivity of their colonies. This talk will look at how bees make wax and what they need to produce it. It will also describe the management practices that can be employed to ensure your colony has clean comb. Knowing how to avoid stressing the colony during these manipulations is also important and the talk will cover the best time to carry them out and the key requirements of the bees.

Presenter: Clive Hudson. North Wales.



I have been beekeeping together with my wife Shân since 1985, on the western edge of the Snowdonia National Park in North Wales. We over-winter about 20 colonies in Modified Commercial and National hives. We do not believe our bees or our beekeeping are 'special' in any way, and regard ourselves as essentially traditional beekeepers that, for various reasons, stopped treating against Varroa 10 seasons ago and found that it worked for us.

Between 2010 -2015 we collected and published data on 1573 colony-winters showing the majority of participants in our area were not treating against Varroa, and were experiencing fewer losses than those who treated. A short video about our beekeeping and interest in tree colonies can be found at beemonitor.org where you can also view real-time temperatures of a colony in a National hive and articles that include information on our Winter Losses Surveys.

Presentation: "Has Varroa Lost its Sting? - My Experience of Treatment Free Beekeeping"

We stopped treating for Varroa 10 seasons ago and our bees are fine! That statement, that fact, is the basis for this presentation. I would like to stress that we are far from unique: most members of our BKA are keeping bees Treatment Free, as are many other beekeepers in our area (see our Winter Losses Survey results) and throughout the UK. I will outline our reasons for stopping treatment. I will also summarise recent evidence that may at last be explaining how bees and Varroa are able to coexist. Science is gradually catching up with the bees! For background information about this presentation see documentation at beemonitor.org. Here you can view our article published in the BBKA News No. 223, "Varroa Has Lost its Sting", which includes our Winter Losses Survey results, and "Notes on Treatment Free Beekeeping". I hope to give a concise presentation and allow time to discuss this topic and try to answer any questions that may arise.

Presenter: Graham Kingham. Devon.



I keep three different types of hives for my mongrel bees – so that I can learn from what they do and why; a never ending mystery. Each year tends to present its own rewards and losses so it is important we learn from the bees - they know best. I favour natural selection and less intrusive means of bee keeping. I do think that we have reached a tipping point as most methods of pest-disease controls are not working. Armed with a microscope or two I have been able to look at the bee inside and out, along with its food

source, pollen. By collecting weekly samples of pollen I have built up a database to compare with the 200 local plants from which I have collected pollen. I have a broad interest in all things bee! and beer and books.

Presentation: "Fat bees, thin bees. Reflections on a good diet"

Learn how the food in the hive affects the bees throughout their entire lives. Find out about how a poor store cupboard leads to suicidal choices. What is a designer diet? Who are the gannets in the hive? Why nectar is like a grape variety in wine. What is the difference between liquid gold and white gold? Pollen, worth its weight in protein. Find out the danger signs and what you can do at each season.

This talk aims to give you the understanding of what good nutrient is, both collected by the workers and glandular feeding, the lack of food and the result of the season's weather affecting your colony, and what to look out for.

Presentation. Workshop: "Pollen Under the Microscope"

Take a closer look at the magnificent world of pollen; see why the bee is so important to plant fertilization. Hands on pollen slide making from current bee-friendly flowers and pollen samples from the hive. Learn how to make and stain slides and to be able to recognize them at 400 times magnification. This is a 2 hour practical session, no previous knowledge is required. Open your mind up to one of nature's wonders!

Presenter: Graham Royle. APHA (Fera). Regional Bee Inspector – Northern Region



Graham started beekeeping in 1988 and started to study for the BBKA examinations in 1995 when he decided he wanted to know a lot more about the bees he was keeping. His studies resulted in achieving the BBKA Master Beekeeper certificate in 2002 and the National Diploma in Beekeeping in 2004. He was also awarded the Wax Chandler's prize in 2002.

