

**Biological Recording of non-native species at the  
County Scale**

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**Summary**

**Some Biological Recording basics**

**Some issues with non-native species**

**Some opportunities**

## Recording Non-native Species

**Biological Recording** is defined as:

*“the collection, collation, management, dissemination and interpretation of spatially and temporally referenced information on the occurrence of biological taxa, assemblages and habitats.”*

National Federation for Biological Recording

**A Local Records Centre:**

***“is a not-for-profit service run in partnership for the public benefit, which collects, collates, manages and disseminates information of known quality relating to the wildlife, wildlife sites and habitats of a defined geographical area.”***

**National Biodiversity Network (NBN)**

## Recording Non-native Species

**Local data for local people**

**In a national and international context**

**An LRC is only as good as its information and the access provided to it**

**Origins – mid 1970's**

**Increasing recognition in the nature conservation world that planning and development was taking place without biological information being consulted.**

**The UK's wildlife was under threat**

**it couldn't be defended without good data  
- there were examples of the value of good  
biological data**

## Recording Non-native Species

**Examples of the value of good biological data at the time included:**

- **BSBI 1962 Atlas of the Flora of Great Britain**
- **Nature Conservation Review 1977**

**and**

**The national BRC set up at Monkswood as a focal point for a national datasets in 1964**

## Recording Non-native Species

**Local information was dispersed and not available for use in a recurring, practical sense**

**Need for one point of contact and access to inform planning decisions and strategies at the right time**

**LRC role was established and taken up, especially by local museums and wildlife trusts**

**Approx 75% of UK covered by an LRC by 1980 – in theory. (Now approaching 100% cover.)**

**With varying successes...driven by idealism not funds**

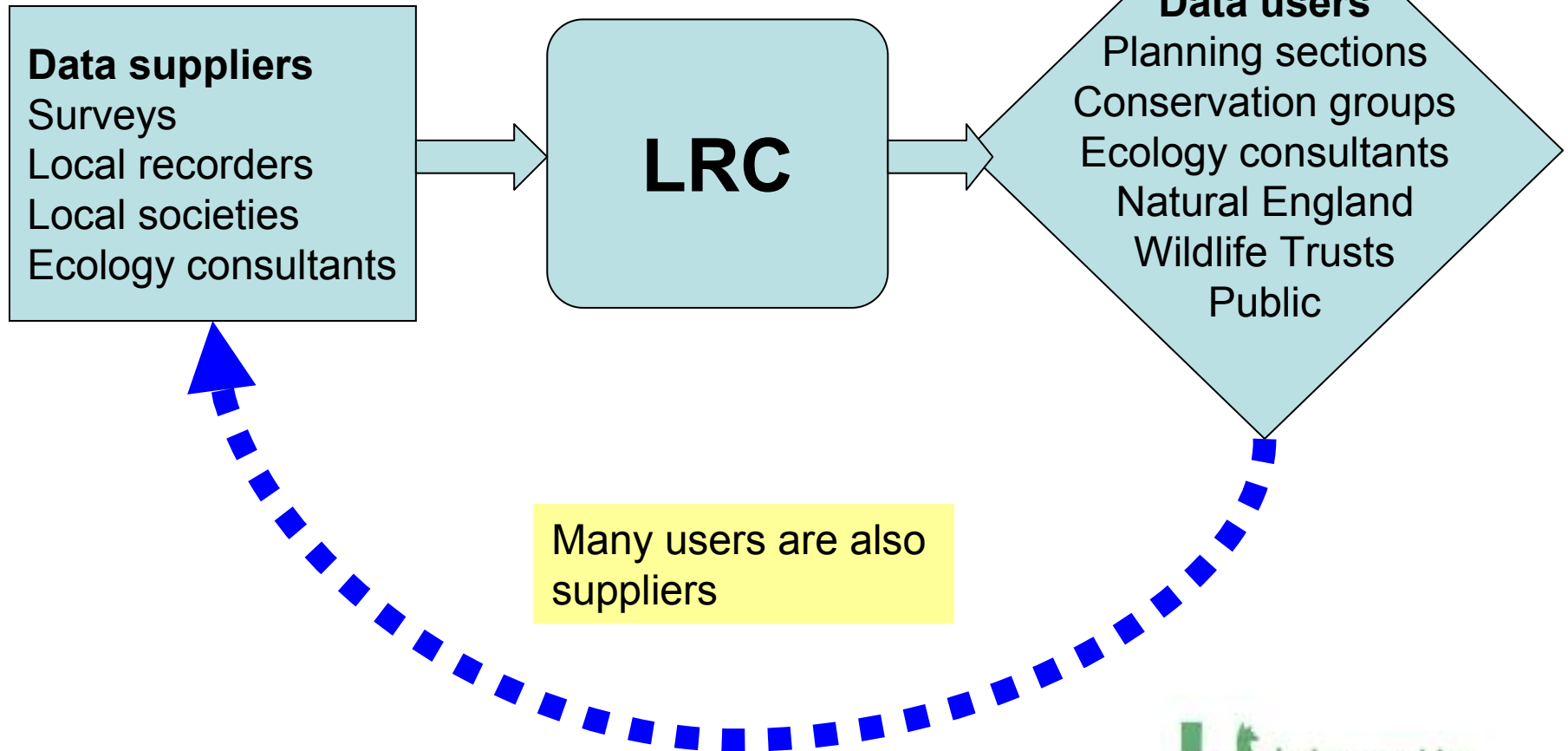
## Recording Non-native Species

**The UK Response to the Rio Conference set up the UKBAP group, Local BAPs and the recognized the importance of local habitats and species.**

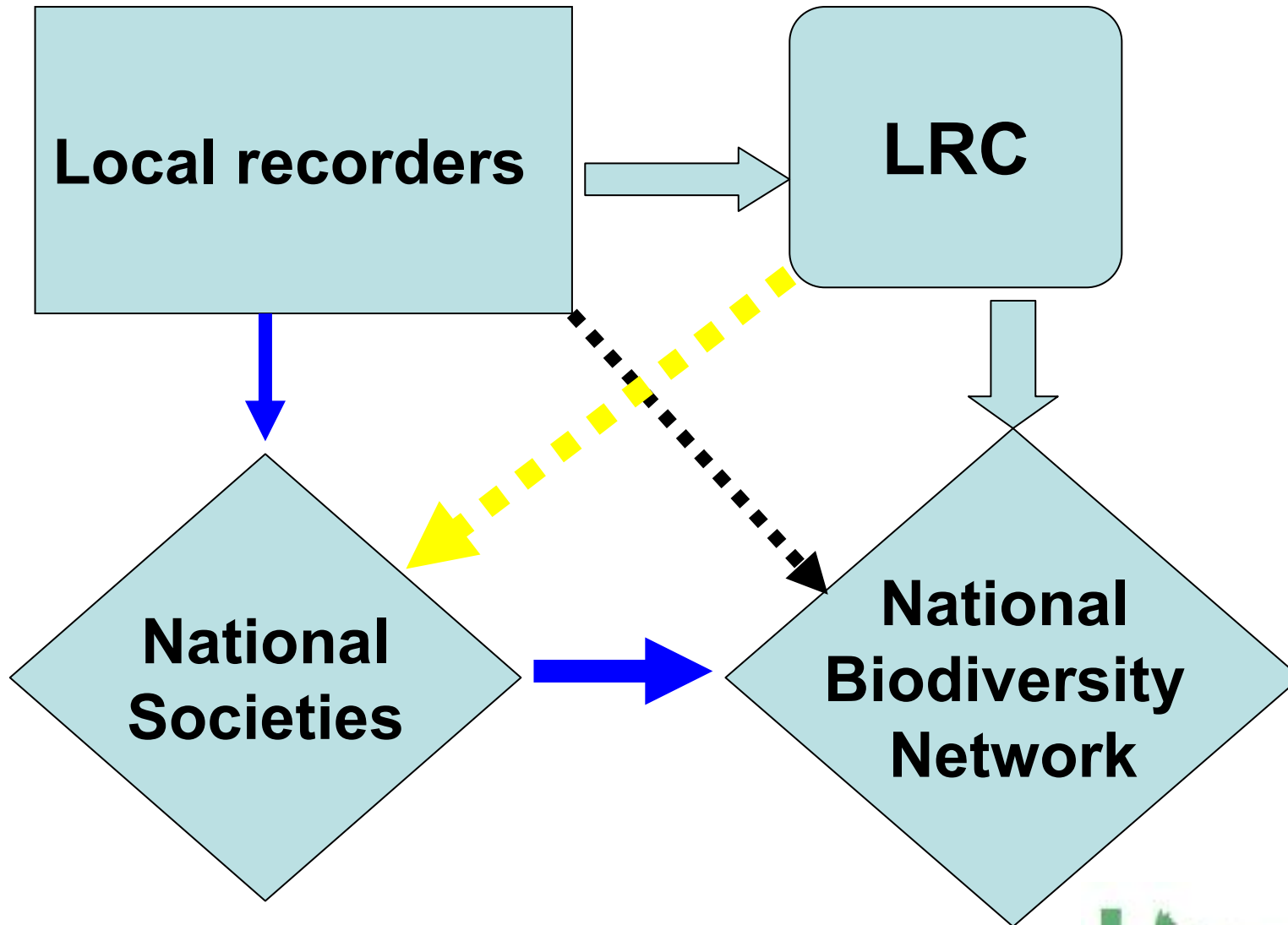
- **Gradually legislation caught up with the conservation movement, expecting planning to take biodiversity into account.**
- **Struggling LRCs either failed or sought wider partnership support to be successful**
- **NBN created as a national point of information and contact**
- **Natural England started to support core role of LRCs**

