Full Responses to the Consultation on the Draft Action Plan for Pollinators

August 2013

Responses 41 - 60

From: John Page [mailto:john.of.pontsian@gmail.com]
Sent: 31 May 2013 15:43
To: BioDiversity
Subject: Consultation on the Draft Action Plan for Pollinators in Wales

I have attached a Consultation Response prepared by the Welsh Beekeepers' Association.

Best wishes, John

John Page
General Secretary
Welsh Beekeepers' Association

Consultation Response Form

Your name: John Page

Organisation (if applicable): Welsh Beekeepers' Association

Your address: The Old Tannery, Pontsian, Llandysul, Ceredigion SA44 4UD

Question 1: Do you agree with our vision for pollinators in Wales?

The Welsh Beekeepers Association [WBKA] is the sole organisation representing some 1650 beekeepers affiliated through 19 local Associations spread throughout Wales. We applaud any action to improve the forage availability and habitat improvement for all insect pollinators.

Question 2: Have we identified the main areas of concern for pollinators in Wales or are there further issues you want to identify?

The provision and continued support of a strong effective Bee Inspection Service is important for maintaining healthy stocks of managed honeybees. The WBKA has an excellent relationship with the FERA Inspection Service and the members of our affiliated beekeeping associations are registered on Beebase.
The WBKA has been an active participant and supporter of the UK Government FERA Healthy Bee Plan since its conception. To ensure healthy stocks of managed honey bees the Healthy Bee Plan has identified the need to educate Beekeepers to a minimum standard of practical competency as defined by the WBKA / BBKA Basic Husbandry assessment. The WBKA also provide preparation & assessment for a range of nationally UK recognised Beekeeping qualifications.
As more people in Wales become interested in keeping colonies of Honeybees not only their initial education but also practical support for them during their early years is important. The WBKA associations throughout Wales are ideally placed to give this support which in turn will help to ensure an increase in the number of managed colonies in Wales.
The continued need to limit and regulate the use of safe insecticides in Wales is vital to the health of all our pollinators.

Question 3: Do you agree with the outcomes identified, and the areas for action to achieve them? Your comments are welcomed.

An additional outcome should be an increase in the number of beekeepers in Wales trained to the WBKA / BBKA Basic Husbandry assessment level. It is important that any increase in the number of managed colonies of honeybees is sustainable and complies with 'best practice'.

Question 4: How could you contribute further to the areas for action identified? How could we support you to do so?

Part of the current role of the WBKA both directly and through the local associations is the education and development of Welsh Beekeepers at all levels from entry to expertise. Along with this work is the provision of public awareness and education as to the importance and needs of not just the honeybee but other pollinators as well.

Previously the Welsh Assembly Government has funded the production of bilingual information leaflets and these are regularly distributed to the local associations for those coming into beekeeping. We will be looking to produce leaflets on additional topics of beekeeping and assistance will be required.

The WBKA has already run courses to help our local association to educate & train new beekeepers throughout Wales. A programme of support to develop this further and to encourage a greater number of Welsh beekeepers entering for the WBKA Basic Husbandry Assessment is seen as a role for the WBKA. If successful then the number of trained assessors will need to be increased.

As an organisation we have a presence at many of the agricultural shows in Wales and the provision of additional display material and education leaflets that show our support of the Action Plan for Pollinators for Wales would assist us in our contacts with beekeepers, farmers (many of whom either keep bees or have them on their land) and the general public.

On a local basis many of our member associations provide talks and / or demonstrations on the honey bee and beekeeping to local organisations such as Women's Institute, Gardening Clubs, Wildlife Societies, Schools etc. These talks and demonstrations are another good way to increase public awareness of the needs of pollinators.

Question 5: Would you like to be involved in developing the actions needed to achieve the outcomes? If so, in what way?

The WBKA is already fully committed to and involved in many of the actions identified to achieve the outcomes. Referring to our comments to Question 4 it can be seen that we are looking to strengthen and develop this role further. Our aims have always been the promotion of healthy bees and competent beekeepers for Wales.

Question 6: We have asked a number of specific questions. If you have any related issues which we have not specifically addressed, please use this space to report them: Responses to consultations may be made public – on the internet or in a report. If you would prefer your response to be kept confidential, please tick here:

The WBKA regularly communicates with some 1,650 Beekeepers throughout Wales both on an individual basis through our quarterly magazine and website but also indirectly through contact with the officers of the local associations. We work very closely with the FERA Bee Inspection Service and ensure that the advice that we circulate is correct. In representing Beekeeping at a Governmental level (both locally & nationally) we do so for the benefit of the honeybee and beekeepers, as a charitable organisation that was founded over thirty years ago.

From: Communications [mailto:communications@wales.gsi.gov.uk]
Sent: 31 May 2013 16:07
To: BioDiversity
Subject: Draft action plan for pollinators - online form response

Page used to send this email:	/consultations/forms/pollinators-action-plan-response-form/
Name:	fiona lanc
Organisation (if applicable):	Habitat Matters Ltd
Email / telephone number:	fiona@habitatmatters.co.uk
Your address:	Llyn-y-Gors, Tenby Rd,St Clears, Carms SA33 4JP
Question 1: Do you agree with our vision for pollinators in Wales?:	Yes in general
Question 2: Have we identified the main areas of concern for pollinators in Wales or are there further issues you want to identify?:	I believe so - the report seems thorough
Question 3: Do you agree with the outcomes identified, and the areas for action to achieve them? Your comments are welcomed.:	Greater support for businesses & biodiversity. Many businesses (offices / retail) are in landscaped areas that are planted up as part of the landscape planning conditions and very little imagination used in the design. This planting could often be improved / enhanced to include more native species rather than low maintenance, big-standard shrubs. Landscape architects could be encouraged to think outside the box. Look at what is growing in the adjacent countryside and include similar in the planting scheme (doesn't need to be native - could be, for instance, ornamental hollies rather than just native but there are many other opportunities). A good example is a road improvement scheme I'm currently working on - we are planting up the site entrance with locally-sourced, bee-friendly plants (flowering garden plants know for good nectar), these will ultimately be offered to the

	local community / school and we will work with them to encourage the creation of a bee-friendly garden and possibly Green Flag application. This is relatively low-key and a small area but it will raise awareness amongst site visitors / workers and they may be encouraged to do something similar on their own sites. It also, of course, counts towards the company sustainability target so has benefits on both sides.
Question 4: How could you contribute further to the areas for action identified? How could we support you to do so?:	Award scheme for business & biodiversity perhaps? (I'm aware of CEEQUAL & Green Apple)
Question 5: Would you like to be involved in developing the actions needed to achieve the outcomes? If so, in what way?:	Happy to help - involvement on Business / Biodiversity group?

From: Communications [mailto:communications@wales.gsi.gov.uk]
Sent: 31 May 2013 21:47
To: BioDiversity
Subject: Draft action plan for pollinators - online form response

Page used to send this email:	/consultations/forms/pollinators-action-plan-response-form/
Name:	Sue Harrison
Organisation (if applicable):	Abergavenny and Crickhowell Friends of the Earth
Email / telephone number:	schyouknowwho@tiscali.co.uk
Your address:	20 Cwmbeth Close Crickhowell Powys NP8 1DX
Question 1: Do you agree with our vision for pollinators in Wales?:	We agree with the vision.
Question 2: Have we identified the main areas of concern for pollinators in Wales or are there further issues you want to identify?:	We agree with the five main areas of concern. We agree with the emphasis placed on the negative effects on pollinating insects of modern agricultural methods: the intensification of agriculture and the adoption of monoculture plus the use of pesticides and herbicides are, in our opinion, the main drivers of pollinator decline. Public ignorance and indifference are also a key area for concern but the issue of raising awareness is touched on

Question 3: Do you agree with the outcomes identified, and the areas for action to achieve them? Your comments are welcomed.:	elsewhere in the document. Outcome 1: We agree with the outcome as the fragmentation of pollinator (plus bird and mammal)) habitat has made a major contribution to decline. Area for Action 1: ....farmland. The value of improving pollinator habitat on farmland cannot be stressed enough. This has to be the focus of any successful rescue operation for pollinators. It is the KEY ASPECT. Farmers must do far more, and with a greater sense of urgency, to restore lost hedgerows, create wild flower field margins, plant more trees and greatly reduce pesticide and herbicide use. There needs to be a major drive towards more traditional, organic farming methods. We hope that the 2013 reform of CAP will introduce greater incentives for farmers. If GLASTIR only attracts 13% of farmers then it's not working. It is not enough to say that more needs to be done. Ecological Focus Areas should cover more than 7% of farmers' land for a start. Perhaps the subsidies offered are insufficient. So this becomes an issue of FUNDING. In addition the GLASTIR application process is apparently very onerous and bureaucratic. The practice of Monoculture has had a devastating impact on pollinating insects. There must be a return to a more mixed cropping system. Farmers should be informed and educated about the value of pollinating insects to the agricultural economy and the environment as a whole. Now that neonicotinoids have been partly banned in the EU consideration should be paid to the detrimental effects on wildlife (and ultimately on all of us) of all pesticides and herbicides. There must be more encouragement to reduce the use of all agro-chemicals, including artificial fertilisers. Farmers will need to change their use of pesticides. The WG Pollinator Action Plan needs to provide information to farmers on alternatives like changing crop rotations, encouraging natural enemies, trap cropping and better pest monitoring i.e. only spray when needed. Area for Action 5 says that pollinator friendly practice will be promoted through Gwlad and Farming Connect. Area for Action 2: ... wider countryside We are concerned that new relaxed planning laws will mean that even more of our countryside will be concreted over, particularly if priority is given to housing, roads, factories etc. The suggested actions include identifying best habitat and promoting connectivity. Also achieving favourable conservation status for protected areas. Who is going to do this and how will it be funded? Area for Action 3: ... in towns, cities and developed areas. We agree that developed areas offer opportunities to provide better habitats for pollinators. Railway embankments already provide an unexpected haven for wildlife and roadside verges could provide the wildlife

corridors that are so desperately needed. Local Authorities have the power to promote the planting of wild flowers and flowering trees by working with local community groups. The adoption of sympathetic verge mowing and hedge cutting regimes is a simple, cost-effective way of extending the flowering season of good pollinator plants. Parks and green spaces, hanging baskets and planters, could all be planted with pollinator plants – ditch the sterile bedding plants that offer no nectar or pollen to pollinating insects. It should be inscribed in LA policy that preference must be given to trees, shrubs and flowers that provide food for pollinators. There is an obsession with neatness that is detrimental to wildlife. Councils should be persuaded that areas of long grass and (Heaven protect us!) “weeds” should have space to flourish, providing habitat and food for pollinators. Outcome 2: We agree. Maintaining healthy populations of ALL insect pollinators is absolutely vital. Area for Action 4: The emphasis here is mainly on honey bees but there is increasing concern about the decline of bumble bees and solitary bees as well as butterflies, moths and hoverflies. The loss of insects leads to the loss of birds etc etc. We are in favour of working to reduce the use of pesticides/herbicides in gardens. Schemes like Perfect for Pollinators run by the RHS should be actively promoted with Garden Centres, horticultural societies and gardening clubs. The Action Plan says that pesticide use will be monitored. How will this be done and by who? Outcome 3: The general public is beginning to wake up to the issue of pollinator decline. We agree with this outcome. Area for Action 5: We wholeheartedly support all initiatives to educate children about the value of pollinators and we have already been actively engaged in working with schools in our local area. The development of a Centre for Excellence sounds a good idea as there needs to be a central body to coordinate all these educational initiatives. (More details required however). More cooperation is needed between local community groups and LAs. Outcome 4: We are in favour of joined-up thinking in all policies and strategies where there is the possibility of actions for the benefit of pollinators and we support further research into pollinator status in Wales. Area for Action 6: We agree with the aim of working in partnership with agencies and stakeholders to this end. The Action Plan says that there are gaps in knowledge of the status and trends of pollinator populations in Wales. Without this data an Action Plan cannot be monitored. Who will collect the data and how will this process be funded? Area for Action 7: The WG needs to keep abreast of the latest research into pollinating insects and take this into account in policy making.

Question 4: How could you contribute further to the areas for action identified? How could we support you to do so?:	We are particularly concerned to help raise public awareness of this issue and this is an aspect we have been working quite hard on. So far in our local campaign we have established links with experts in the field of pollinating insects, holding a very well attended public meeting back in April with three invited specialist speakers. We have had 3 articles published in the local press about the pollinator issue. We are organising 2 bee walks in June led by one of our experts to assess the status of pollinator habitats locally. We are also co-funding and helping to plan a pollinator friendly wildlife garden at a local primary school where we recently did a school assembly - dressed as bumblebees. We are also working closely with our local garden centre, Macdonald's, running a Pollinator Promotion Day in June to coincide with the local Llanfoist Open Gardens Day. We think it's vital to work with other organisations like the Monmouthshire Meadows, Tidy Towns, the Bumblebee Conservation Trust, Bees for Development, Gwent Wildlife Trust etc where our campaigns overlap. We have also been involved in preliminary discussions with Monmouthshire County Council about their new project to lease green spaces to community groups for the planting of fruit, vegetables and wild flowers. Help with funding individual projects is always helpful, but equally the setting up of a forum to coordinate these campaigns would be welcome.
Question 5: Would you like to be involved in developing the actions needed to achieve the outcomes? If so, in what way?:	We would like FOE Cymru to continue to play a role in helping to develop the actions required. As a local FOE group we will support this project as much as we can. Our contribution so far is detailed in our response to Question 4 above.
Question 6: We have asked a number of specific questions. If you have any related issues which we have not specifically addressed, please use this space to report them:	This document sets out to establish a framework for a Pollinator policy for Wales and the areas for action identified draw attention to ways of further developing this framework but we feel it falls short of being an Action Plan. The implementation and delivery of this policy remain to be defined in detail: it is not yet clear how these outcomes will be achieved and important issues of funding are not addressed. The document does not set out clear decisive objectives.