Graham currently manages 20 colonies in three apiaries. In 2015 he joined the National Bee Unit as a Seasonal Bee Inspector covering Cheshire. Earlier this year he was appointed as Regional Bee Inspector for the Northern region where he manages a team of four seasonal inspectors covering Cheshire, Merseyside, Lancashire, Cumbria and Northumberland. Graham has always been involved with the education of beekeepers at all levels from encouraging beginners to take up the craft to assisting more experienced beekeepers to learn more about their bees and how to keep them.

Presentation: "That looks different, what is it? How serious and what can I do?"

A look at the common but not so serious bee pests and diseases and the less common but nastier problems that we should all be aware of. The underlying causes and how the disease manifests itself will be covered. Colin will look at when in the season we are likely to see these diseases and the husbandry methods that can be used to minimize their impact. The talk will help you recognize disease and how to select for stronger, disease resistant bees.

Presentation. Workshop: "Diseased comb workshop and Disease inspections"

(Jointly with others)

Learn how to carry out a disease inspection from the experts; see and test for foul brood disease in the comb – infinitely better than photographs. This two part workshop will cover both how to carry out a rigorous bee disease inspection, demonstrated on live colonies and, in the second part, the examination of diseased combs in classroom conditions. The diseased combs will range from the minor conditions to the Notifiable Foul Broods. The workshop will also cover biosecurity and barrier management techniques, particularly useful to those with more than 1 apiary or for who people who collect swarms.

Presenter: Liz Gardner. APHA (Fera) Seasonal Bee Inspector for Gloucestershire.



Liz started keeping bees in 2009, joining Gloucester BKA in that year. She quickly became active in the Association and continues assisting with training, helping with events and conducting safaris.

She joined the National Bee Unit in 2013 and through inspecting hundreds of colonies each season, she has well and truly expanded her bee experience. She has also been involved in both incursions of the Asian Hornets, she was central to the Tetbury incident as it was in her area. A side benefit of being a Bee Inspector, as far as Liz is concerned, is meeting all the

lovely beekeepers around the County! Liz holds the BBKA General Husbandry Certificate and keeps 20 -30 colonies in National hives.

Presentation. Workshop: "Diseased comb workshop and Disease inspections"
(Jointly with others)

Presenter: Gordon Bull. APHA (Fera) Seasonal Bee Inspector - Western Region.



Gordon is a biologist who started keeping bees at his home in the North Cotswolds in 2008. He quickly became completely enthralled with the subject and despite vowing in the 1970s that he would never sit another exam, he worked his way through the BBKA system and qualified as a Master Beekeeper in 2015. His beekeeping interests include queen rearing and raising nucs. In 2014 he chose a complete change of career and joined the NBU as a Seasonal Bee Inspector. He started in the Southern Team inspecting in Northamptonshire and the Gloucestershire-Oxfordshire borders and in 2018 moved to Western to

cover Worcestershire and parts of Warwickshire and Gloucestershire. He was in the teams that dealt with the Tetbury and Woolacombe hornet outbreaks and recently gained some hands-on experience of Small Hive Beetle while on holiday in Australia.

Presentation. Workshop: "Diseased comb workshop and Disease inspections"
(Jointly with others)

Presenter: Jim Pearson. West Yorkshire.



Jim Pearson is a member of the Wakefield and Pontefract branch of the Yorkshire BKA. He is a practical beekeeper who applies science where required and where he sees the relevance to his beekeeping. As a progressive beekeeper he is always trying to understand bees more and in doing so he has discovered that some of what has become standard information is not always correct.

A keen enthusiast of native and near native bees, he manages around 30 colonies with his brother Geoff, one apiary being in the foothills of the Pennines 800 ft above sea level.

Presentation: "Variations on Demaree - more than just for swarm control"

The Demaree method or "Demareeing" is often only associated with swarming and swarm control, but it is such a versatile method there can be many other benefits that are not often known.