# Recording Non-native Species

LRCs should provide a single data source to all users



# Recording Non-native Species



## Recording Non-native Species

### LRC functions

#### Recording support

Surveying  
Receiving/ exchanging data  
Software advice  
Maps and summaries

#### Planning

Strategic summaries  
Development control  
Planning portal  
Ecological consultants

#### Monitoring

Summarising by district,  
county and region  
Reviewing  
publishing

#### Public archive

Keeping data in the public domain  
Permanent archive  
Supporting public use

## Recording Non-native Species

**LRCs' main function is to have good quality data, reliably determined, from across its area, that is recent enough to be relevant.**

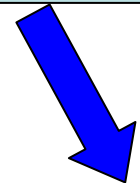
**UK tradition to control the quality of data is to have County Recorders, experts in a taxonomic group who verify that records are correct or likely to be correct.**

- They can be individuals or panels of experts.**
- They need to know their species, identification and their area.**
- THEY ARE VITAL TO THE RECORDING PROCESS**

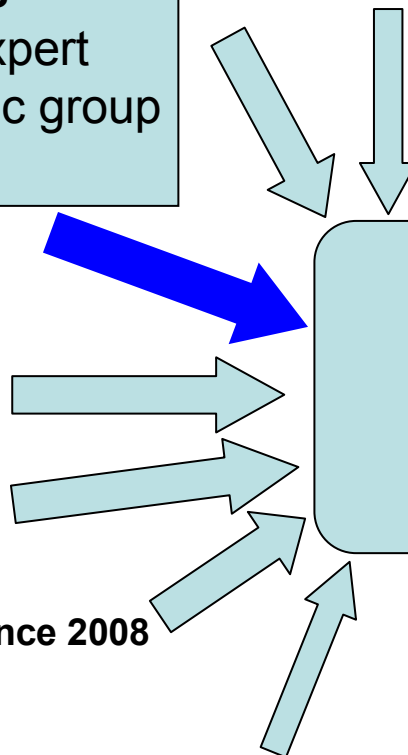
**LRC data has to stand up at a Public Enquiry**

## Recording Non-native Species

**Data suppliers**  
Local recorders  
Local societies



**County Recorders**  
Individuals or an expert panel per taxonomic group



**LRC**



**Data users**

**Validating records:**

- 1 Original record accepted as valid by County Recorder
- 2 Input version is confirmed as valid

## Recording Non-native Species

### Recording software

#### **RECORDER 6 –**

- . **NBN supported**
- . **most (20+) LRCs use it**
- . **complicated but comprehensive checklists supported by NHM &**
- . **national societies**