From: Communications [mailto:communications@wales.gsi.gov.uk]
Sent: 31 May 2013 22:37
To: BioDiversity
Subject: Draft action plan for pollinators - online form response

Page used to send this email:	/consultations/forms/pollinators-action-plan-response-form/
Name:	J. Prince
Email / telephone number:	jbprince9@yahoo.co.uk
Your address:	8 New Market Street Usk NP15 1AT
Question 1: Do you agree with our vision for pollinators in Wales?:	Yes.
Question 2: Have we identified the main areas of concern for pollinators in Wales or are there further issues you want to identify?:	At various places in the Action Plan, reference is made to the need for data collection: Page 16 “mapping and identifying the best or potential habitats for pollinators” Page 18 “We will monitor the situation with regard to the introduction of non-native bees for commercial pollination purposes“ Page 19 “There are gaps in our knowledge of the status and trends of pollinator populations in Wales” Page 20 “We will work towards improving surveillance and monitoring of pollinators…” A realistic action plan starts with quantification of the current situation. Evaluating the plan success requires further data collection. Collecting data on insect populations is difficult and requires trained and experienced personnel. Nowhere in the plan is there any indication of where these people will come from, how they will be trained and, if necessary, paid.
Question 3: Do you agree with the outcomes identified, and the areas for action to achieve them? Your comments are welcomed.:	I agree with the outcomes identified but the areas for action are much too vague. An action plan needs quantified analysis of the start position, quantified goals, a time scale, identification of who will deliver the goals and a budget for the project completion. None of this information is currently present in the draft action plan.

From: opj@talk21.com [mailto:opj@talk21.com]
Sent: 01 June 2013 10:44
To: BioDiversity
Subject: Response to a draft action plan for pollinators

I am writing in a personal capacity, although I am a member of the conservation committee east of the North Wales Wildlife Trust. I have been involved in bumblebee research and coauthored the book 'Bumblebees' with Dr S A Corbet, published in 2011 by Pelagic Press (http://www.pelagicpublishing.com/bumblebees-naturalists-handbooks-6.html).

It is vital that the draft action plan leads to practical action that will help promote the long term interests of pollinators. Conservation of their populations is rightly starting to be appreciated as absolutely vital to our own strictly selfish best interests, let alone their intrinsic importance in sustaining plant communities.

One of the biggest opportunities for the action plan should be to focus on arguably the largest (ca 250,000 Ha) and most undervalued environmental asset in public ownership - **road verges**. Many of these are historically old and un-'improved', providing a vital endemic seed reserve of endangered plant species vital to the life cycles of many pollinators. Verges are currently abused and grossly mismanaged by the majority, if not all, Highways Departments in Wales - who choose to ignore the NERC Act - invoking safety issues as the overriding excuse for all bad or thoughtless management practices. Development and implementation of good verge management - in consultation with the numerous expert opinions available via the Wildlife Trusts, Plantlife, Bumblebee Conservation Trust, the RSPB and others - with strong guidance and direction from the Assembly (that Highways departments of Wales cannot then ignore), would with a single action improve the biodiversity prospects of a very significant area of Wales. Road verges by their very nature are **connected** habitats - something recognized as vital to conservation efforts which aim to the promote dissemination of genetic population resources throughout the environment.

For bumblebees (in particular) *"undisturbed land with rough grass and occasional willow trees (for spring forage), hedge bottoms and roadside verges, are of absolute importance to their survival. These habitat remnants need to be appreciated and sensibly managed. Road verges form an extensive 'nature reserve', under public management, with enormous potential to conserve and increase biodiversity, or, if poorly managed, to undermine it. Usually under-appreciated, and viewed as just an additional cost in the council maintenance bill, there is great scope for verge cutting regimes compatible with maintaining and improving plant diversity, allowing flowering and seed set to occur. Verges should be the hay meadows of the future, alive with flowers. These can be simple, often cost-saving options, and they need urgent implementation before irreversible losses increase."* (Prys-Jones & Corbet, 2011, see above reference)

I have outlined in the attached chapter from our book on bumblebees the threats to bumblebees, in particular, and a number of issues that need to be addressed for their conservation. While for some of these issues many vested interests are involved (e.g management of farmland), this is not the case with verges. The Assembly is **uniquely** well placed to influence verge management in Wales - as it has ultimate control of the Highways departments that have responsibility for them; the sole compromise for

good verge management is public safety - which does not need to be compromised if good management plans are developed and enforced by an Assembly with suitable teeth.

On a lighter vein, well-managed and flower-rich verges and hedgerows can be an invaluable asset to tourism. A recent visitor to us from France was so impressed by one stretch of flower covered verge that he asked us to stop the car to take a closer look.

Thanks for the opportunity to present these views for serious consideration. I would be happy to contribute to the development of sensible pollinator management strategies, and very much hope the Assembly decides to give verge management, in particular, the priority it deserves.

Regards

(Dr) Oliver Prys-Jones

-----Original Message-----
From: raygwoods@aol.com [mailto:raygwoods@aol.com]
Sent: 02 June 2013 23:15
To: BioDiversity
Subject: Pollinators Consultations

Please find attached my comments on your consultation document. Yours sincerely Ray Woods

Wales Pollinator Action Plan Consultation response

Response by Ray Woods BSc, Ty Mawr Mill, Builth Wells, Powys LD2 3SH

Question 2: Have we identified the main areas of concern for pollinators in Wales or are there further issues you want to identify?

The appropriate management of farmland and to some extent forestry is the key to restoring pollinator populations. As to how "connected" suitable habitat has to be I am uncertain as bees tend to be wide ranging foragers. A patchwork of sites offering continuity of pollen and nectar sources to meet their daily requirements and suitable nest sites may be just as effective and easier to create. It is vital to continue to support the existing series of safeguarded wildlife sites rich in insect pollinated flowers and to develop incentives for farmers to retain what few flower-rich meadows and woodlands as exist. The Cambrian Mountain ESA had an excellent meadow and woodland scheme that was widely taken up and may be a suitable model or to adopt funded by a radically reformed EU farm support mechanism. The widely taken up Tir Gofal farm conservation scheme also had a variety of reversion options that helped increase wild flower numbers. The termination of this scheme was ill thought through with a result that few of the gains made have been carried through into Glastir and much of the money spent improving habitat may well have been wasted. Ways of salvaging the gains achieved by ESA and TG agreements should be urgently devised in perhaps another tier of Glastir.

Woodland management grants need to provide for wide permanent ride edges and a management plan that is of a scale to provide a continuity of clear-felled areas rich in flowers.

Great care needs to be taken before promoting additional organic farming schemes, at least for stock farms. In a bid to keep on top of weeds previously spasmodically controlled by herbicides a large topper is the preferred choice for organic farmers. Nectar-rich weeds such as thistles are now flailed before flowering. The large flail requires a large tractor and an ability to get everywhere with it. This has resulted in the loss of smaller flower-rich trees such as crab apples, blackthorn and hawthorn, often vital pollen and nectar sources. The promised high clover swards appear to in practice deliver little nectar-at least to hive bees and usually on the point of maximum flower production are turned into silage. Stubble turnips or swedes grown without pre-emergence weed-killers may offer a useful range of nectar and pollen in that they usually support good numbers of weed species. This, however, requires research to prove. It is somewhat surprising that as far as I can tell no detailed research has been undertaken to establish the biodiversity benefits of organic stock farming. All work that I can trace is on arable farms.

The entire eutrophication of landscapes is now beginning to happen in Wales. Intensive chicken and stock units have been allowed to develop spasmodically each with its own ammonia footprint. These units replaced fewer much larger units that were more aggregated and so affected, in total, a much smaller area of Wales. Eutrophication has led to the loss of flower rich banks and verges and their replacement by mostly wind pollinated herbs and grasses. Much more work is required to understand and quantify the impact before action can be taken to address the problem. There is scant information on critical loads for many flower-rich habitats and even less data on current local background and deposition levels.

The greatest benefits from least effort on farmland could be had from a dramatic change in hedge management. The hedgerow renovation scheme and Tir Gofal restored many hedges but never implemented appropriate follow up management. Instead of trimming every other year as was recommended, most farmers trim annually. This prevents almost all the woody species from flowering and renders most hedges poor at supporting pollinators. To ensure regular flowering of hawthorn, elder, blackthorn, bird cherry, willow etc. many more hedges should be allowed to grow up. At least a three year cutting cycle is required to maximise flower production. Current hedge trimming machines find material of that age difficult to deal with. Research into new cutting and handling techniques is required to encourage less regular hedge trimming. Costs could perhaps be recovered by the sale of baled and/or chipped hedge arrisings. Research should also be undertaken to establish other agricultural benefits of tall hedgerows in the matter of better shelter and earlier spring grass to encourage their adoption.

All too often hedges now support nitrophilous vegetation that offers few flowers. Docks, nettles and grass species are all wind pollinated and are now too often the dominant vegetation. The causes of this can be readily guessed at when observing fertilizer spreading. Too often the slurry or pellet spreader is driven too close to the hedge, the bottom of which intercepts a larger quantity of fertilizer than the average for the field. Better education and a quantification of the wasted money could ensure more careful use of these materials.

Many permanent pastures and long term leys tend to produce more flowers. EU regulation demands prior approval before such areas are ploughed. In practice this regulation is widely flouted and even if prosecution results the penalties do little to

deter others from such actions. This legislation should be re-examined and if it proves a valuable way of conserving flower-rich grasslands its implementation should be pursued more vigorously. Oddly in parts of Wales at least other EU regulations are pursued with an over-degree of zealousness at the expense of pollinators. The grazable areas regulations have at least in Mid Wales been pursued with vigour. Areas dominated by gorse, bramble and blackthorn in particular have been considered ungrazable. As a result this important habitat has been grubbed out and/or burned. This regulation should be re-examined and its implementation reconsidered.
The importance of nectar and pollen producing trees in the farmed landscape should be promoted. Lime, sycamore, rowan, field maple, crab apple and bird cherry are all significant and should be promoted either in hedges or in shelter belt or shelter woodland plantings.

Area for Action 3 promoting diverse habitats in towns, cities and developed areas

The planting of flower-rich verges beside busy trunk roads needs to be reconsidered since death of insects by collision with passing vehicles is a real risk. The Trunk Road Agency should be given powers to acquire land away from the trunk road for flood storage purposes and mitigation and not be forced to make this provision close to the carriageway.

A review of signage at my local garden centres showed no evidence of any attempt to promote insect friendly flowers except for a very few labels produced by the plant grower. The lack of labels may not be entirely due to inertia. For many cultivars I suspect we have little knowledge as to their value. For example how large does a pansy flower have to be before a bumble bee fails to be able to get a grip? Further work is required in this area.

Question 4: How could you contribute further to the areas for action identified? How could we support you to do so?

As a trustee of a wildlife trust in Wales I am pleased to learn that the COOP is to fund a programme promoting the value of gardens for wildlife with the Welsh WTs. Capacity to undertake this work is dependent on the continued core funding of these organisation by Welsh Government. Ways need to be found of continuing to core fund the WT's.

Action 7: Building an evidence base to support future action for pollinators

A monitoring scheme needs to be devised to measure the status of pollinators at a Welsh scale. These results need to be linked into an objective measure of the availability of nectar and pollen that permits trends to be measured. Existing plant recording schemes run by Plantlife and the Botanical Society of the British Isles could form the basis of such a study. The loss of expertise in institutions such as the National Museum of Wales is to be regretted and reversed.

Name: Marc Carlton (submitting on behalf of Wildlife Gardening Forum)

Organisation: Wildlife Gardening Forum

Email: wlgf@stephenmhead.com,

Address:
Wildlife Gardening Forum
Coordinator
Dr Stephen Head
17, Honey Lane
Cholsey, Oxon OX10 9NL

Q1: Do you agree with our vision for pollinators in Wales?
We think that this is a very worthwhile initiative. This is an area where Wales could become a trailblazer for the rest of the UK, following on from the pioneering DNA bar-coding of the native flora already done by the NBGW. The vision has a real chance of succeeding, but for that to happen we think there is a need for more of a focus to bring everyone together, and a need for more effective and accessible means of sharing knowledge and best practice.

Q2: Have we identified the main areas of concern for pollinators in Wales, or are there further issues you want to identify?
We agree with the existing areas of concern highlighted in the report, however we think the concept of 'habitat alteration' could be extended to cover the built environment (towns and villages). It is now recognized that such areas, particularly gardens, frequently provide an important forage source for pollinators, and that a number of wild bee species use stone walls or old mortar as a nesting habitat, and some Lepidoptera hibernate in cracks and crannies in old walls. Modern gardening styles that move away from traditional flowery gardens, and standards of renovating walls and buildings which remove insect nesting or hibernation opportunities, are both trends which serve to degrade the value of the built environment to pollinators. 'Area for Action 3' suggests strategies to mitigate these trends, and we particularly welcome the recognition that planning law should take pollinators into account; we believe this should encourage the incorporation of pollinator- friendly features (e.g. perforated nesting bricks, and so-called 'green roofs') in new buildings as standard.

Q3: Do you agree with the outcomes identified and the areas for action to achieve them? Your comments are welcomed.

We do agree, but we would like to elaborate on these with four proposals:

Our first proposal relates to management of public land (such as road verges and public parks) to increase its value for pollinating insects. It must be a priority to amend grass cutting regimes and maintenance practices, in order to increase the value of grassland in the public care as invertebrate habitat and as a forage source

for insects. There is now good evidence that pollinator-friendly management of utility grass can also be considerably cheaper than conventional gang-mowing. However, this change in management can require planning, piloting, re-training of contractors, organising local publicity, and locating an outlet to take the clippings (which can possibly be used as animal bedding). In this regard we hear anecdotally of examples of good local authority practice and bad practice. The fact that local government in Wales is fragmented into a number of relatively small unitary authorities, and that verges of major roads are maintained separately by the Trunk Roads Agencies exacerbates the knowledge gap. We believe there is a priority need to address this knowledge gap with improved information- sharing between local authorities, so that experience and best practice with regard to modifying grassland maintenance regimes can be effectively shared. Perhaps existing authorities that are successfully implementing this change could be nominated as 'beacon authorities' or local 'centres of excellence', that other local authorities and the Wales Trunk Road Agencies could learn from.