Jim Pearson uses his version of Demaree for swarm control and/or swarm prevention by setting up the colony just when a honey flow is on. He will explain how by using minimum equipment he uses the method to maximum advantage to do such things as raise queens and nucs, harvest bees and brood and draw foundation.

Presentation: "The Use and Maintenance of Apideas and Other Mini-nucs"

Many beekeepers experience difficulties when attempting to use mini-nucs, so they give up.

With a little knowledge and tuition mini-nucs can be very successful, producing queens using minimum resources.

This presentation will explain the way Jim Pearson uses Apideas to mate queens with care, including advice on filling, maintenance and what pitfalls to avoid

Presentation. Workshop: "Internal view of the honey bee"

Using a stereo bifocal dissecting microscope (not as complicated as it sounds!) this workshop is aimed at beginners in microscopy. It will show how beekeepers can easily study their bees internally by using simple inexpensive equipment (less than £100) that is readily available. It will also show how to make parts or improvise.

Working in small groups participants will learn methods used to dissect bees and have a look inside to see their working components. These can be done at home on the kitchen table.

Presentation. Workshop: "External view of the honey bee"

Using a stereo bifocal dissecting microscope (not as complicated as it sounds!) this workshop is aimed at beginners in microscopy. It will show how beekeepers can easily study their bees externally by using simple inexpensive equipment (less than £100) that is readily available. It will also show how to make parts or improvise.

Working in small groups participants will learn methods used to take a close look at how parts of bees anatomy have evolved to do the task they have to perform. These can be done at home on the kitchen table.

Presenter: Daisy. West Sussex.



Daisy is a horticulturist, has a degree in Field Biology and has been keeping bees since 2006. In that time she has acquired a tremendous amount of experience with her own and others' bees. She is a member of the Wisborough Green Beekeepers Association and a valued demonstrator and teacher at their training apiary. Daisy completed her BBKA exams and in 2012 became a Master Beekeeper.

Daisy currently has 30 colonies with one hive located in the local primary school. Every week during term time, 6 children assist her with inspecting the bees. So far, over 60 children have experienced handling bees, a project she is very proud of. One student completed her Bronze Duke of Edinburgh Scheme with Daisy during 2016, the whole project being based around bees and beekeeping.

Daisy also gives a number of very useful talks throughout the region (Sussex) both to beekeeping and non-beekeeping groups and can usually be seen at the annual South of England Show, explaining the ins and outs of bees to the visiting public.

Presentation: "The rise and fall of the colony throughout the year"

Daisy will look at the contraction and expansion of the colony throughout the beekeeping year and examine some of the behaviours/communications going on inside the hive. What makes a worker bee go out and gather pollen or nectar? What factors affect the queen's egg laying rate? Why do some bees live for 6 weeks and others 6 months?

If we understand what's going on inside, we can respond and work with our bees to help them stay healthy, happy and productive.

Aimed at the beginner/intermediate beekeeper. with lots of sound practical advice from month to month.

Presentation: "General Anatomy - Do bees really smell through their legs?"

Keeping it simple and in plain English, this talk is an introduction to anatomy. Looking at the senses – how do bees touch, taste, smell and see, we look at the sensory organs and various methods of communication bees use to navigate their world.

We also look at how they breathe and how they make wax.

Don't be afraid that you will be bombarded with technical jargon and words you don't understand, this talk is very much aimed at the beginner.

Presenter: Paul Cross. Bangor University.



Paul has kept bees for 10 years. He currently runs 15 colonies on Anglesey and at the Bangor University apiary, which is used for teaching and research purposes. He is involved in supervising a diverse range of bee-related research projects, including the evaluation of bee-keeping as a poverty alleviating tool in Uganda and Tanzania; discrimination of honey bee races in North Wales (in conjunction with Steve Rose of BIBBA); the impact of neonicotinoids on solitary bees; two projects developing micro-electronic bee trackers; Dispersal strategies and space use in pollinating

bees; and a forthcoming study on tracking of key pollinators in agricultural and natural landscapes.