#### **MAPMATE**

- . **commercial software**
- . **Recorders' favourite**
- . **simple but effective**
- . **checklists supported by experts in national societies**

#### **Home grown -**

- . **several individual ACCESS base systems maintained**

## Recording Non-native Species

### Recording software

#### **RECORDER 6 & MAPMATE validation**

**force data to be entered by choosing from controlled lists of species, names and recorders, and making sure valid dates and localities are entered.**

## **Issues with recording non-native species:**

**Who's interested?**

**Varies from group to group – BSBI has a very active aliens group**

**Some individuals are alien hounds – it's a very active area for those who are interested**

**What's non-native?**

**Rely on local expertise and the views of previous experts.**

**Most species can be categorized as native, established non-native, and casual non-native – i.e. they come and go. Genetic or taxonomic research may alter opinions from time to time.**

## Recording Non-native Species

### Plant example from the BSBI for Leicestershire Numbers of species:

	pre 1970	post 1970
<b>Native species</b>	<b>986</b>	<b>840</b>
<b>Archaeophytes</b>	<b>133</b>	<b>116</b>
<b>Neophytes</b>	<b>277</b>	<b>256</b>
<b>Casual species</b>	<b>250</b>	<b>161</b>

**Summary** : major decline in native species  
: non-natives of remain at approx 40%  
of the total species number

**Initial discovery**

**Initial identification**

**Confirmed identification**

**Notification in taxonomic specialist group or organization's newsletter**

- **DEFRA/ Natural England or equivalent may get interested in potential problem or otherwise key species.**
- **Press release – “if seen, contact..”**
- **Local interest encouraged to see how far they have spread – recent national media interest in Harlequin beetles and Japanese kelp.**

## Recording Non-native Species

**Who knows what they are?**

**Easiest with species from another part of the country  
– or areas covered by identification books and  
checklists**

**What's expected? What's moved in close by?**

**Rely on county recorders to know what could or  
should be around -**

## What if it's completely new?

- **Initial identification – perhaps with gardening hand books rather than Flora Europea**
- **or a photograph sent as an enquiry to peers**
- **or a national authority like Kew or Natural History Museum or a national society**

**Temporary name – to be used to allow recording to continue whilst correct name is confirmed, and added to the species name dictionaries.**

**RECORDER 6 and MAPMATE won't allow you to export temporary names**

## Recording Non-native Species

**Checklists in Recorder and Mapmate follow after a few months once it's accepted – intervals are getting shorter**

**Mapmate updates quicker than Recorder (so far)**

## Recording Non-native Species

**Non-natives can be popular**

**Nuisance or danger?**

**Curiosity?**

**Public interest**

**“Devil weed**

**“Plant of death**

**“Killer bee**

**“Bullying black squirrel**

**All helps to get attention.**

## Recording Non-native Species

**There's often little commercial interest unless it's a major agricultural pest**

**LRCs' most requested data concern**

- **Protected Species,**
  - **Local Wildlife Sites,**
  - **LBAP habitats**
  - **Statutory sites**
- not non-native species**

## Recording Non-native Species

- **LRC role is to record the presence and distribution of non-native species over time.**
- **When do they get involved?**
- **If records come through existing channels then they should be included as routine**
- **Records from other agencies may not – they may need to be chased**
- **LRCs need to be aware of topical issues and species and the opportunities to explain ‘recording’.**

## Non-natives attract publicity

- Local and national publications
- Newspapers

Fanciful identification may need to be followed up -  
*“triffid plant that grows in the dark, botanists say  
it’s new to science”* = Teasel

But it could have been something more special.

Garden escapes allow for a wide range of plants to be  
potential colonizers

## Recording Non-native Species

### Japanese Knotweed

**Reputed to be widely spread now, especially in or near urban areas**

**Very persistent**



Photo EA

## Japanese Knotweed

**Some serious surveys in Leics (Charnwood Wildlife Project found it in 22 out of 31 parishes surveyed)**

- **Leics Flora says (1980) - 122 tetrads (out of 606 max)**
- **First record – in a Leicester garden 1881**
- **First escaped record 1901**
- **NBN says 20 x 10km sq**
- **LRC says 4 recent records – none in the 40,000 plant records recorded last 2007!**