Our second proposal relates to the co-ordination and focusing of public activities in support of pollinating insects. Recently a wide range of organisations have become interested in matters concerning the conservation of pollinators and what they can do to help. Typically this includes schools, Scout and Guide Groups, Women's institutes, community associations, gardening clubs and allotment associations, Transition Towns, beekeepers associations, and so on. Several wildlife and conservation charities and a supermarket chain have also been running their own pollinator campaigns recently. In general these campaigns and activities are carried out in an unconnected and disjointed way. We suggest that the collective activity of all these bodies could have more focus and synergy and would be more effective if there were an annual National Pollinator Week (or month) in Wales. This would give a clear focus for all these organisations to base activities around, and would facilitate the sharing of skills, knowledge and experience. A dedicated web page (which could be established on an existing web site and would not have to involve significant expenditure) could be set up to centrally publicise all these activities. We think this could be a 'quick win'. Admittedly there is already a Wales Biodiversity Week and a (UK) National Insect Week, but neither of these seems to achieve a high enough profile at present to serve the purpose we suggest.

Our third proposal recognises that there is a pressing need for more extensive collection of biological records in Wales, especially of under-recorded groups such as solitary bees, in order to get a better evidence base. A National Pollinator Week could be used as a catalyst for 'citizen science' projects to introduce more members of the public to recording, and to initiate the training of more recorders. Teaching people to observe and record pollinating insects in their gardens would be a good introductory route to expanding recording effort. Several wildlife charities (such as Butterfly Conservation) have well-established recording schemes and their experience could be harnessed.

Our fourth proposal is to emphasise the importance of reforming public amenity horticulture so that planting schemes provide forage for insects. At present the

almost universal use of highly-hybridised bedding plants provides little or no forage for pollinating insects. There is much scope for improvement in planting schemes. Again there is a knowledge gap and an urgent need for easily accessible and well-publicised examples of good practice in this regard. A priority should be to liaise with the gardening award schemes (such as Wales in Bloom) to ensure that they take value to pollinators fully into account in their judging criteria.

Q4: How could you contribute further to the areas for action identified? How could we support you to do so?

The Wildlife Gardening Forum is a UK-wide community of interest that straddles the worlds of horticulture, nature conservation, and research. We connect 209 organisations as well as many individuals. We are in a unique position to co-ordinate information flow through the UK, and to suggest people who could answer specific questions or contribute to working groups. Among our own membership we have a Research Group, a Horticulture Trade Group, an Education Group and a Plants and Planting group. CCW (now NRW) has been a prime mover and supporter of the Forum since its inception, and we have a number of Wales-based members. We would like to offer our support and our experience towards the furtherance of the Pollinator Action Plan.

Q5: Would you like to be involved in developing the actions needed to achieve the outcomes? If so, in what way?

Please refer to our response to the previous question. We could be used as a channel for information and networking.

Q6: We have asked a number of specific questions. If you have any related issues which we have not specifically addressed, please use this space to report them:

We would like to make the following observation:

One of the critical roles of pollinators is that they lie at the bottom of the food chain and many of them are essential food for insectivorous birds and for bats. In particular, the larvae of Lepidoptera (caterpillars) are used as food by the young of many garden and woodland birds; hoverflies are part of the diet of swifts, swallows and house martins; and moths are the major part of the diet of bats. For this reason we think it is important not just to conceive of 'pollinators' as bees, and also to acknowledge that the 'ecosystem services' provided by pollinating insects extend well beyond that of the pollination of certain food crops. We feel that converting the value of pollinators into monetary terms or seeing them primarily in terms of their service to humankind, while important, undervalues their important role in the maintenance of overall biodiversity.

It follows that we would like the role of hoverflies, both as pollinators of various kinds of wildflowers not visited by bees, and as a food source for birds, to be fully acknowledged in the action plan, as well as the role of Lepidoptera as food for birds

and bats. It follows from this that planting schemes and land management regimes aimed at supporting pollinators need to take the whole range of pollinating insects into account, and should not solely concentrate on the needs of bees.

Emily.keenan@nationaltrust.org.uk

A National Trust Wales Response to the Consultation on the Draft Action Plan for Pollinators for Wales

As Wales' largest conservation charity the National Trust are delighted to see the Welsh Government addressing the issue of declining pollinator numbers and the serious impacts this could have for the landscape, environment, economy and communities of Wales.

The contents of this plan, in our view, succeed in identifying the main areas of concern for pollinators and laying out a strong vision for pollinators in Wales. We are glad to see areas for action emerging in this plan and would like to be involved in developing more detailed actions in the future. The plan enquired as to the role of third sector organisations such as ours in protecting pollinators. The National Trust in Wales is currently contributing to the protection of pollinators in a manner which fits many of the 'Areas for Action' identified as outlined below.

Advancement of Knowledge

Action 7: Building an evidence base to support future action for pollinators

A conservation charity which owns large and varied areas of coast and countryside, the National Trust are in an excellent position to work with Welsh Government to advance our knowledge in this area so as to provide better conservation for the future. An example of our current work is our 'Garden Grassland Project', funded by NRW, in which we have worked to study the effects altered management of our grounds and gardens can have on biodiversity and other ecosystem service provision. Lessons learnt from such work can be taken forward inside and outside the National Trust. We are also breaking new ground through experimental techniques on our agricultural holdings. On the Llyn peninsula, as part of the Llyn Partnership Project, we are working with partners to enable farmers to produce flowering hay for feeding stock on the heaths. As well as being a sustainable source of natural habitat and livestock feed this method has the added benefit of being a high nectar source for pollinators at key times of year.

Work at our Properties

Action 2: Promoting diverse and connected flowering habitats across the wider countryside

The National Trust in Wales is responsible for 50, 000 hectares of land in Wales. Being such a major landowner we see ourselves as being able to make a substantial contribution to promoting and connecting diverse habitats which support pollinators across Wales. As a large landowner and a charity with a landscape interest we feel we can support the Welsh Government in further

enhancing habitats for pollinators across Wales. On the land which we manage in hand the National Trust supports pollinators through enhancing and expanding high nature value grasslands including flower rich grasslands, waxcap fungi grasslands and others, while also improving the management of the grasslands in the context of garden and presentation plans. We also strive to improve the overall environmental score of land we manage in line with the National Trust environmental standard for parks and gardens, and wider environmental management systems, all of which will have positive outcomes for pollinators alongside delivery of other ecosystem services such as improved water management and carbon storage.

Action 5: Working to raise awareness of the importance of pollinators and engage our citizens in their management

The National Trust achieves this through the provision of formal and informal opportunities for people of all ages to engage with nature at our properties. Many such opportunities are focussed on young people learning about the natural world, such as at Stackpole Outdoor Learning Centre where our outdoor learning team encourage learning about nature through interaction with wildlife in the varied setting of cliffs, coves, woods, ponds, marshes and swamps. This includes a wide variety of pollinators including the bee fly, speckled wood, orange tip and common blue butterflies and dragonflies of the hairy and blue-eyed darner varieties.

Work with our Tenants

Action 1: Promoting diverse and connected flowering habitats across farmland

As an organisation which has land managed in cooperation with our 240 tenant farmers in Wales we have been working to ensure all our farmland is farmed in a way to benefit pollinators and biodiversity more generally. We see flower rich grassland are a key part of the mix terms of restoring connectivity and permeability in the landscape and as such we work widely with our tenants to enhance and restore grasslands. In areas such as Ynys Mons we are systematically assessing farms for such grassland and considering management of this grassland as part of standard procedure for our let estate.

We are hopeful that the examples of our work provided here are useful in demonstrating how third sector organisations such as ourselves make a contribution to the well-being of pollinator population in Wales. We are keen to enter the partnership which will create the Action Plan for Pollinators in order to share our views on how the Welsh Government can best support organisations such as our own in our current and future work for pollinators.

Consultation Response on Draft Action Plan for Pollinators for Wales for Isle of Anglesey County Council

We agree on the need to ensure pollinators are safeguarded for a number of reasons and basically welcome the draft Action Plan.

The main comment we have relates to: Area for Action 2: Promoting diverse and connected flowering habitats across the wider countryside (p 16). We note the following is of particular relevance to local authorities:

'We will work towards improving habitats across the countryside by aiming to achieve the favourable conservation status of protected areas, and the protection and management of habitats which benefit pollinators through Local Authority Biodiversity Champions.'

Comment: We would like to have more details on how Champions and Local Authorities are to be involved. There is likely to be a keen willingness within local authorities to play a significant part, but - especially given the current financial situation local government is in - this will depend on what resources can be made available for the purpose, particularly in a time of budget cutbacks in many areas of work.

Prepared by:
David Cowley
Ymgynghorydd Ecolegol ac Amgylcheddol, CS Ynys Mon
Ecological and Environmental Adviser, Isle of Anglesey CC
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From: Communications [mailto:communications@wales.gsi.gov.uk]
Sent: 03 June 2013 22:22
To: BioDiversity
Subject: Draft action plan for pollinators - online form response

Page used to send this email:	/consultations/forms/pollinators-action-plan-response-form/
Name:	Dr Fiona Doonan
Email / telephone number:	fic5@aber.ac.uk
Your address:	Maesteg, Penbontrhdybeddau Abersytwyth SY23 3EZ
Question 1: Do you agree with our vision for pollinators in Wales?:	yes
Question 2: Have we identified the main areas of concern for pollinators in Wales or are there further issues you want to identify?:	yes
Question 3: Do you agree with the outcomes identified, and the areas for action to achieve them? Your comments are welcomed.:	there needs to be more specific aims for county councils, eg reducing frequency of mowing of grass road verges to allow flowers to bloom, selecting nectar raich plants for municipal planting. Engage with schools to increase awareness in primary age children.
Question 5: Would you like to be involved in developing	via Wildlife Trust

the actions needed to achieve the outcomes? If so, in what way?:	
Question 6: We have asked a number of specific questions. If you have any related issues which we have not specifically addressed, please use this space to report them:	The regeneration of moorland and upland bogs in mountainous areas would encourage the growth of bilberry and heather which form early and late nectar sources.

Consultation on the Draft Action Plan for Pollinators for Wales

Name: Dr Angie Polkey
Organisation: Denmark Farm Conservation Centre
Contact details: angie@denmarkfarm.org.uk
Address: Denmark Farm Conservation Centre, Betws Bledrws, Lampeter SA48 8PB.

Question 1: Do you agree with our vision for pollinators in Wales?

Yes, but the timescale may be too long term. If habitat degradation and fragmentation continues unabated – particularly where it is 'under the radar' - it may be impossible to redress the situation. This 'death by a thousand cuts' has contributed to the current situation, despite policies and conservation efforts.

The NERC Act, with its current interpretation and focus on priority species and habitats, is likely to be limited in its benefits for pollinators on any kind of widespread scale.

The vision for pollinators – and for the Ecosystem Approach as a concept - needs to include Education (at all levels), Communications (including methods such as social networking) and Community involvement. This is needed to create public understanding and support for long term measures that will improve and conserve the environment, including pollinators, for human benefit as well as nature.

We agree with the holistic and cross curricular approach outlined in Box 1 in this regard.

Question 2: Have we identified the main areas of concern for pollinators in Wales or are there further conservation issues you want to identify?

Broadly, but the built environment – both public and private green spaces, including gardens – is also a cause for concern eg. the trend towards 'tidy' spaces, concreting over gardens and parking areas, use of chemicals for easier maintenance etc etc. With concerted awareness campaigns and support, these areas – especially those in the public domain such as parks, LA office environs and schools – could be enhanced for pollinators and a multitude of other benefits for people.

The organisational list of NGOs is limited – need to bring together and support as many of the players as possible – particularly those that can galvanise action on the ground (such as Denmark Farm Conservation Centre in Ceredigion). Examples include the Federation of City Farms and Gardens, Permaculture Cymru, Caring for God's Acre.

Question 3: Do you agree with the outcomes identified and the areas for action to achieve them?

Yes – but need wide action and support across the board, geographically, politically (across departments, not just those directly involved in the environment) and demographically.

Essential to reach farmers and landowners *outside* agri-environment schemes eg smallholders, permaculturalists, horse owners (esp as the latter are not covered by agricultural policies). DFCC attracted many of these types of landowner when running its Ceredigion Biodiversity Enhancement Scheme (2003-6).

Need to ensure knowledge transfer actions are backed up by follow up, guidance and support to make changes.

Also absolutely essential to work across the whole countryside – *not just special sites*. The latter have been managed for conservation for decades – and still pollinators decline. The causes are gradual, insidious and can be 'under the radar'. A holistic approach, geographically speaking, seems more likely to pay dividends and to be more resilient. Even small changes, such as relaxing mowing regimes in gardens and public green spaces, can make a contribution to a *broad range of pollinators* (whereas it seems unlikely that marsh fritillaries, for example, are important pollinators - though they are important in their own right of course!).

Very much agree with the need to ensure Wale's citizens are better informed…this must entail education at all levels, both formal and informal. A wide range of groups and organisations can participate in this so everyone is aware of the need to encourage pollinators and how they can play their part. And agree it's essential to include urban areas. Many organisations can have an influence here, from the Merched y Fawr/WI to Ecoschools, Church Wardens (re. churchyard management) to NGOs such as Aber is Green and Denmark Farm Conservation Centre. Citizen science can play an important role in raising awareness and media programmes such as Springwatch help engage a wide public.

Question 4: How could you contribute further to the areas for action identified? How could we support you to do so?

DFCC is a small NGO (charity) with a proven track record of delivering results on the ground. During our Ceredigion Biodiversity Enhancement Scheme, we raised awareness amongst landowners, who then – for example – created or restored over 14 km of hedgerows. In our more recent community programmes, Natural Links and Wildlife Where You Live respectively, we have involved many community groups in awareness of and direct action for the environment, whilst at the same time enhancing skills and wellbeing.

We are cost-effective, resourceful and professional in our delivery of programmes with the minimum of bureaucracy and in-house administration (we prefer to focus on projects that buy in external expertise as required rather than have lots of in house staff). **What we need is the financial support to deliver programmes that can help achieve some of the Outcomes described**. We have such a project proposal, called **Spaces to Sustain**, which has education and action for pollinators as one of its core objectives – we are seeking funding for this project *now*.

Question 5: Would you like to be involved in developing the actions needed to achieve the outcomes? If so, in what way?

We have a small in-house team, as described above. However, we would be happy to offer our experience and advice in our areas of expertise. Particularly, for example:

restoration of biodiversity to farmland, wildlife-friendly gardening and community projects, environmental training & education for all ages, permaculture/sustainable design.