Presentation: "Long distance drone tracking of key pollinators in agricultural and natural landscapes: Achieving sustainable use of natural resources"

Dr Paul Cross and engineering colleagues at Bangor University have developed a revolutionary tracking technology designed to follow honey and bumblebees across their entire foraging range in real time with high accuracy. The tracking system uses a

piezoelectric micro-generator that harvests electrical energy from the bee's own body vibrations to power radio-wave transmission from a miniaturized antenna attached to the thorax. This eliminates the need for bulky battery-powered transmitters and provides an unlimited energy source over the bee's lifetime with negligible hindrance to its flight capacity. An automated self-tracking drone captures the transmitted signal. The drone will track target insects with a wing beat rate of >160/sec and a body mass of >0.09g for up to 40 minutes across their entire foraging range. The tracking system functions in topographically challenging terrain such as mountains, overcoming many of the inherent limitations of traditional harmonic radar approaches which require a direct line of sight between radar equipment and the tracked bee.

Presenter: Dorian Pritchard. Northumberland.



Dorian Pritchard is a retired university lecturer in medical genetics. He has a PhD in developmental genetics, is author of "*Foundations of Developmental Genetics*" and first author of "*Medical Genetics At A Glance*". He has run 4 – 25 national hives in Northumberland since 1979 and was inspired to concentrate on the native Dark Bee, *A. m. mellifera*, after comparing the

performance and honey quality of local and foreign bees side by side in a rape field. He has been prominent for many years at local, national and international levels of beekeeping, serving as Conservation Officer of BIBBA and

for 10 years as President of SICAMM, the international association for conservation of the Dark Bee. He has taught some 300 beginners in his classes at Kirkley Hall Agricultural College. His publications in the beekeeping press reflect his deep concerns for native honey bee conservation and his success in selecting Varroa resistant, near-native bees.

Presentation: "Geordie Bees Bite the Mite"

"Geordie bees" are *A. m. mellifera* adapted to the Newcastle area of North-East England. They seem to be almost completely resistant to varroa. I have not treated them for 16 years, but of several hundred colonies, have lost only 3 or 4 to the mite. One hybrid colony developed a heavy infestation, but overcame it rapidly, with many mutilated mites falling to the floor as if bitten. The greatest degree of mutilation was detected during the post-

swarming capping interval, but it also increased steadily as the brood nest expanded. Altogether up to 9 strategies or occasions are indicated when mite numbers may be reduced, notably in association with brood breaks.

Excessive anti-varroa grooming was indicated only after mite numbers had already greatly exceeded supposedly lethal levels, fatally injured mites dropping from the brood nest at up to 23 per day in May. Literature reports ascribe such response to “emergency bees” that specialise in aggressive allogrooming and may arise due to disruption in juvenile hormone synthesis during early worker development. This is probably a stress response to massive mite assault due to acaricide treatment being withheld.

Presenter: Jim Ryan. Tipperary.



As a child I used to help my grandfather making up section crates and wiring and waxing frames. I started my real career as a beekeeper in 1983 and after attending Gormanston Summer Course every year I qualified as a lecturer in 1989. I edited the FIBKA magazine An Beachaire (the Irish Beekeeper) for 14 years retiring in 2012. I lecture at Gormanston regularly and have also lectured and demonstrated in Scotland, England and Isle of Man. I run roughly 50 colonies for run honey and rear about 30/50 queens every year. I am a member of North Tipperary BKA,

having been chairman for 16 years and Secretary for about 8 years and am currently chairman of Galtee Bee Breeders.

Presentation: "The History of Beekeeping in Ireland"

This talk will cover beekeeping in Ireland from the earliest times to date. We have probably the oldest book on beekeeping in the world in the Bech Bretha or Bee Judgements. The earliest complete copy dates from about the year 900 and while not very helpful to modern beekeeping should be of interest to all. I have managed to locate a few references from the 15th and 18th centuries. The Irish Beekeepers Association was founded in 1881 which is the start date of modern beekeeping in Ireland and will deal with the fathers of Irish beekeeping Turlough O'Bryen and Rev J G Digges who had a famous row with T W Cowan and William Herrod-Hempsall.