**Seldom recorded for Local Wildlife Site monitoring**

**So very under-recorded**

## Recording Non-native Species

# Floating Pennywort



Photo EA

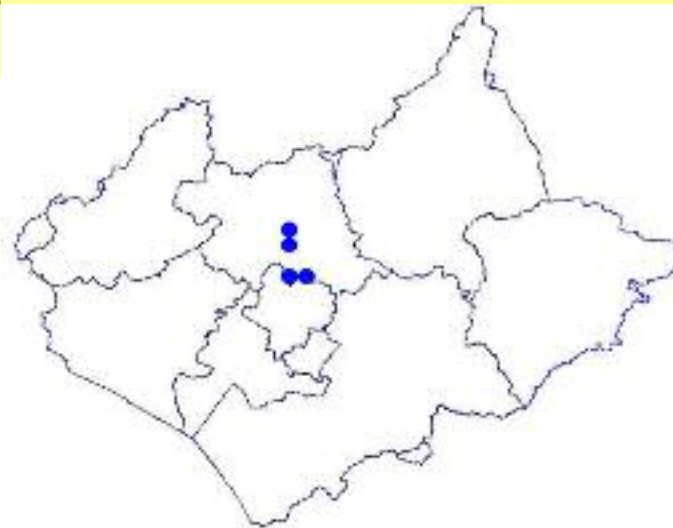
Non-native Species Conference 2008

## Recording Non-native Species

### Floating Pennywort

- First record November 2004 in Leicester
- By 2008 has spread 10 miles north to River Trent
- Flora (1980) no record
- NBN no record
- LRC – 18 records for 2005 only
- Environment Agency – keep detailed distribution maps and aerial photographs

LRC needs to make formal records of all these observations



Event Date	Event Spatial Reference
01/11/2005 - 31/12/2005	SK50030806
01/11/2005 - 31/12/2005	SK50280949
01/11/2005 - 31/12/2005	SK50880947
01/11/2005 - 31/12/2005	SK50860943
01/11/2005 - 31/12/2005	SK50520920
01/11/2005 - 31/12/2005	SK50520920
01/11/2005 - 31/12/2005	SK50460915
01/11/2005 - 31/12/2005	SK50460914
01/11/2005 - 31/12/2008	SK50790878
01/11/2005 - 31/12/2008	SK50660881
01/11/2005 - 31/12/2006	SK50650883
01/11/2005 - 31/12/2006	SK50561269
01/11/2005 - 31/12/2005	SK50581272
01/11/2005 - 31/12/2005	SK50551277
01/11/2005 - 31/12/2005	SK50541279
01/11/2005 - 31/12/2005	SK50831614
01/11/2005 - 31/12/2005	SK50501534
10/12/2005	SK502152

## Recording Non-native Species

### Violet Carpenter Bee



Non-native Species Conference 2008

Photos  
E.Peat

## Recording Non-native Species

### Violet Carpenter Bee

**First record for Leicestershire March 2007**  
**Now 2 records from 2007 from Leicestershire**  
**NBN 6 records (none from Leicestershire)**  
**LRC no records digitized**



## Recording Non-native Species

### Harlequin Ladybird



**Interesting name**

**Killer reputation**

**Easy to see**

**Public survey**



*H. axyridis* adult and pupa  
© Bev Wigney, Crocodile Phase gallery

## Recording Non-native Species



### Harlequin Ladybird

#### Public survey

Recording forms sent to 400 members of public and heritage wardens

2,000+ id charts and 3,000 Forms downloaded

## Harlequin Ladybird Survey

Name	Age	0-20 <input type="checkbox"/>	21-40 <input type="checkbox"/>	41-60 <input checked="" type="checkbox"/>	61+ <input type="checkbox"/>
Address		1, OXFORD STREET SPAY STREET L106.		Post code	LE12 9EQ
Location		Home address		Date	21/10/07
Grid reference		Post code			
What you found		How many			
	Larvae	1 <input type="checkbox"/>	2-5 <input type="checkbox"/>	6-10 <input type="checkbox"/>	More than 10 <input type="checkbox"/>
	Adults	1 <input checked="" type="checkbox"/>	2-5 <input type="checkbox"/>	6-10 <input type="checkbox"/>	More than 10 <input type="checkbox"/>
Comments (What was it doing? E.G. flying, walking on the ground, sitting on a leaf, eating a greenfly...)					
Walking up wall of ivy on wall (under window)					
Date Received					6/12/07
Number of records					1