From: Carol Keys-Shaw [mailto:c.keysshaw@btinternet.com]
Sent: 04 June 2013 09:25
To: BioDiversity
Subject: Comments on WAG Pollination Consultlation Document

Carol Keys-Shaw. (Carol)

Comments on Consultation Document.
Wales Action Plan for Pollinators

I am aware that the Welsh Beekeepers Association and officers from our Association have responded and I am in agreement with those comments.
I think the Consultation Document fully explained the majority of difficulties but there are other issues that I think must be borne in mind and can be summarized as Environmental Changes, Changes in Agricultural Practice, Contradictory Practice and rulings from the EEC Common Agricultural Policy, i.e. grub out hedge rows and then put them back, using subsidies to encourage poor environmental practice subsidies to farmers for following this advice, poor education of farmers, poor education of public, poor education of beekeepers who do not belong to Associations, Diseases, Weather, Proven Pesticide use, Gardening Fashion, Gardeners using pesticides, plant breeders of flowers that are not pollination friendly, like Double Begonias.
The Public, tidy Verges demanded and protests if they are not. They want to win Tidy Village Competitions so often the Local Authority and Highways Agencies are dammed if they do and dammed if they do not. Policy for Judging ''Tidy Village'' is therefore an issue.
Inconsistency in implementation of local Authority road verges cutting policy, poor Training of Contractors involved in cutting.
Following Consultation how are any conclusions, recommendations, goals and Objectives going to be implemented and more importantly how are they going to be monitored and evaluated?
There must be an action plan.
Some of the following items could be included
Common Policy throughout Wales on Verge Cutting.
Standard approved Training for Staff involved in this.
Influencing EEC via MEP's
Training of judges in Tidy Villages and Tidy Towns, amendments to the Tidy Town/Village Criteria.
More work with Wales NFU and Young Farmers Associations.
Education links with Agricultural and Horticultural Colleges.
More links with Garden Centres.
Raising Public Awareness.
Education of Children and young people.
Tighter Rules regarding importation of Bees to prevent diseases
Otherwise like most consultations, a good idea but nothing ever comes of it.

Carol Keys-Shaw
Beekeeper Member of South Clwyd Beekeepers Association

From: Colin Keyse [mailto:colink@tynyclwtisa.fsnet.co.uk]
Sent: 04 June 2013 10:49
To: BioDiversity
Subject: APP consultation response

Dear Sir/Madam,

Please find attached our response to the Welsh Government consultation on the draft Action Plan for Pollinators.

Yours faithfully

Colin

Colin Keyse
Rheolwr Canolfan y Prosiect /
Project Manager

Bwyd Cymru Bodnant Welsh Food
Tal y Cafn
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Consultation response to the Draft Action Plan for Pollinators (APP) 4 June 2013

General response.

The Welsh Government is to be applauded for bringing this draft plan to consultation stage so promptly, and for making a good effort to distil the important elements of a wide-ranging and complex subject into a coherent set of proposals. Generally the proposed actions form the basis of an acceptable plan. Because the vast majority of Welsh land is agricultural, this is the most important area to work on although townscape improvement will be welcome, and may be easier to influence because of the public estate.

The attention given to organic farming is most welcome. Whilst there is still some room for debate over the extent of benefits of organic produce to the consumer in terms of nutrition and yields, there can be no doubt at all that it is beneficial to pollinators. The use of an economic valuation on 'pollination services' is noted, however attempts like this may well be useful to economists, and it may be necessary to make this sort of attempt in order justify budgets for intervention programmes, but the report itself makes clear that the potential benefits, (or cost of dis-benefits) is likely to be significantly greater. The main reason for this is recognised in the report throughout by its emphasis on the adoption of the Ecosystem Framework Approach, which itself derives from the work done to achieve the European Union Biodiversity Strategy (EUBS).

Ecosystem services are incredibly interdependent with causal intersections in a myriad places. Just quoting an estimate for the cost of manual pollination of crops in order to replace the work of absent pollinating insects, is to ignore the lateral effects on air, soil and water quality and other parts of the food chain if pollinators of non-food species of plant are also not protected. The avoided cost figure is therefore almost certainly dramatically understated, even though the cost-benefit accounting mechanisms cannot yet cope. The idea that the contribution of pollinator services to agriculture is worth £ 400-500 millions in a nation of 60million people, i.e. less than £10 per person per year, obviously underestimates this figure to a ridiculous extent. If hand pollination only was possible for fruit it is accepted that the minimum affect would be to double prices. Is the present spending on fruit really less than £10 per person per year in Wales? In the face of the currently looming obesity epidemic, is the opportunity cost of not ensuring more local fresh fruit and veg itself considerably more?

The complexity of these interactions, the report clearly and correctly states, is only barely understood, but there is a vast body of empirical evidence that teaches us that if we break a link in the chain, unexpected effects will appear somewhere else to our detriment. The only real way to put a value on pollination is to look at it from the point of view of the plants.

Many plants, both wild and cultivated, produce no seeds at all without pollinators. Without sufficient pollinators they simply become extinct. It is possible that we will be able to manage with a reduced variety of plants. It is more likely that we are unable to foresee the consequences.

Insect-pollinated plants invest heavily to attract pollinators. They put resources into the formation of flowers to attract pollinators, and into the formation of nectaries to provide pollinators with food. They produce such an excess of pollen that it provides protein and fats for pollinators. On the scale of a country this is a gigantic allocation of resources. I have yet to see an attempt to even estimate the number of tons of sugar and protein produced for this purpose annually or what this might be worth in money. Insect pollination is vitally important to plants, and although we don't see many benefits from dandelions and daisies, they are all part of our habitat. We jeopardise this at our peril.

The precautionary principle is therefore not only environmentally sound, it is economically prudent and the NBCW supports the Minister and the Welsh Government in upholding this sensible and positive stance. It will not only perpetuate Wales' leading example in the UK but also provide scope for sustainable regeneration in many rural Welsh communities.

<u>There are six main issues in agricultural land.</u>

Our observations are based on anecdote but have been collected from beekeepers from neighbouring associations, and from farmers, local residents and visitors to our centre at Bodnant Welsh Food in the Conwy Valley. Our centre offers the opportunity for visitors from all backgrounds and all levels of knowledge to take their time and engage our staff and volunteers in discussion on a wide range of related topics. From the estimated 20,000 visitors we have welcomed since we opened our first centre's door in July 2012, a number of recurring themes have emerged that stick in the mind. The plan acknowledges that the vast majority of the land are of Wales is rural/agricultural; the headings below summarise NBCW's views on this.

Overgrazing of 'rough' and mountain land combined with historical losses of heather.
This means that flowering plants are grazed to the ground. Improvement of this aspect by reducing livestock numbers might affect farm incomes although conversely it might reduce the costs of winter feed and improve carcass price. It would also have a dramatic affect on the number of flowering plants and the variety of grasses, and on mammals and birds. It would increase the beauty of our countryside which in turn would increase tourism.

Loss of hedgerows and harsh management of remaining hedges with flails.
This reduces the areas of habitat for pollinators such as bumble bees and solitary bees and prevents hedgerow shrubs from flowering to their full potential. Both these issues are driven by their affect on costs. Large fields allow big machines to be used; traditional hedge management is a skilled and labour intensive task. But many farmers consider that hedges contribute to the profitability of their farms in other ways. The shelter from wind and rain reduces energy use, or calorie requirement, of cattle and sheep, which is reflected in food bills and the survival and growth rate of lambs (for example as evidenced in the outcomes of the sustainable land management project by the Pontbren Group near Llanfair Caereinion, Powys) The variety of nutrition from both hedge plants and from the varied plants growing at the hedge base is also considered significant. Arable crops benefit from the effects on microclimate as well, and from the efficient micorrhysal root associations which increase mineral availability.

But if Integrated Pest Management systems are about to be made mandatory for crop protection under EU Directive 2009/128/EC and the obligation in this directive to encourage natural predators of pests is enforced, the importance of hedges as habitats for beneficial insects will be accepted as it doesn't seem to be at present.

The replacement of pasture with ryegrass, with or without the addition of cultivars of clover to reduce nitrogen fertilizer inputs.
The cultivars of clover used in these mixes are considered to be of less benefit to pollinators than the wild varieties, and because nitrogen fertilizers used to boost grass growth effectively inhibit the growth of legumes there is a tendency for them to revert to pure ryegrass. There are other problems caused by the high nitrogen inputs which boost growth of grasses so well. These nitrogen inputs affect the health of river systems and the coastal seas. Great attention has been given for many years to reducing nitrogen input in grassland by sowing legume/ grass mixes and these are very welcome. But high nitrogen inputs are still seen as the most efficient way to maximise fodder production in terms of tons per acre.

Herbicides which only leave weeds in marginal areas.
These may be among the greatest threat to pollinators. Fields of cereals with poppies are now very rare. Minor honey plants like ground ivy are much less abundant and fields with a good crop of dandelions are not seen as often as they could be.

Monocultures which may provide nectar and pollen but give a short period of abundance followed by a long period of dearth for pollinators.
By growing suitably varied crops on a farm to provide a succession of nectar and pollen sources it would be possible to make migratory beekeeping with all of its disadvantages unnecessary, as well as improving the lot of other pollinators. Historically farms were mixed. They had natural grassland with clovers and other flowering plants, arable fields with cereals, beans and winter forage which also had their share of wildflowers such as poppies, and they grew fruit. Farm diversification is happening, but the economic situation favours

specialisation and growing fruit in particular is not generally considered worthwhile.

Pesticides and in particular neonicotinoids, about which concern is growing internationally.
We have read the EFSA report and the Commons Select Committee report with great interest and with some hope of changes to come. The recent EU vote may change matters, although as yet the way this decision will be implemented in the UK in its transposition into law remains unclear. It seems likely that the conventional ways of looking at pesticide toxicity to non target species needs to be reviewed. Published toxicity figures may appear robust but insects exposed to varying stresses caused by weather, disease and nutrition may be susceptible to very much lower levels.

It may be helpful to remember that populations of bees exist on a knife-edge balance. When conditions are favourable they prosper and increase in number. When conditions are unfavourable they decline. Under normal conditions these increases and declines are balanced over the years but an apparently minor shift in the environment may cause very large changes which destroy this balance. There is anecdotal evidence from highly respected institutions that, for example, mosquitoes raised in research establishments can be severely affected by incredibly low dilutions of insecticides. Problems from contamination have caused difficulties for decades. It seems unlikely the levels in these cases could not be reduced to levels below those which would normally be considered toxic.

Forestry.
Although much forestry in Wales is focussed on conifer plantations these can be, and often are, managed in ways which benefit pollinators. Open rides and areas near streams provide both habitat and forage. After felling areas of forest produce a profusion of nectar producing plants. The big issue of clear felling or selective felling is being considered and it is significant that a few forests are managed in a very different way from the norm and are considered to do it economically. But the greatest contribution could come from changes from conifers to other trees. In Eastern Europe for example: Robinia pseudoacacia is grown on a large scale and the honey from this tree is economically significant. In Wales some valuable timber is produced by cherry and sycamore and willow is being grown for fuel. Oak, ash and beech woods are beneficial for their secondary vegetation, which can include ivy, holly, yew, hawthorn, and brambles as well as bluebells and other flowering plants. Hopefully other species such as sweet chestnut may find markets and their cultivation can have an impact. The work that Coed Cymru have been doing for many years is exemplary in development of a value-added supply chain for indigenous Welsh timber in this respect. Again, at Pontbren, the use of mid-slope shelter breaks and planted stream margins has been shown to have a significant impact on soil hydrology and flood event attenuation in main river catchments – if native flowering species are used for this purpose, the cost benefits multiply exponentially!

Land in towns.

There is a great interest in bee friendly planting on private and public land. Although the great proportion of land in Wales is not in built up areas this interest is making a small difference which could have a significant impact at a local level. The tendency for gardeners to want lawns of only grass is hardly being challenged. Clover in particular gives a lawn a different appeal. Some lawns are managed so that cowslips, dandelions and clovers can contribute to pollinators. This is a common subject of discussion with our visitors and we are able to dispense a large amount of free literature on pollinator-friendly species to cultivate. There are many good sources of information on flowering plants which are beneficial to

pollinators and there is no doubt that improvements can be made. *But it is important that emphasis on gardens does not divert attention from the much greater areas outside towns.*

Council managed land.

Councils own large areas of Wales. They own farms and other land but also own land which should be considered to be an unusual nature reserve. Most counties own hundreds of miles of roadside verges. Some members of the public, **often those most vocal to their elected representatives**, would be happier if these roadside verges were managed as if they were suburban lawns.

In a neighbouring county (Denbighshire) this year verges full of flowering plants were cut as soon as the flowers appeared as were large stretches of the A470 trunk road. As a consequence it is inevitable that many solitary and bumble bees were unable to replenish their food reserves after an unusually long and severe winter and died. This action may be considered to be in contravention of the NERC Act 2006. It is hoped that the issue of roadside verge management can be properly addressed, and although the ecological assessment required to draw up a detailed management plan would be a huge undertaking it would not be overly burdensome to enforce a wider 'best practice' policy.

In creating a plan which is not only well researched and structured, but which is actually deliverable to the extent its authors intend, we assert that utilising opportunities provided by the range of stakeholders in the process is vitally important. Our answers therefore address what we see as being a critical plank in this strategy: the need to engage with the wider public at all levels about the importance and relevance of the Action Plan to avoid misunderstanding and even possible misrepresentation of its objectives.

Q1 Do you agree with our vision for pollinators in Wales?

Broadly yes. It will be extremely interesting to see how successful the adoption of this plan is in continuing the process of 'embedding sustainability in everything that Welsh Government does'. The authors of the consultation describe that way that Eco-system services are efficient and effective (there is no waste!!) yet are amazingly interconnected at all levels. Attempting to emulate this kind of connectivity in the decision making process required to implement the plan will be educational. Observation of the life of the Honey Bee and the history of human-kind's social interaction with this highly-organised invertebrate offers a unsurpassed metaphor and learning tool for sustainable systems development!

Question 2: Have we identified the main areas of concern for pollinators in Wales or are there further issues you want to identify?