Presentation: "Beekeeping without too many mistakes. How I manage my bees and why"

This talk will focus on aspects of my own practice developed over 35 years of beekeeping. I will look at the beekeeping year and what we should do and be doing at different stages. I will also look at some of the things we are taught to do and how and why we do them. I want to look at ways of getting the best from your bees by giving them as much help and as little hindrance as possible.

Presenter: Gavin Ramsay. Perthshire.



Gavin is the Chair of the Scottish Native Honey Bee Society, an organisation which was formed in 2017 to attempt to conserve and reinstate the dark native honey bee in Scotland. The society has grown rapidly and is starting an ambitious project in 2018 to discover and to share what remains of the native type. He also serves the members of the Scottish Beekeepers Association as their representative for bee health and bee science issues.

Following a 37-year career as a plant geneticist, he is well placed to work with geneticists and others to understand what remains of the native honey bee in Scotland. For the last five years he has worked with two friends to help develop an isolated site for mating queens in the Ochil Hills in central Scotland. In his spare time he runs a one-man bee farm of about 90 colonies in Tayside and Fife.

Presentation: "Identifying Dark Native Honey Bees"

What traits can we use to verify the purity of native stocks? This talk will explore the morphological traits which can be used to assess the affinities of a colony of honey bees and describe how this is being used to help identify a wider range of native honey bee lines. The relative merits of this approach will be discussed along with the place of both wing morphometry and DNA markers in verifying the purity of a stock. Progress in Scotland on making such lines available will be discussed.

Presentation: "DNA Methods For Honey Bee Breeding: Where Are We Now?"

In recent years both microsatellites and, increasingly, SNP arrays are being used to explore the genetic background of samples of bees. There is also the prospect of being able to select breeders carrying particular genes controlling desirable traits. This talk will give beekeepers an introduction to the technology and explain the acronyms. It will describe

how these methods are used to assign a sample to a subspecies, to determine the proportions of admixture from other subspecies and potentially to guide the selection of breeder stocks with other good qualities such as pest and disease resistance.

Presentation: "Communication in Honey Bees"

In complex communities, organisms need to communicate to cooperate effectively. Honey bees are communicators par excellence and in this talk we will allow them to speak for themselves in a series of videos with a human interpreter explaining the messages. The presentation will lay out the surprising range of communication we can see and hear in a bee hive and show how such behaviours make the unit work effectively. These behaviours together show that even simple brains are capable of holding information to be interpreted and acted upon later when other situations arise. Listening in to the messages of the bees helps us all improve our skills and our understanding of the colonies in our care.

Presenter: Margaret Murdin. BBKA President



Margaret has been keeping bees for about 15 years and now has recently downsized from over 25 colonies to just 6 colonies, mainly to give more time to BBKA matters. She is a Master Beekeeper and won the prestigious Wax Chandlers' Award. Margaret has gained the National Diploma in Beekeeping (NDB), is Secretary to the NDB and an active member of the NDB short course team

Margaret is President of the BBKA, a member of the Education and Husbandry Committee and sits on the Examination Board as Assistant Moderator. She is a Correspondence Course Tutor and an Assessor for module examinations and husbandry assessments. Previously Margaret was the Principal of a large Further and Higher Education College, a Chief Examiner for Teacher Education and a tutor and examiner for the Open University. She has sat on several Government Committees advising on further, higher and special education.

Presentation: "Becoming a Proficient Beekeeper"

Having taken the Basic Assessment after the first few years of beekeeping, progressing to the next stage where you feel confident and proficient is challenging, but it is also very rewarding and great fun. It involves increasing and broadening your experience of handling bees in many different situations whilst at the same time learning the theory and putting it into practice. This takes time, commitment and planning but there are many people to help

and structures in place to be used. This talk will outline how proficiency can be achieved efficiently whilst continuing to enjoy beekeeping.

