

School & Farm Wildlife Programme (SFWP) Pilot

April 2007 onwards

Background

The Cambridgeshire & Peterborough Biodiversity Partnership generously agreed to support SFWP during the programme's 2007/2008 development phase, prior to the completion of an HLF grant application, in February 2008, in association with the Royal Entomological Society.

This funding application proposed to twin 100 schools/colleges with 100 farms, which would then provide farmland insect field study sites for A Level Biology/Environmental Science teachers and students in England in 2009-2011. The recording and monitoring of farmland insects, using hand-held digital assistants, providing a benchmark for on-farm biodiversity improvements at a time when schools and local authorities are formulating their sustainable development strategies for implementation in 2010.

Selected Heads of Science & Biology in schools/colleges were invited to join SFWP in Cambridgeshire in April 2007. Seven educational establishments recognised the benefits of conducting A Level biology curriculum field studies on arable farms, hosted by the Highflyer farmers, starting in the summer term of 2007 (from 12 originally invited).

Each farm was audited by D P Bird, a BASIS qualified agronomist, in order to confirm that the selected agri-environment scheme habitats would add value to the wildlife recording process – all exceeded the minimum criteria and the farm visit risk assessments were conducted.

Objectives in Cambridgeshire

- 1- To promote The Cambridgeshire & Peterborough Partnership BAPs in the county to all participants with specific farmland information packs available to the Highflyers, Science teachers, Science Learning Centres and Farm Open Sunday attendees.
- 2- To focus student introductions on the Arable, Low Input grass, Fenland and Aquatic HAPs and the Farmland Insect SAPs and associated websites using anonymous interactive wireless q/a Optivote handsets to promote understanding of UK agriculture and county biodiversity.
- 3- To assist Highflyers farm teams fine-tune the management of HAPs and SAPs.
- 4- To facilitate supervised student field studies developing state of the art hand-held computer data loggers developing biodiversity keys.

The Twins – School/Colleges and Highflyer hosts

Hills Road Sixth Form College at Russell Smith Farms, Duxford, Cambs
Knights Templar School, Baldock at Velcourt Ltd, Wendy, Cambs
Sandy Upper School, Sandy with David Felce, Southoe, Cambs
Newport Free Grammar School, Newport with Sian Wombwell, Ickleton, Cambs
City of Ely College, Ely at Shropshire Farms, Ely, Cambs
Sir Harry Smiths Community College, Whittlesey at L A Mason, Ramsey, Cambs
Kings School, Peterborough with Janet Herbert, Northolm Farm, Eye Green,
Peterborough, Cambs

Mark Schwier at St Ives provided the venue for Open Farm Sunday in June 2007

The Science Learning Centre at Hertford provided facilities for a briefing to interested teachers

Mrs Herbert hosted Kings School students during National Insect Week in June 2008

30 days were dedicated to preparation, servicing the farm audits, school visits, farm student days, Open Farm Sunday and teacher briefings

Achievements

Arable non-cropped areas which are HAPs

Habitat areas on arable farmland where student briefings and initial studies conducted include:

Pollen and nectar (4 has on five farms)
Grass and enhanced margins (10 has on seven farms)
Fen (2 has on one farm)
Cultivated margins (3 has on two farms)

Ponds (two on two farms)

Low input grass (2has on one farm)

Biodiversity activities on non-cropped HAPs - adjoining arable crops

Sweep/butterfly netting techniques developed
Pitfall trapping for ground beetles at Eye Green
Practical training with hand-held pdas – keys used for Ladybird and Butterfly species in established grass margins
Sweep net catches separated into insect orders as part of in-field id process

Communications with farmers and teachers

Ten introductory on-farm meetings with farmers and teachers proved very informative for all as farmers recognised, for the first time in some cases, an audience for the non-cropped habitats and associated species.

Teachers were surprised at the extent of farmland systems and the variety of A Level curricula field study areas available on the farms.

Many parents pay £250 for their teenagers to visit dedicated field stations!

During schools on-farm days the SFWP team reviewed how to monitor biodiversity in the grass margins using sweep nets and how rare arable plants can be established in cultivated margins focusing on the target species for SE Cambridgeshire.

SFWP promoted the list of Cambridgeshire BAPs and their management when addressing 20 key farmers, 20 teachers and over 100 students involved in the Pilot.

Over 200 hours were required to build the working relationships with 8 twins and the SFWP team training in use of hand-held computer keys.

Communications with BRC

Insect sweep net and pitfall trap samples require validation from the continued studies at Northholm Farm, Eye Green. This data will be forwarded to BRC.

Programme - Highs and Lows

40 adults and over 100 teenagers, some starting at university in October 2008, readily took on the principles of studying and monitoring county BAPS.

They are, in effect, Ambassadors for Conservation in Cambridgeshire.

The hand-held computer, used by a small sub-group at Kings School, has proved how simple butterfly and ladybird identification can be - armed with photos and recording forms in the field from a starting point of little knowledge.

Equally, pit fall traps and sweep net catches prove daunting to identify for the layman. Bumble bees too proved a step too far - with difficulties using the reference textbook and posters in the field.

Small timing windows when teenagers are actually on the farm prove frustrating for all concerned - resident experts make good use of limited time.

Future focus needs to be on specific insect orders.

Subject to HLF funding and RES agreement we envisage the future A Level farmland studies focusing on specific insect groups which are barometers for the health of integrated arable land e.g butterflies & moths, beneficials and chick food favourites including ladybirds, true bugs and ground beetles and their associated plant hosts.

Our future challenge, funds permitting, is to assemble software keys to motivate young scientists to use 'smart' mobile phones to store their identification records on SFWP bespoke software, including GIS and photos and upload to our central database for collation