Broadly yes. Our answers are given in detail in the general response section.

Question 3: Do you agree with the outcomes identified, and the areas for action to achieve them? Your comments are welcomed. :

Action 1. Farmland.

NBCW is working with Menter a Busnes on a pilot Honey producer/marketing cooperative model for North Wales. The integration with future agri-environment schemes and farmers through, for example, 'Farming Connect' is of immense importance. NBCW supports the fundamentals of the Integrated Pest Management approach, as opposed to the wide use of agri-chemicals and is keen to help explore ways in which the benefits to farmers and rural

communities can be best communicated.

Action 2 Flowering habitats: wider countryside:
Fully supportive of the objective and proposed actions.

Action 3 Flowering habitats in developed areas.
Fully supportive of the objective and proposed actions. NBCW is happy to explore ways in which we can assist in the dissemination of key messages and best practice to both public and private sector personnel with responsibility for land and premises management. In addition we are also keen to introduce the idea of beekeeping as a sociable activity that can be integrated with, for example: urban parks 'friends groups' with employers wanting to improve their employee personal development and team-building opportunities as well as their Corporate Social Responsibility profile, and with authorities wanting to manage public land in the most efficient, sustainable and visually attractive way.

Action 4. Supporting UK actions to promote healthy pollinator populations.
Fully supportive of the objective and proposed actions.

Action 5. Working to raise awareness.
Wales should be a leader amongst UK nations in this area. Raising awareness amongst not only Wales' resident 3m population, but also the 3m visitors that come here annually because of the quality of our environment, is incredibly important. At NBCW, we witness this every day we are open.

Question 4: How could you contribute further to the areas for action identified? How could we support you to do so? :

National Beekeeping Centre Wales is a public-facing organisation representing all aspects of the Honey Bee and Bee-keeping in Wales to the general public, both experienced Beekeepers and the casual non-beekeeping visitor alike. Our first centre is located on a site with a very high potential visitor footfall in a context which stresses the value of local Welsh food quality and sustainable production. We support the work of local Beekeeping Associations by recommending membership and signposting enquirers to them. We applaud the work of their umbrella body the Welsh BeeKeepers Association in giving a cohesive voice to the needs of their indirect membership and in championing good practice. NBCW seeks to educate and explain the wide range of issues relating to the environment, rural Welsh culture and history, social interaction through association, economic sustainability through support of the local economy and products, and health and well being in general. Our approach is participatory – we have a growing band of active volunteers, and is not prescriptive: we start dialogue on any related topic our visitors want and then help them 'join the dots'.

We have already established our first Visitor Centre and apiary in the Conwy Valley. We hope that this basic function and its related training and education facility will be close to financially self-supporting (with a significant volunteer input) within eighteen months from now. We are in early-stage discussions with other third parties who may be interested in hosting similar activities elsewhere in Wales and linking into a local network of organisations, in a way similar to that we are developing in North Wales. We would be very keen to pursue these opportunities and identify what costs and benefits this would entail. We feel that the existence of a network of mostly self-funding practical advice centres across

Wales would help the active dissemination of the Plan's objectives.

Question 5: Would you like to be involved in developing the actions needed to achieve the outcomes? If so, in what way? :

National Beekeeping Centre Wales Mission statement is : *"We are a non-profit distributing organisation whose aim is to help develop a vigorous, healthy and environmentally responsible beekeeping industry in Wales. We will promote good practice, accurate and accessible public information, and involve the community"*

Our mission delivery objectives can be described thus:

1. Inform and engage visitors to our centre, our website and through social media and outreach programmes. Engage people of all levels of knowledge and signpost them to other organisations and sources of information, or develop an ongoing relationship in one of several ways.
2. Educate, train and mobilise. Following initial contact, bring NBCW's messages to local schools, businesses and other associations where this is seen as mutually beneficial. Using the Bee-Buddies programme framework, and the development of a comprehensive training facility to deliver the BBKA syllabus, NBCW seeks to recruit and train more new Beekeepers, and to help improve and up-skill existing Beekeepers, and to promote the benefits of joining local Beekeeping associations.
3. Create sustainable revenue and capital. In pursuing the first two objectives, NBCW will also deliver other Sustainable Development (**SD**) benefits at the same time. Of primary interest is the creation and expansion of sustainable revenue income from a range of trading activities which of themselves will deliver SD outcomes by, increasing local economic activity and its multiplier effect, and developing the indigenous supply chain in sustainable products and transferrable skills. Being able to largely meet its core and direct operational costs from earned income is essential to allow NBCW to take an unambiguous public stance without fear or favour.
4. Engage in policy development and effective collaboration. NBCW is not primarily a lobby or pressure group, or a campaigning organisation. It can and should however, be able to help form and influence policy in support of its mission free from compromise by either political, institutional or commercial interests; hence the importance of having its own sustainable income.

NBCW is happy to engage as it is best able within the constraints of its present resources to help the Welsh Government deliver understanding of and engagement with the APP into the future.

Stephen Thomas (Director) and Colin Keyse (Project/Centre Manager)

COED CADW
WOODLAND
TRUST

Consultation on the Draft Action Plan for Pollinators for Wales

Response by Coed Cadw

June 2013

Introduction

Coed Cadw (The Woodland Trust) welcomes the opportunity to respond to this consultation and welcomes the draft Action Plan. The comments that follow are delivered on behalf of Wales' leading woodland conservation charity. We achieve our purposes through a combination of acquiring woodland and sites for planting and through wider advocacy of the importance of protecting ancient woodland and trees, enhancing its biodiversity, expanding woodland cover and increasing public enjoyment. We have over 1,000 sites in our care covering approximately 20,000 hectares (50,000 acres). These include over 100 sites in Wales, with a total area of 1,580 hectares (3,900 acres). We have 300,000 members and supporters across the UK. Coed Cadw has three key aims: i) to enable the creation of more native woods and places rich in trees; ii) to protect native woods, trees and their wildlife for the future and; iii) to inspire everyone to enjoy and value woods and trees.

Coed Cadw is an active member of Wales Environment Link and also intends to sign up to the WEL joint response to this consultation. We have, in our response to the consultation document emphasised the value of trees and shrubs, as they are hugely valued by pollinators as a source of nectar, pollen and shelter throughout the year.

In very early spring, when fresh intake of pollen is vitally necessary, and when at the same time the bees are limited by temperature to short distance flights, every flower within reach of the hive becomes important, and in particular the flowering trees. Even a few of these trees near the hive provide a vast foraging area. Even the smaller trees, bear an abundance of catkins for example and are very favourite sources of pollen, especially in woods which provide valuable shelter from the wind. (Hodges)

Question 1: Do you agree with our vision for pollinators in Wales?

Yes, we do agree with the vision for pollinators in Wales, but believe that trees and woodlands can contribute significantly to achieving these 'conditions' to support healthy populations. The list of other Welsh Government Strategies and Action Plans already in place listed in the document on page 7 fails to mention the Woodlands for Wales Action Plan 2010-2015 and we believe this particular plan will significantly help achieve your vision for pollinators. The imminent Wales Inventory of Urban Trees may also act as a catalyst for further tree planting in urban areas.

Question 2: Have we identified the main areas of concern for pollinators in Wales or are there further issues you want to identify?

Coed Cadw was pleased that woodland (including farm woodland) was identified within the areas of concern under *Habitat alteration – destruction or fragmentation*. Wales is 'one of the least wooded

countries in Europe and both existing and new planting provides great opportunities for pollinators (Woodland Trust (2011) the State of the UK's Forests, Woods and Trees). The Welsh Government have already in place a tree planting target, which we believe is achievable, and specific, targeted tree planting for pollinators should be carried out. The tree planting that continually takes place on farms and in parks and open spaces or in a developing new districts and housing estates could be made to improve permanently the neighbourhood for pollinators if some regard were paid to the nectar value of different kinds of trees available for planting. (Howes, 1979)

Question 3: Do you agree with the outcomes identified, and the areas for action to achieve them? Your comments are welcomed.

Yes agree with outcomes identified and with the areas for action to achieve them. We've gone into further detail for applicable Action Areas for us:

Area for Action 1: Promoting diverse and connected flowering habitats across farmland identifies that providing landowner grants, and using hedgerow and tree belt buffers, trees and orchards will help by providing pollinator friendly habitat, and Coed Cadw fully supports this. We suggest that more flexibility is required within the Glastir woodland creation scheme to favour pollinator friendly planting, in particular encouraging higher proportions of open space, lower density planting and the use of more flowering shrub species. A pollinator option within Glastir woodland creation could be considered. We have gone into more detail in our answer to Q5, but briefly, we shall be launching a Pollinators Farm Tree Pack at the Royal Welsh Show this year, and this will be promoted throughout the summer and fits perfectly into Action 1.

We also support the proposed actions under the RDP and Glastir with regards to the buffer zones, corridors and so forth, but would like to make the point that whilst this is a great idea, the key to this is that the corridors / edges / corners are not cut down / mowed / trimmed before the plants come into flower, and therefore its important to let them come into flower.

Area for Action 2: Promoting diverse and connected flowering habitats across the wider countryside highlights the need to work with Natural Resources Wales to embed best practice for pollinators within the Welsh Government woodland estate, building on the current work to improve woodlands for native flora. Coed Cadw would endorse this need to make the most out of the woodland estate.

Area for Action 3: Promoting diverse and connected flowering habitats in our towns, cities and developed areas mentions the idea of adjusting mowing regimes, or leaving areas of long grass. Coed Cadw supports leaving wild flowers on verges etc to flower and leaving mowing things until later on.

Area for Action 5: Working to raise awareness of the importance of pollinators and engage our citizens in their management is an action area Coed Cadw would very much support. We already provide Free Tree Packs for Schools, Community and Youth groups which include 'Bee friendly' packs. These are completely free and only involves a simple online registration form. More than 450 were supplied to schools and communities in Wales last autumn and could be improved further with more promotion by the WG as part of the Pollinator Action Plan. In addition, from July this year, we

believe that we will be doing our own bit to promoting pollinator friendly practice to farmers in Wales through the launch of the Pollinators Pack (detailed below in Q5).

Question 4: How could you contribute further to the areas for action identified? How could we support you to do so?

We are preparing a proposal with Coed Cymru for a starter tree planting grant for landowners which would provide an easy introduction to tree planting and encourage take up of Glastir for more substantive works. This scheme would be suitable for delivering pollinator friendly planting, but would require funding from the Welsh Government. We've detailed our other contributions below in Q5. The Free Tree packs for schools, community and youth groups that the Woodland Trust provides could be promoted further through the Pollinator Action Plan.

Question 5: Would you like to be involved in developing the actions needed to achieve the outcomes? If so, in what way?

Coed Cadw believes we can help develop the actions needed to achieve the outcomes in many ways and we are already making arrangements to launch the 'Pollinator's Pack' as part of our Farm Tree Pack range at the Royal Welsh Show in July this year. This Pollinators Pack with contain specially selected species mix that provide the greatest benefit to pollinators.

The Woodland Trust also makes available a free school pack available across UK, but specifically in Wales we are planning to make available a Farm Tree Pack mentioned above. This is a separate Wales only arrangement specifically aimed at farmers. We have had a successful trial of the Native *Tree Belt* and *Wood Pasture Farm Tree Packs* and will continue to make these packs available this year, along with the new *Pollinator Farm Tree Pack*. These Farm Packs are not free, and farmers have to pay a contribution towards it whilst we subsidise 2/3 of the cost. The quantity of these packs that we can supply will be subject to available funding.

The free tree packs for schools, community and youth groups are available in a wide range of different packs, and include species of value to bees. As already mentioned, these are available to these groups for free and there is a simple online registration form for each group wishing to receive one. Planting trees is a great way of raising awareness amongst children and the wider community and fits very well with one of the suggested actions set out in the plan, namely working with schools to raise awareness in schools of the importance of pollinators and pollinator friendly gardening. The cost of these packs is currently covered by a major corporate sponsor.

Question 6: We have asked a number of specific questions. If you have any related issues which we have not specifically addressed, please use this space to report them:

Coed Cadw are working with other organisations, for example Keep Wales Tidy and Coed Cymru to promote small scale tree planting; copses tree belts and hedges including the promotion of our packs. These contribute to actions 1-3, but this supports tree planting which is not currently eligible for Welsh Government grant. We feel there is a need for Welsh Government grants for planting to be more flexible in relation to species (allowing higher % of shrubs for example which are of greater value to pollinators) and planting densities.

COED CADW
WOODLAND
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June 3 2013

Welsh Govt Draft Action Plan for Pollinators
Bees *for* Development Response to Consultation

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Question 1 Do you agree with our vision for pollinators in Wales?

The vision and objectives of the Consultation are admirable: an ecologically harmonious Wales, a country whose natural resources are respected and whose environment is protected, whilst those same natural resources form the foundation for the homes and livelihoods of its people.

We support the current approach through ecosystems services: it is imperative we protect the systems that allow us to survive. However, our environment is more than a potentially monetised resource, and we respect and protect it for more reasons. Understanding and valuing the contribution of ecosystem services to a human society is important, however it should not make those services subordinate to a human economy.

We support the creation of sustainable places, a low carbon economy, resilience, and long-term benefits for our water, air, soil, landscape and biodiversity. Maximising the wellbeing of our ecosystem will in the long term maximise the benefits to people, communities, businesses and the public sector. We support the commitment to sustainable development, long-term investment and job creation, and the endorsement of the CBD, Aichi targets, and EU Biodiversity Strategy.

An ecosystem approach has many benefits, but can also hide many problems. Whilst the overview is essential, there are microclimates and areas of local diversity and distinctiveness which are not replicable elsewhere and which need protection from a human vision of the sustainable economy. It will be the task of the Natural Resource Management Programme to chart a course which protects our local distinctiveness whilst maintaining an understanding of the health of the wider environment.

Question 2 Have we identified the main areas of concern for pollinators in Wales or are there further issues you want to identify?

Points arising from Action Plan

re <u>What are pollinators</u>

Page 1

Most honey bees are not moved. Wild and managed colonies will pollinate areas within a 3-10 mile radius of their nest sites. Most colonies are held by small scale beekeepers, not by professional bee farmers who will move their colonies for pollination services or particular honey production.