Presenter: John Donoghue. Co. Offaly



I grew up on a small farm in Co. Offaly Ireland and am a Carpenter/Joiner by trade. My first hive of bees was a swarm from a wild colony in the roof of the old farmhouse. My granduncle who kept bees all his life gave a hive to a neighbour and he helped hive the swarm. I was in primary school at the time

I manage 50 to 60 colonies, mostly national hives. I started to exhibit at honey shows in the mid 1970s and won my first trophy at the National in London in 1979. After many years exhibiting I now have the honour of judging at these shows and encourage new exhibitors.

I have lectured to many associations over the years on the very practical craft of beekeeping and try to pass on some of the knowledge gained over more than forty years, some of which can only be passed on through touch and feel.

Presentation: "Bringing Nucs Through the Winter"

Will emphasize the importance of good autumn preparation. The observations we need to make. The health history of parent colony. The history and pedigree of the queen. The observed brood pattern and absence of brood problems. The expansion rate of the nuc, its foraging ability and pollen storage, its strength going into winter with young healthy bees. Selection of wintering site, security, shelter and avoidance of frost pockets. Winter varroa treatments if necessary. Food and feeding as we leave winter and enter spring.

Presentation: "The Importance of Good Spring Management"

Will deal with learning the skills of early spring observations, what we can learn from just watching our bees flying. When and if feeding is necessary. How to avoid isolation starvation. Checking for signs of disease, dealing with empty hives and old comb. First inspections. Queen performance, brood pattern. Food requirements and availability of water. Dealing with colonies of unequal strength.

Drawing on past experiences and climatic conditions. When to add supers. Taking advantage of early nectar and pollen sources and get foundation drawn. Getting ready for and anticipate what comes next.

Presentation: "Managing Bees For the Honey Crop"

Deals with knowing your local area and when to expect the main honey flow. Getting supers ready for run honey or cut comb. Maintaining strong stocks. Avoiding congestion, giving queen room to lay and providing space for incoming nectar . Predicting what might happen by reading the present situation. Minimise swarming and dealing with swarming colony.

Presenter: Grace McCormack. National University of Ireland. Galway



Grace is a professor in Zoology with expertise mainly in studying evolutionary and genetic relationships between organisms. She has applied such techniques to questions about human viruses through different animals groups (sponges, echinoderms, sea squirts, mites and bees) to animal parasites and pathogens. Being invited to assist with supporting the plight

of native Irish honey bees Grace did a beginners beekeeping course around three years ago and set up a research apiary at the University in Galway. A second apiary near her home has been established from swarms taken from wild and escaped bees where her team attempts to encourage the natural development of bees that do not need chemicals to survive. Still a novice beekeeper she looks forward to a long future of learning about, and helping, bees.

Presentation: "Ireland: A significant reservoir for *Apis mellifera mellifera* both managed and wild"

Apis mellifera mellifera is threatened over much of its natural range. However, in Ireland microsatellite and mitochondrial data have shown that a significant population of this subspecies exists in pure form and spread over a large geographical region on the Island. Black bees have been managed and protected by beekeepers on the island, some of who formed the Native Irish Honey Bee Society (NIHBS) in 2012 and a breeding programme was initiated for *Amm* in 2014/2015. The application of a SNP panel that detects hybridization between M and C lineages clearly supports other data in that the majority of beekeepers included in the breeding programme indeed have bees that show very low to

no introgression from the C lineage. Furthermore, SNP data has also been applied to the first feral bee colonies located in Ireland subsequent to the introduction of Varroa. Here we will present on the use of molecular data in helping to manage and conserve honey bees in Ireland, and to elucidate patterns in colour variation and honey bee subspecies purity in wild and managed bees towards improving conservation and bee management/breeding in the face of potential hybridization threat.