#### What happens to records sent to the Environment and Heritage

The Centre holds the 'people's collection', keeping natural history info and records safe and available to all. The information you send to it added to the main database. It can then be used to interpret change wildlife populations, and to inform local plans or conservation strategy. The information, and data is often published online or in reports. The information is never sold, but organisations may be charged a fee to cover staff time spent searching and reporting on some data. Your personal details will be stored with your records. Your personal details will not be passed on to anyone else. Can we contact you if we need to ask you about your records? Yes  No  If you would like to receive records of the results of this survey, please tick here

6/12/07

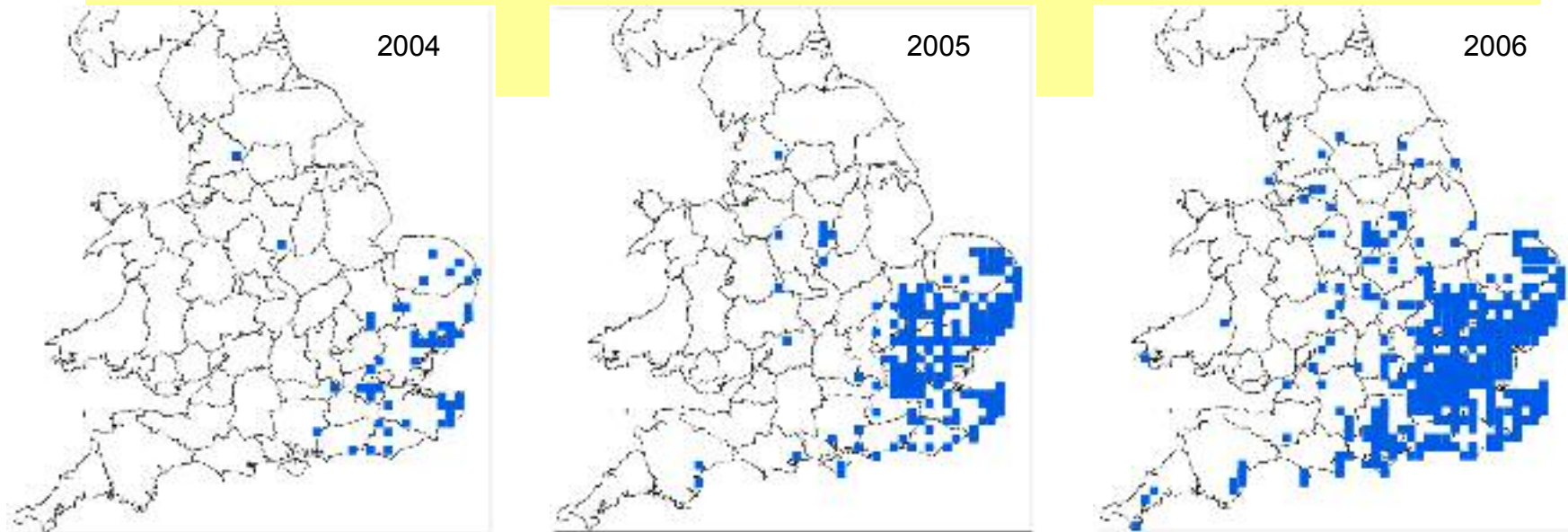
Non-native Species Conference 2008

## Recording Non-native Species

### Harlequin Ladybird

**Only 19 Leics localities recorded in 2006 and 2007  
(plus some from other parts of the UK)**

**Massive gap between initial interest and actual  
records received**



Non-native Species Conference 2008

National distribution

## **Non-native recording opportunities**

**Despite some problems, non-native species can be a hook to explain the importance of recording to a wider audience**

**They offer new and a news story!**

**They provide a counterpoint to the (almost) continuous decline in the native flora and fauna**

**They are very varied – some are predictable, many not**

**They offer a chance to link to new communities**