Honey bees – wild and managed – are important pollinators for the maintenance of wild plant populations.

Page 7

Honey bees are an indigenous species. They have a unique place in our ecosystem: a naturally occurring wild pollinator, but also a managed resource when people put them in hives. The EU may classify them as a farm animal (itself a contentious point), but legally and biologically they are wild: they are not dependent on people for feeding or breeding.

*NERC Act: duty on LA's to conserve biodiversity. Many bees (bumble, solitary) are included, but not *Apis*. *Apis mellifera* should be included in the Section 42 list of priority species.

Page 9

Figures for numbers of beekeepers will be inaccurate because of current attitudes to BeeBase and the methodologies of the BBKA – question is by how much?

Amateur beekeepers hold more colonies than commercial bee farmers. This has impact on pollination services as much as honey production. Much of this honey is traded privately, and may not be included in NBU estimations.

Apis mellifera is an indigenous species. Wild colonies are still thriving (often better than beekeeper colonies). They need protection.

Wild pollinators: many wild colonies of *Apis mellifera*. British bee, mixed with imports, only well adapted descendants survive BUT these naturally occurring wild colonies are crucial to the long-term health of our managed populations (page 9). Support

Page 10

Main areas of concern:

We would change the emphasis of concern, putting disease of honey bee populations as the lowest priority problem. We know that many species are declining (see for example the State of Nature report, May 2013) and the rate of loss of honey bees is similar to other species.

Agricultural intensification, monocultures and agro-chemicals are linked destructors of habitat. Agro-chemicals follow intensification because monocultures are paradise for pests. Systems with greater diversity require fewer (or no) chemicals, and benefit biodiversity.

Likewise, habitat destruction follows the scaling up of agricultural enterprises which require larger machinery and greater areas to become economically viable. These are cases where an overriding economic imperative subordinates local biodiversity.

Page 12

Support the aim of Welsh Govt to reduce use of agro-chemicals: we would eliminate them - pesticides, herbicides, fungicides. Danger in sub-lethal effect of lipophilic compounds in honey bee nests.

Climate change is an extremely dangerous unknown. Honey bees are potentially more able to withstand extremes of climate – cavity temperature regulation, generalist feeders, ability to reproduce lots. But current policies may disrupt natural adaptation.

Pages 11-12

Disease would be last on our list of concerns. It is a consequence of poor health arising from poor nutrition, poorly adapted bees, and (in managed colonies) management which does not prioritise health.

Danger of loss of pollination networks is huge.

Impossibility of using existing figures to assess how management affects bee health because of skewed data towards beekeepers who a) register on BeeBase b) respond to Qs and c) agree with and accept BBKA methodology of bee disease management.

In our experience at least half of beekeepers either do not register or do not follow BBKA procedures.

Disagreement in "controlling *Varroa*": how?

Recent high loss figures do not suggest that beekeepers are getting better at managing honey bee colonies. The loss of honey bee colonies during winter 2012-2013 is higher than 50% in this part of Wales.

Page 15

BfD sees itself as a stakeholder in Wales.

*Currently no central focus for all pollinators in Wales. Can we contribute to one? For example in collaboration with NBG, National Botanic Garden etc.?

Question 3 Do you agree with the outcomes identified, and the areas for action to achieve them? Your comments are welcomed.

Yes indeed: Areas for Action

Areas for Action 1-3 (pages 16-17)

We support all efforts to promote diverse and connected flowering habitats across farmland, wider countryside, towns, cities and urban areas.

Would like to help everyone understand that not all flowers are useful: highly bred hybrids may be useless, purely ornamental (e.g. some flowering cherries, bedding out plants)

Can Wales have a policy of planting only bee-friendly plants in its municipal planning schemes, roundabouts? Longer-term plantings should include lots of bee-friendly trees. If these are also

fruiting trees – apples, pears, cherries, hazel, walnuts, chestnuts etc. – there are benefits to people too - who can forage on the fruit.

Area 4 for Action (page 18)

Most contentious: subject of how disease is managed is current debate in beekeeping circles. Many beekeepers disagree with BBKA and NBU methodologies. This has cumulative effect in distorting data as many beekeepers do not provide information into central databases. (The debate is roughly analogous to that in the early 1950s with the beginning of the organic agriculture movement.)

Need discussion and acceptance of alternative methodologies.

In establishing programmes for the future sustainability, it is vital to find policies to which everyone can subscribe, if we are to get widespread support.

Beekeepers need support, not just commercial honey producers: pollination is a more valuable (undervalued and little understood) contribution to our horticultural and agricultural economy as well as to our wider biodiversity. Wales would look very different – and much more barren – without honeybees.

We would campaign for a ban on all imports of bees. We need to develop resilient local populations.

Pesticides: support moratorium on neonicotinoids, ideally extend because one year's data is insufficient.

Area for Action 6

Developing a biodiversity strategy which recognises pollinators should include *Apis mellifera*, particularly efforts to allow development of locally adapted bees which suit well their local microclimates and flowering seasons, in their ability to store enough food for winter, and to reproduce successfully.

Area for Action 7

Support development of indicators around pollinator populations, pollinator-friendly habitat areas, and public awareness.

Question 4
How could you contribute further to the areas for action identified?
How could we support you to do so?

Area for Action 5

Developing a CENTRE OF EXCELLENCE

BfD would hope to contribute to developing a Centre of Excellence for pollinators across Wales. It is also possible to contribute to the Eco schools initiative through developing information and training resources for staff and pupils. Education of public; planting; protection.

We can help promote best practice for Local Authorities, land managers, farmers and the public through information resources, and through training courses.

Support the National Beekeeping Centre for Wales, already established in Conwy http://beeswales.co.uk/en-GB/About-Us

Question 5
Would you like to be involved in developing the actions needed to achieve the outcomes? If so, in what way?

Yes, we would like to be involved in further consultations. Very willing to provide training and other inputs as we can offer.

Question 6:
We have asked a number of specific questions. If you have any related issues which we have not specifically addressed, please use this space to report them:

We understand from our international work that the causes of bee decline and the loss of healthy bee populations are multi-factorial. Single causes such as poisoning or starvation are visible and immediately deadly. Less visible, but just as lethal in the long-term, is the effect of the combination of threats currently posed to bees.
The Briefing Paper outlines the current popular understanding of the UK debate, with regard to habitat and forage loss, pesticide use, diseases and parasites, and climatic conditions. It is unnecessary to repeat these arguments here, but it is possible to offer a different emphasis. For example, the research does not consider the genetic fitness of the local populations of bees, nor does it consider in detail the impact of management techniques on owned colonies; though we would agree that first and foremost a clean environment is essential for healthy bees. If we begin by understanding what bees need, we can better understand the collective impact of current problems.
BfD has developed guidelines which form the basis for our international work. These guidelines for sustainability consider the environment, genetics and management of honey bee populations. They are as relevant in the UK and Europe as in any developing country.

1. Bees need safe environments free from pesticides and pollution. They need flower-rich habitats, diverse, with long flowering seasons, and with nest sites and water.

   Monocultures are rarely good for bees, since they offer a limited food source for a very short period of time. The rest of the year, there will be no food for bees and a colony will be stressed by the greater distance travelled to find food. If flowering verges, edges, hedges and ditches are also destroyed, the impact on a colony will be even greater. Large monocultures are attractive to pests and are therefore accompanied by increased pesticide use, either through seed-dressing or sprays. The effect of the cocktail of chemicals found in bees and in their nests (the comb is an essential part of the superorganism of a honey bee colony) is unknown and largely untested. BfD therefore supports WAG in its aim to move towards more organic farming and diverse landscapes.
2. Healthy colonies are a part of a wider population of indigenous honey bees adapted to local conditions. Indigenous honey bee populations have suffered. Diseases and parasites are spread by human action – most evidently the Varroa mite's expansion across the world. Bees are still being moved around the world, in an attempt to increase honey production or pollination. Nevertheless, in the UK bees are wild animals, legally and biologically: we do not

control their breeding or feeding. The introduction of bees from other countries can lead to a loss of adaptation in the wider bee population and inability to survive our climatic variability and extremes. BfD therefore supports the use of local bees, and opposes any importation of bees or queens.

3. Beekeeping management techniques impact on the health and vitality of colonies. These techniques should consider the health of the local population of bees, not just colonies in a single apiary. Honey bee colonies are superorganisms: the implications have only recently been understood. Bees require clean nests to raise their brood, and to communicate through complex (and little known) pheromones. Their honey gathered from nectar during the summer supplies their nourishment through the winter, keeping them alive and allowing the colony to increase in size in spring, ready to reproduce. Management techniques which destroy a colony's ability to regulate its own health will weaken it. BfD has developed principles and techniques of sustainable beekeeping, which prioritise the health of colonies and support the bees' natural immunity to disease. Good beekeeping is, however, unable to compete against a barren environment, poisoned food sources, and a poorly adapted gene pool.

Relevant papers

1. Welsh Govt Consultation on the Draft Action Plan for Pollinators April 2013
2. Welsh Government – draft generic Ecosystem Assessment Approach Framework 2012 under development.
3. Natural Resources Wales (from April 013)
4. Based on report published 2009, Bangor University Environment Hub
5. http://wales.gov.uk/about/cabinet/cabinetstatements/2011/110615nat/?lang=en
6. http://wales.gov.uk/topics/environmentcountryside/consmanagement/nef/?lang=en
7. DEFRA: Healthy Bees Plan March 2009
8. National Assembly for Wales research paper: Bee Health May 2013
9. Wales Biodiversity Partnership NERC priority species http://www.biodiversitywales.org.uk/en-GB/Section-42-Lists
10. National Bee? Centre Wales http://beeswales.co.uk/en-GB/About-Us
11. FoE – Breeze, Roberts, Potts: the Decline of England's Bees. Policy Review and Recommendations. University of Reading 2012
12. State of Nature report http://www.rspb.org.uk/Images/stateofnature_tcm9-345839.pdf May 2013

Responses to consultations may be made public – on the internet or in a report. If you would prefer your response to be kept confidential, please tick here:	OK to make our response public, thank you.

Consultation on the Draft Action Plan for Pollinators for Wales

RSPB Cymru Response
3 June 2013

For further information, please contact:
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Question 1: Do you agree with our vision for pollinators in Wales?

The WG commitment to use the developing Ecosystem Approach Framework in order to support healthy populations of wild and managed pollinators to benefit the environment, people and economy of Wales is welcome. Addressing the issue of pollinator population declines is essential as part of a move to halt wider biodiversity loss in Wales. However, we feel that a focus on pollinator declines goes against the proposed ecosystem approach. Many other invertebrate groups provide ecosystem services, including nutrient cycling and pest regulation, trying to deal with declines in each group individually is an impossible task without a comprehensive and deliverable biodiversity strategy.

Rather than focus on pollinators we feel time would be better spent developing a thorough and deliverable biodiversity strategy that could guide development of future species action plans.

The areas for action identified in the consultation document provide a strategy for supporting pollinator populations, however, there are few if any direct actions suggested within the consultation document. The finalised action plan will need to contain defined actions, measurable outcomes and costed mechanisms for delivery, whilst forming part of a wider strategy to halt biodiversity loss.

Question 2: Have we identified the main areas of concern for pollinators in Wales or are there further issues you want to identify?

Although the main areas of concern have been identified within these broad areas, there are further issues that need consideration.

Within any plan, management for managed pollinators can provide a useful backup to wild pollinators, but care should be taken to avoid a focus on managed populations at the expense of management for wild pollinators. Evidence has shown that pollination success from managed pollinators, including honeybees, is less productive than pollination by wild pollinating insects. Increased visits by wild pollinators led to universal increases in fruit set across 41 crop systems worldwide compared to increases in only 14% of crops with increased visits from honeybees[1].

Agricultural intensification and the move towards monocultures

Since the 1930's the UK has lost 97% of its lowland meadows, this is typical of the loss of traditional farmland types. Continued degradation and fragmentation of these habitats across Wales is a key factor in the drastic declines in pollinators. Reversing this habitat loss and increasing the quality and quantity of natural habitats is fundamental to improving conditions for wild pollinator populations alongside wider biodiversity. As well as biodiversity benefits, this approach will also deliver wider ecosystem benefits.

Recognising and supporting High Nature Value farmers (see Annex 1 for Definition of High Nature Value (HNV) Farming) who can provide and maintain these habitats through extensive farming practices would benefit pollinators and wider biodiversity whilst providing a sound investment for public money. HNV farming can be identified as those farmers undertaking sustainable land management practices which support our important habitats, providing a safe place for our most threatened wildlife – practices which are more often than not, influenced by the attitudes and motivations of the individual farmers themselves.

These HNV farming practices can be characterised as low intensity, often upholding traditional systems (ie mowing hay meadows, leaving fallow areas, etc) - farmers working within the confines of climate, temperature, soil and topography, managing their land with an integral respect for the environment, yet land quality and distance from markets makes farming these areas particularly difficult.

Currently, under the existing CAP, HNV farmers receive limited support. HNV farmers deliver a wide range of public goods and services as well as providing habitat suitable for a wide variety of wildlife. HNV farmers should therefore receive the maximum support from Welsh Government to help deliver its environmental objectives.

It is important to approach any action for pollinators from a biodiversity point of view rather than from solely pollinators, as enhancements made to benefit biodiversity will inherently benefit pollinators whilst providing a much more connected approach to the problem.

[1] Garibaldi et al., Science 339, (2013).

As set out in the *Consultation on the Draft Action Plan for Pollinators for Wales*, Glastir currently covers only 13% of Welsh agricultural land. Although Glastir contains pollinator friendly options, low uptake of the scheme, means many of the benefits to pollinators and wider biodiversity will have limited impact due to restricted implementation.

Habitat alteration – destruction or fragmentation

Financial pressures and the low levels of support for extensive farming, can lead to abandonment of extensive farms that traditionally have provided varied habitat for a diversity of wildlife including pollinators. Support for HNV farmers can alleviate the financial pressures on extensive farming systems and can help maintain the mosaic of habitat that is of such benefit to a wider variety of wild pollinators. By supporting extensive farming systems across Wales through support for HNV farmers, varied and connected habitat for pollinators, and a variety of other priority species can be created and maintained.