Presenter: Kevin Williams. Cardiganshire.



Kevin was born and bred in Carmarthenshire. He started keeping bees when he was around 15 years of age and he now keeps some 20 stocks of native Bees. He is very keen to improve his stocks and he works with a small breeding group near Lampeter, Ceredigion to that end.

He gives talks on keeping bees and related matters.

He practices as a Solicitor in partnership with his daughter in the Teifi valley now on a part time basis specialising in country matters. He lives with his wife Edith on a conservation farm near Llandysul where he enjoys country life including , shooting, fishing, gardening and of course Bee keeping. He enjoys researching his family history and is currently learning Spanish at the local university. He is looking forward to passing on his knowledge about bee keeping especially to his five grandchildren.

Presentation: "History and Traditions of Bee Keeping in Wales"

No matter where it is in the world the history of beekeeping can be fascinating, often being part of culture that has existed for centuries and included in early laws. Beekeeping in Wales is known to go back for well over 1000 years, being mentioned in Hywel Dda laws. It is also known that bees had great value in mediaeval Wales. This lecture will reveal some of the history and traditions of Welsh beekeeping from the beginning until modern times.

Presenter: Nick Bentham-Green. Cornwall



Nick was in a "former life" a Royal Marines Officer for 32 years. Nick first started keeping bees in the early 90's having between 2 and 5 colonies for many years. For most of that time he bred his own queens, quickly realising that there had to be a better way rather than importing queens.

Nick chaired the Tavistock Branch of the Devon BKA for a few years and was also the Branch apiary manager.

In 2009, whilst still in Devon, he joined BipCo (Bee Improvement Programme for Cornwall), which was under the Chairmanship of Jo Widdicombe. At this time Nick became very interested in bee improvement, realising that he had in fact been doing the same, with his own bees for a number of years.

In 2011 Nick retired from the Royal Marines and became a full time beekeeper. He now runs about 30 colonies, and helps with the management of a number of mating apiaries in SE Cornwall. He is also Chairman of BipCo and one of the Directors of B4, (Bring Back Black Bees), which is a community interest company looking at conserving the remnant populations of Amm in Cornwall.

Nick has been the Chairman of BIBBA for about 2 years.

Presentation: "BIBBA, Aims and Aspirations – What do you as a member want from BIBBA?"

This will not only be a presentation but, I hope, a discussion as well. We stand at a cross-roads, where at long last there seems to be an acceptance across most of the beekeeping community that importing bees is a bad thing, and that it threatens the UK's Biosecurity and thus it's Biodiversity. Where should BIBBA stand with this? We are already leading the way, albeit quietly; should we be making more noise? Should we be doing more? As Chair of the trustees, I am very interested in your points of view, so will be handing out a very brief questionnaire, which will be taken in at the end. Also I will take questions throughout the talk, so that you can all contribute to the debate.

Presenter: Michael Collier: Shropshire.



Michael Collier trained at Fairview College, Commercial Beekeeping Course, Canada and for one year at the National Bee Unit with Vince Cooke. He emigrated to Canada where he managed 3000 hives for 5 years. He also has experience of a large queen rearing operation in California and is now one of the largest queen producers in the UK.

Michael trained with Dr Fisher in Germany on an Instrumental Insemination Course and also with Susan Cobey, Advanced Instrumental Insemination in the USA. Michael now manufactures his own bespoke AI Insemination Equipment.

Presentation: "Large Scale Queen Rearing"

This presentation will draw on the experience Michael Collier has gained when producing large quantities of queens in the U.S.A. and U.K. He will cover topics that are relevant to the large scale queen rearer, including cell raising methods, making up large volumes of mating nucs, setting up queen mating apiaries and the maintenance of mating nucs. He will touch on techniques of queen breeding and large scale package bee production.

Presentation: Workshop: "An Introduction to Instrumental Insemination"

This workshop is intended for those who are fairly serious about investigating instrumental insemination of queen bees. Places are limited.

This is a "taster" and will cover the following:-

- Overview of equipment needed for insemination
- Insemination techniques
- Production of drones
- Collection and storage of drone semen
- Preparation and insemination of virgin queen
- Aftercare of queens

Presenter: Kevin Thorn: Suffolk.



Kevin Thorn is a Beekeeper with hives in and around Lavenham, Suffolk. Kevin is passionate about improving his bees and working to educate beekeepers in this area. Kevin is Chair of West Suffolk Beekeepers and Groups coordinator for BIBBA. He has established a bee Improvement group at Abberton Reservoir in Essex working with local beekeepers, Colchester BKA, Essex and Suffolk Water and Essex Wildlife Trust to reintroduce the native black bee to the area.

Presentation: "Some Opportunities For Bee Improvement Groups: A Case Study"

Kevin will talk about his experiences in establishing a bee Improvement group, working with local partners. This will include methods of Queen Rearing used and successes and setbacks and how these were overcome. The seminar will cover raising funding, organizing a group, media opportunities and working with Beekeepers of all levels of experience and abilities.

Presenter: Dylan Elen: Belgium



Dylan is a beehkeeper for 9 years now and manages around 50 hives, partly in Gwynedd and partly in Belgium where he is from. He grabbed the opportunity to turn his passion into his profession by becoming a honey bee scientist. Currently he is doing a PhD at Bangor University where he does research on the genetic introgression of Welsh honey bees and potential *Varroa*-resistance behaviour in North-Welsh honey bees. Apart from his activities in Wales, he also is a beehkeeping lecturer / demonstrator; president of ZwarteBij.org, a Belgian trust for the conservation of the local Dark bee (*A. m. mellifera*); board member of SICAMM and breeding coordinator for Belgium within the E.U. funded SMARTBEES project. Conservation of subspecies is one of the main areas of focus of Dylan because locally adapted honey bees are the key to develop sustainable beehkeeping.

Presentation: "What is left from the Welsh Dark bee? - An upcoming study at Bangor University"

During the last century, a lot of honey bee queens from non-native origin were imported into Britain because it was thought these would be better than the native Dark bee (*A. m. mellifera*). Beekeepers mainly replaced their original stock by Italian bees (*A. m. ligustica*). Later on Buckfast bees were developed which became quite popular as well and nowadays also Carniolans (*A. m. carnica*) are actively imported. Keeping those non-native honey bees, which are not adapted to the British environmental conditions, caused / causes hybridization and local extinction of the Dark bee, whilst she is the key to sustainable beehkeeping in the Britain because of natural selection and genotype x environment interactions. In the next few months Bangor University will analyse the genetic pollution of Welsh honey bees in order to get insights in where, and to which extent there are still Welsh Dark bees present to assist in conservation and breeding.

Presentation: "Professional breeding, the importance of standardized performance testing"

In order to convince beehkeepers to keep native local honey bees so that importation of non-native non-adapted honey bees can be avoided, it is of utmost importance to be able to offer native honey bee stock which is attractive to work with. This means stock which is gentle, calm, productive, disease resistant, etc. To get to this level of improved stock it is

necessary to breed honey bee stock in a professional way by making use of standardized performance testing like is recently established for most European subspecies within the E.U. funded SMARTBEES project. The focus will lay on the setup and execution of professional breeding.

Presentation: "Controlled mating, the key for conservation and breeding"

In the case of conservation management and breeding activities, it is important that queens are only mated by drones of the same native subspecies and only with drones from specifically improved stock. The principle of mating control is a necessity in order to gain success. There are different ways for beekeepers / bee breeders to get control over this difficult issue, examples are mating stations, artificial insemination (AI) and moonlight mating. All three will be discussed, looking at the advantages / disadvantages, though the focus will lay on the setup and maintenance of mating stations.