Many of the previous comments underpin the requirement that any solution must target increasing the quality and quantity of habitats as a priority. In turn, this will benefit a diversity of wildlife, including many priority species including pollinators. Supporting HNV farmers is one way of achieving this target, other means of Welsh Government encouraging and incentivising beneficial land management practices may be required. Welsh Government has a direct role to play in demonstrating how the Action Plan can be implemented across its own estate, including NNR's, forestry etc. This should extend to all land in public ownership e.g. local authority owned/managed land where there is a biodiversity duty.

Disease

Lack of genetic variation in populations, caused by isolation and fragmentation of populations is known to reduce the robustness of the populations and increase the risk of disease causing extinction of local populations.

Care needs to be taken over importation of foreign bees as managed pollinators, as there is a risk of introducing new disease to which native pollinators are susceptible.

Agro-chemicals

The recent EU initial 2-year ban on neonicitinoids will pose significant challenges for those farmers whose current pest management strategies are built around neonicitinoid seed treatments. These farmers need support and advice to make a successful transition to systems of Integrated Pest Management. In the absence of such support, many farmers may resort to increased use of older chemicals, which bring their own environmental concerns.

The Welsh Government should closely monitor pesticide use (including the remaining authorised uses of neonicitinoids as well as alternative chemicals) during the 2-year period. Better systems of monitoring should also be put in place long-term: spatial and time-specific data on pesticide applications is needed to allow impacts to be correlated with use.

Climate change

The impacts of climate change are likely to be wide ranging, the consultation document focuses on the mismatch between activity of pollinator populations and flowering dates of food plants, but there are likely to be many equally serious issues. Climate change is likely to put increased pressure on already vulnerable populations by causing contraction in distribution, as temperatures increase some species will be forced northwards as habitat distribution changes due to changing environmental conditions. There is a likelihood there will be increased competition as species with a southerly distribution migrate northwards, including the possibility of species colonising from continental Europe. This has already been seen with new bird species colonising Wales including Little Egret and Dartford warbler[2] and we would expect the same to be true with pollinators.

Other issues.

The lack of information on the current situation for many pollinator populations must be taken into account when finalising the action plan as the situation could be markedly worse than predicted for some species. Improving the knowledge of pollinator populations, and their interactions should be a priority. There is a need to increase research into the importance of varied habitat for biodiversity, with a focus on understanding the habitat requirements for all priority species including pollinators. Improved research into the change in extent of semi-natural habitats in Wales is also required.

Although production of an Action Plan is a step in the right direction, without a robust financial plan to finance the proposed actions, there is little opportunity to implement. The final costed action plan must be targeted at delivering enhancements for biodiversity including pollinators; to focus on pollinators fails to implement the adopted Ecosystems Approach.

Relying on Glastir to provide support for pollinator populations risks diluting already stretched resources for agri-environment schemes. To make a significant difference to pollinator populations and to ensure all the suggested actions are followed up financial resources would need to be made available.

[2] The State of Birds in Wales, 2012, RSPB Cymru, Cardiff.

Question 3: Do you agree with the outcomes identified, and the areas for action to achieve them? Your comments are welcomed.

Outcome: Wales provides diverse and connected flowering habitats to support our pollinators

Area for Action 1. Promoting diverse and connected flowering habitats across farmland

Promoting diverse and connected flowering habitats is a sensible approach provided it forms part of a wider biodiversity strategy that looks at protecting and enhancing all habitats – for the benefit of species including pollinators.

Whilst Glastir may have many options that improve conditions for pollinators, any benefit would be dependent on the uptake of Glastir. Currently Glastir only covers 13% of agricultural land so the benefits to pollinator populations would be limited. In addition, the ability to target for priority wild pollinators under Glastir Advanced is hampered by the method of application of the data sets, which would need to be addressed. Whilst regional packages increase the ability of the Entry scheme to provide for locally important pollinators, low uptake due to poor design and implementation of the regional packages is an issue and would limit the benefit to pollinators.

The Glastir Woodland grant scheme can be a useful tool in providing beneficial habitat for pollinators. However, this should not be used at the expense of other habitats and species. Use of the Glastir Woodland Grant Scheme to benefit pollinators (as with other objectives) should be under the caveat, use of the appropriate trees in the appropriate place.

As well as providing flowering habitats as foraging areas, as for any other wildlife, the full ecological requirements for pollinators must be secured to ensure that habitat suitable for nesting resources and hibernation is also available. Encouraging diversification of farmland habitats is to be welcomed as this should provide habitat for a wide range of wildlife including pollinators, and could assist Welsh Government in meeting the target of halting biodiversity loss by 2020

Care should be taken around measures such as adding clover to grass leys, whilst this will benefit bees, it should be noted this is unlikely to benefit many other pollinators. An alternative that would provide wider benefits would be the adoption of fallow margins to allow wild plants to develop which will benefit all pollinators, these margins, which are available as an option within Glastir, represent a good use of public money as they reward farmers for providing a public service in supporting biodiversity. They also have the potential to provide wider environmental benefits when coupled with watercourses as buffer strips.

As mentioned previously HNV farming can provide the required diverse and connected habitats required for pollinators and wider biodiversity, support for HNV farmers would help meet the suggested outcome.

Area for Action 2: Promoting diverse and connected flowering habitats across the wider countryside

We agree that protection for and management of Wales' Natura 2000 network of SPA's and SACs, as well as SSSI's should be improved and expanded. Maintaining protection for this network could in itself provide benefits to the economy and communities, through increased tourism. Again, this could help in achieving the target of halting biodiversity loss by 2020.

Once designated sites are identified, they must be brought up to and kept in favourable conservation condition, ensuring they support the wildlife for which they are important, including pollinators. This has the added benefit of assisting Welsh Government in achieving its target of 95% of Welsh SSSI's being in favourable condition by 2015[3] and meeting its 2020 biodiversity target.

Whilst we would welcome support for the SINC designation, any support would need to be backed up financially to ensure Local Authorities have the resources to develop and monitor the SINC network, ensuring all existing sites are properly managed and contributing to biodiversity objectives is vital in assisting Welsh Government meet its obligations. Any enhancement of the SINC designation should be targeted at protecting and enhancing wider biodiversity, not specifically aimed at pollinators. Additionally strengthening Planning Policy Wales to protect flowering habitats, and reviewing the EIA agriculture regulations to ensure they tackle gradual intensification, would help protect diverse and connected flowering habitats across the wider countryside.

Welsh Government recently stated there had been a 27% loss of marshy grassland over the past 15 years; the above actions should help prevent further such shocking losses.

Area for Action 3: Promoting diverse and connected flowering habitats in our towns, cities and developed areas

As mentioned under Area for Action 1, within our urban areas as well as the countryside it is important that as well as providing flowering habitats for foraging, effort has to be made to provide the full suite of species needs, including suitable habitat for nesting and hibernation.

[3] Environment Strategy for Wales, (2006).

We encourage action to support provision of parks and green spaces, managing green spaces to benefit pollinators in line with wider biodiversity objectives and promoting pollinator friendly gardening. The upcoming Environment bill provides an excellent opportunity to provide legislative backing for actions necessary to support biodiversity and benefit pollinators and the wider environment.

Sensitive management of roadside verges could be an area that delivers for biodiversity and pollinators without accruing additional costs or requiring resources. Cutting twice (with cuts very early in the year and in late summer), but avoiding the key growing, flowering and seeding period and removing the cuttings could provide significant biodiversity benefits[4].

Outcome: Wales' pollinator populations are healthy

Area for Action 4: Supporting UK action to promote healthy populations of pollinators in Wales

There is an opportunity for Welsh Government to lead the way in the UK in developing a robust action plan, to benefit biodiversity including pollinator populations. The action plan will contribute to many objectives of the upcoming Biodiversity Strategy, by utilising an ecosystems approach the action plan for pollinators can have far-reaching benefits for nature. By demonstrating a commitment to developing a clear and robust plan, including financial provision for achieving the desired outcomes, Welsh Government could set an example for the other UK administrations to follow that provides a springboard for the recovery of pollinator populations across the UK as well as providing benefits to the wider environment and economy.

The Welsh Government should closely monitor pesticide use (including the remaining authorised uses of neonicitinoids as well as alternative chemicals) during the 2-year period. Better systems of monitoring should also be put in place long-term: spatial and time-specific data on pesticide applications is needed to allow impacts to be correlated with use.

As mentioned in response to question 1, support for managed pollinators is welcome in support of efforts to benefit wild pollinating insects. However, the focus should be on protecting and enhancing biodiversity including pollinators.

Outcome: Wales' citizens are better informed and aware of the importance and management of pollinators.

[4] Plantlife, http://www.plantlife.org.uk/about_us/news_press/flowersontheedge

Area for Action 5: Working to raise awareness of the importance of pollinators and engage our citizens in their management

Increasing the awareness and knowledge of the importance of pollinators and engaging citizens in their management can have benefits for both pollinators and people in Wales. This would be an excellent opportunity to increase awareness of the importance of the natural environment as a whole, with pollination one of a number of examples of the services and benefits we rely on nature for. Increased engagement with nature and the environment has been shown to have wide-ranging benefits for individuals including improvements in physical and mental wellbeing[5].

Increasing engagement with Farmers is critical as 80% of land in Wales is agricultural and agriculture has the potential to have the most profound impact on pollinator populations. Encouraging farmers to provide suitable management for pollinators, such as varied habitat and suitable nesting resources could be encouraged through support for High Nature Value Farming as mentioned above. This could be achieved in part through providing advice and guidance, to farmers, designed to achieve integrated environmental enhancements including improved populations of pollinators.

Where required schemes that encourage the management and creation of habitats, including woodland that that are beneficial to wildlife (including pollinators) should be developed, and existing schemes expanded. Encouraging the wider public to follow guidelines that benefit pollinators in their own gardens, could be a cost effective method of improving the availability of habitat suitable for many pollinators.

Outcome: Wales has joined up policy, governance and a sound evidence base for action for pollinators

Area for Action 6: Linking together Welsh Government policies to produce beneficial actions that are good for pollinators and therefore wider ecosystem health

It is vital to ensure policies are linked across Welsh Government, as there is a risk of counter productive policies such as infrastructure investment destroying habitat of already vulnerable pollinator populations. An example of this would be proposals for an M4 relief road through endangered shrill carder bee[6] habitat on the Gwent Levels.

Linking policies across Welsh Government makes good sense as this could provide opportunities for investment that could benefit pollinators, the environment and the economy.

[5] Every Child Outdoors Wales. RSPB, 2012.
[6] UK BAP Priority Species: http://jncc.defra.gov.uk/_speciespages/156.pdf

As mentioned in the consultation document, '70% of visitors surveyed by Visit Wales stated that the quality of the Welsh environment was one of the main reasons for their visit,' this provides an excellent opportunity for linking actions that benefit pollinators with wider economic benefits. The economic benefits of investment in nature and the environment have been explored in depth including case studies in Wales[7]

Welsh Government has an opportunity to use £400 million of public money in the Welsh CAP budget to reward and incentives farmers to deliver significant environmental benefits, including improved pollinator populations. To ensure that this valuable resource is used to its full effect and represents a justifiable use of taxpayer's money the following actions must be undertaken:

- Cross Compliance, which represents the minimum environmental standard must be adequately implemented and compliance monitored and the Environmental Impact Regulation and associated requirements must be implemented effectively.
- The 30% of Pillar 1 (equivalent to £100 million) paid to farmers that is dependent on them undertaking identified *greening* measures leads to genuine environmental enhancement of the wider farmed countryside
- The maximum amount of money as possible is transferred from Pillar 1 to Pillar 2 to incentivise and reward farmers for undertaking targeted land management that will help Welsh Government meet its environmental commitments.
- Dual funding (which is being supported in some quarters) is avoided i.e. the same action is not paid for twice out of both Pillars, and that targeted action in Pillar 2 builds on the broad environmental foundation established by Pillar 1 greening.

This approach would ensure that those farmers, with most to offer re environmental benefits, such as HNV farmers receive the largest proportion of CAP payments. This represents good value for public money as it helps secure environmental benefits for wider society.

Area for Action 7: Building an evidence base to support future action for pollinators

We agree it is a priority to fill knowledge gaps in relation to status and trends in pollinator populations, interactions between populations and threats and mitigation methods. Filling these gaps in our knowledge should be part of a move to improve knowledge of biodiversity across Wales in order to inform Welsh Government policies, and to complement the Ecosystem Approach adopted by Welsh Government.

[7] Natural Foundations: Conservation and Local Employment in the UK, RSPB. 2011.

Question 4: How could you contribute further to the areas for action identified? How could we support you to do so?

RSPB Cymru would welcome the opportunity to contribute to reviews of existing schemes that may come about as a result of the Action Plan, such as reviews of Glastir or RDP funding. We would also welcome the opportunity to input into further development of clear and deliverable actions. We are also able to contribute to the process through Wales Environment Link.

RSPB Cymru is also feeding in to the development of a Biodiversity Strategy for Wales.

Question 5: Would you like to be involved in developing the actions needed to achieve the outcomes? If so, in what way?

RSPB Cymru would welcome the opportunity to be involved in developing the actions required to achieve the outcomes set out in the Action Plan for Pollinators. We are able to input in whichever format this takes.

Question 6: We have asked a number of specific questions. If you have any related issues which we have not specifically addressed, please use this space to report them:

Whilst we support the principle of an Action Plan for Pollinators, we strongly feel this should be developed as part of a wider Biodiversity Strategy, encompassing the full variety of Welsh wildlife. How will the Action Plan for Pollinators be incorporated into the upcoming Biodiversity Strategy?

There is little or no mention of finance within the consultation document, how will the Action Plan be funded to achieve the required outcomes?

RSPB, 3 June 2013

Annex

1. What is High Nature Value farming?

HNV farming describes low-intensity farming systems which are particularly valuable for wildlife and the natural environment. The UK has approved EU level requirements for all Member States to identify, monitor and support their existing HNV farming systems (Regulation 1698/2005 establishing EAFRD).

In a UK context, HNV farming can mainly be associated with extensive beef and sheep farming in the uplands and marginal farming areas, because of its high reliance on semi-natural vegetation (*vegetation comprised of native plants and maintained by grazing and/or mowing which has not been agriculturally 'improved'*) and unimproved pastures for grazing. However there are also examples from the lowlands which include some low input arable/mixed farming systems and coastal habitats which contain a mosaic of semi natural features which support a rich assemblage of wildlife.

HNV farming relies upon the sympathetic land management practices of farmers – such as grazing with low stocking rates, the traditional mowing of hay meadows, leaving fallow areas, cutting rush or undertaking habitat restoration – all vital for maintaining many of our priority habitats and ensuring the survival of our most threatened wildlife species.

3rd June 2013 response to the Draft Action Plan for Pollinators for Wales of the Welsh Government of the 9th April 2013

Dr. Robert J. Paxton; School of Biological Sciences, Queen's University Belfast, MBC - 97 Lisburn Road, Belfast BT9 7BL, UK; Tel: +44 (0)28 90975786; FAX: +44 (0)28 90975877; E-mail: r.paxton@qub.ac.uk

The Draft Action Plan provides a good summary of the state of the scientific field ca. one year ago. Recent research results from my group, in part undertaken within the EU research project **BeeDoc** (http://www.bee-doc.eu), and within the Insect Pollinators Initiative project **Emergent Diseases** (http://beediseases.org.uk) that I head (my principal collaborators: Dr Juliet Osborne, University of Exeter, and Dr Mark Brown, Royal Holloway University of London), provide more up-to-date information, as detailed below.

1. Local-scale habitat features are primary determinants of wild bee species richness and need to be considered in any action plan for pollinators. Not only floral resources but also **nesting sites (e.g. bare ground, hedges) at the scale of 1 m or less** are vitally important for pollinators. Results have been published recently:

Murray TE, Fitzpatrick Ú, Byrne A, Fealy R, Brown MJF, Paxton RJ (2012) Local-scale factors structure wild bee communities in protected areas. Journal of Applied Ecology 49:998–1008. doi:10.1111/j.1365-2664.2012.02175.x

2. Viruses transmitted by Varroa mites, particularly deformed wing virus and varroa destructor virus-1 (both members of the same family of viruses), are the major cause of mortality of honey bees. Our results are currently being prepared for publication. Attention needs to be paid to effective control measures (e.g. information to beekeepers, provision of effective medicaments) to reduce the indirect pathogen burden imposed by *Varroa destructor* on honey bee colonies.

3. Managed pollinators share pathogens with wild bees, a potential cause of mortality of wild pollinators. Our results suggest that there is on-going transmission of Varroa-transmitted viruses from honey bees to wild pollinators, highlighting the need for efficient Varroa control by beekeepers. Our results are currently being prepared for publication. Pathogens are transmitted from imported, managed bumble bees to native bumble bees, potentially causing enhanced mortality of native bumble bees. Results have been published recently:

Murray TE, Coffey MF, Kehoe E, Horgan FG (2013) Pathogen prevalence in commercially reared bumble bees and evidence of spillover in conspecific populations. Biological Conservation 159:269-276. doi:http://dx.doi.org/10.1016/j.biocon.2012.10.021

4. Neonicotinoid insecticides interact with honey bee pathogens, elevating honey bee mortality. Field-realistic doses of thiacloprid interact with deformed wind virus to increase mortality of worker honey bees in experimental cages. Our results are currently being prepared for publication.

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3rd June 2013

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To whom it may concern,

Buglife - The Invertebrate Conservation Trust is the only organisation in Europe dedicated to the conservation of all invertebrates. We are passionately committed to saving Britain's rarest little animals, everything from bees to beetles, and spiders to snails. Our aims are to halt the extinction of invertebrate species and to achieve sustainable populations of invertebrates.

Buglife welcomes the Welsh Government's commitment to producing a pollinator action plan. However we would urge that a more holistic approach is adopted for the protection and conservation of the full range of ecosystem services that are provided by invertebrates, e.g. water purification, pest control, nutrient recycling, soil structure and health, etc.

The document being consultation upon at this time is more of a strategy than an action plan. The lack of defined, measurable actions means that it will be difficult to measure the success of the plan. Measurable targets should be included in the final action plan, together with details of the monitoring that will be put in place to measure progress.

We support the principle that *"… the emphasis for the Action Plan should be on providing better and more connected habitats which will support both wild and managed pollinators in farmland, the wider countryside, and in urban and developed areas*". In particular, we welcome the focus on habitat creation and connectivity. Buglife agrees that habitat loss and land use intensification are two of the main factors in pollinator declines but it is important to note that other factors such as pesticide use and non-native species also play a role in the decline of pollinators.

High quality habitat is essential if we are to be successful in aiding the long-term survival and dispersal of insect pollinators. It is important that this habitat fulfils all the key requirements of pollinators and other invertebrates i.e. food, foraging, nesting and overwintering resources.

Buglife is promoting the development of a network of B-Lines throughout the UK to help support both our native insect pollinators and other wildlife in the wider countryside. The key aims of the B-lines initiative are to restore and create high quality wildflower-rich habitat, helping to conserve populations of a wide range of insect pollinators; and to help link small fragments of habitat, assisting species movement and dispersal. The overall aim is to maintain and develop high quality habitats rich in native species. Although a wide range of habitats are important to insect pollinators, we believe the primary focus should be on increasing the area of wildflower-rich habitats, for example grasslands, heathland and lowland fens. In addition to the overall wildlife value of these key habitats it would also be beneficial to develop scattered scrub, woodland edge habitats and species rich hedgerows, as well as taller-grown grassy areas to provide useful shelter, nesting and food supply.

Buglife delivers a number of 'buzzing' projects in urban areas throughout the UK. These projects aim to create pollinator friendly habitats in urban parks and are delivered in partnership with local authorities. The creation of wildflower meadows within parks during these projects has involved sowing wildflower seed, the alteration of management regimes, creation of additional habitat features such as bee banks and bare earth scrapes, and community engagement activities such as wildflower planting days and pollinator surveys. We are currently in discussions with a number of local authorities in Wales with a view to developing similar projects.

The importance of brownfield (or post-industrial/previously developed) sites for supporting pollinator populations should not be overlooked. If properly managed, brownfield sites with high value for biodiversity can not only deliver suitable habitat for many rare and endangered species, but can also transform themselves into wild city spaces full of wildflowers that will attract pollinators and other animals. Such sites are an important part of the habitat network, providing corridors "stepping stones" for species to disperse around and through urban areas. Wherever possible brownfield sites with the highest potential for biodiversity should be protected from re-development.

Green roofs should also be considered as potential pollinator habitat in urban areas. Even the simplest sedum based roof can provide a foraging area for a wide range of inset pollinators. More extensive green roofs can incorporate wildflower habitats and features to provide shelter and nesting areas for insects. Further information on the creation of green roofs for invertebrates is available on our website.

Crucial to the success of this action plan is a 'joined up' approach to its implementation. It is unclear from the consultation document as to how the Welsh Government aims to achieve this. Actions should be more specific and measurable (SMART) and a responsible body should be assigned to each one.

Buglife would be delighted to be involved in developing the actions and setting targets to measure success. We are also be able to advise on the conservation of pollinators and other invertebrates and on the creation of wildflower habitats both in the wider countryside through our B-lines initiative and in urban areas with our 'Get Britain Buzzing' and Green roof projects. Further information on our work can be found on our website – www.buglife.org.uk

Yours faithfully,

Craig Macadam
Head of Regions and Countries

Environment Systems Limited
Consultation Response to "Draft Action Plan for Pollinators for Wales"

23rd May 2013

Contact: Dr. Katie Medcalf, Environment Director, Environment Systems Limited, 11 Cefn Llan Science Park, Aberystwyth, Ceredigion, SY23 3AH. Tel: 01970 626688 E: katie.medcalf@envsys.co.uk

Background

This response is on behalf of Environment Systems Limited. Environment Systems helps organisations understand and better manage our environment. We do this through providing leading edge consultancy and services to help clients benefit from environmental information intelligence and insight. We specialise in the development and use of geographic information, in particular from remote sensing sources, for the delivery of baselining and monitoring in the environment and agriculture sectors.

Formed in 2003, Environment Systems is a Small Medium Enterprise (SME), based in Aberystwyth and currently employing 23 members of staff. All staff are highly skilled and educated to either graduate or post graduate level. The majority of our current customer base is in the public sector (central, agency and local government) and non-governmental organisations primarily across UK but increasingly outside the UK.

Environment Systems, through the contact given above, are willing to enter into further dialogue on this submission and the related issues.

Summary

Environment Systems welcomes the opportunity to provide a response to this consultation on a draft action plan for pollinators for Wales:

1) We agree with the general premise of the statement but feel that the words 'conditions' is too vague. We would prefer the statement to say "Wales will support healthy populations....".

2) We agree with the five identified but feel that management alterations both in the urban setting where the general public are paving over their gardens and in the rural environment with changes in mowing patterns are also important.
   In addition, we have a concern that the five points do not address the lack of awareness of the general public of the importance of pollinators. The general public can have a large effect on this issue.

3) We agree with the outcomes

4) We could help build the evidence base by monitoring and by providing scientific evaluation. The Welsh Government could support us by providing additional funding to support these activities.

5) Through the COBWEB FP7 research programme and other activities we are involved in we would work to understand how crowd sourced data and ecosystem services related information can support the supply and verification of monitoring and evaluation.

6) We believe Wales could become a leader in promoting environmentally responsible precision farming where both food production and the wider environment are enhanced by the management of our land and recognising its multi-functional capabilities. An example of this is micro-targeting of pesticides and fungicides using novel techniques, such as UAS and tractor mounted sensor systems. Another example of innovative agricultural practices would be to investigate sowing flowering species within grass leys to enhance the quality of silage and the environment.

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4th June 2013

Cymdeithas Eryri - Snowdonia Society
Response to the Draft Action Plan for Pollinators

June 2013

Cymdeithas Eryri, the Snowdonia Society, is a registered environmental charity working to protect, enhance and celebrate Snowdonia, its wildlife and heritage. The Society works with volunteers, local communities, organisations and businesses to achieve this vision.

The Snowdonia Society owns the iconic property 'Tŷ Hyll, the Ugly House', in Capel Curig where, as part of Natural Resources Wales's Communities and Nature Strategic Project, and part funded by the European Regional Development Fund through Welsh Government, and the Heritage Lottery Fund, we have developed the Tŷ Hyll Honeybee Initiative.

This includes a small information facility about the current plight of pollinators, in particular the native honeybee, and suggests how individual's actions can help, including providing a pollinator friendly environment. Tŷ Hyll's one acre wildlife garden now showcases the best plants for bees and other pollinators. A small apiary has been set up within the four acre deciduous, native woodland where, in partnership with the National Beekeeping Centre for Wales (NBCW), volunteers are undertaking pioneering work to create a plentiful supply of native queen bees. Details of the initiative can be found at www.theuglyhouse.co.uk.

With this particular interest in the action needed for pollinators, which will also contribute to wider biodiversity improvement, we welcome the production of this 'Draft Action Plan' and the opportunity to comment.

We have endorsed the response made by Wales Environment Link to the consultation and have the following additional comments.

Question 1: Do you agree with our vision for pollinators in Wales?

The vision would have greater focus and clarity, and relevance to the EU 2050 vision, if it stated "Wales has restored, protected and sustained conditions for all pollinating insects to thrive". If thought necessary this could be qualified by "This will benefit biodiversity for the benefit of the people, the economy and environment of Wales"

Question 2: Have we identified the main areas of concern for pollinators in Wales or are there further issues you want to identify?

The main issues have been identified.

Two are of particular concern: the continual agricultural 'improvement' of pasture, with herbicides and fertiliser, on land not covered by Glastir; and the fragmentation of pollinator friendly habitat by over zealous, and often unnecessary, highway verge cutting, even on minor rural roads where speed is naturally controlled by the character of the road.

Question 3: Do you agree with the outcomes identified, and the areas for action to achieve them?

We support the four proposed outcomes.

Area for Action 2: Promoting diverse and connected flowering habitats across the wider countryside

A primary means of promoting greater connectivity between all varieties of pollinator friendly sites is sensitive management of highway verges – increasing planting with native wildflowers, adjusting mowing regimes (timing, height and width of cut) and only cutting where absolutely necessary for proven safety. This should be included in Best Practice Guidance for Highway Authorities.

Area for Action 3: Promoting diverse and connected flowering habitats in towns, cities and developed areas

Comment as for Action 2.

Pollinator friendly planting could be promoted and encouraged by giving advice and support to Welsh garden centres and nurseries in their choice of best plants to grow and sell.

Area for Action 4: Supporting UK action to promote healthy populations of pollinators in Wales

Action should include the control of the introduction of non-native bees for commercial pollination, until monitoring indicates sustainability of the native honeybee is not compromised. Actions related to the use of pesticides should be expanded to include the use of fertiliser and herbicide on agricultural land and urban greenspace.

Area for Action 5: Working to raise awareness of the importance of pollinators and engage our citizens in their management

Schools can benefit tremendously by visiting 'awareness raising' venues such as NBCW and the Tŷ Hyll initiative, but they are often prevented from doing so by a lack of funding for transport. Action to provide necessary assistance would be helpful.

Question 4: How could you contribute further to the areas for action identified? How could we support you to do so?

Through our Tŷ Hyll Honeybee Initiative we aim to continue to engage and educate people in the concerns and how they might contribute to actions required, including sustaining our showcase pollinator friendly wildlife garden which is open for visitors throughout the year. We also hope to continue our partnership with NBCW in raising locally suited *Apis mellifera mellifera* queen bees for the benefit of local populations of honeybees and beekeepers.

Although the initiative is currently sustained by volunteers from the local community we believe that ***the long-term success would be better secured with additional funding to support a dedicated Project Officer to maintain publicity and facilitate greater public engagement***. This would help to achieve Areas for Action 3 and 5

Question 5: Would you like to be involved in developing the actions needed to achieve the outcomes? If so in what way?

Although we do not have the resources to be directly involved in developing the actions we would welcome engagement through further consultation. We can also advise on Areas for Action 3 and 5, based on our experience, as appropriate.

Question 6: We have asked a number of specific questions. If you have any related issues which we have not specifically addressed, please use this space to report them.

No Comment.

Yours faithfully

Huw Jenkins
Director