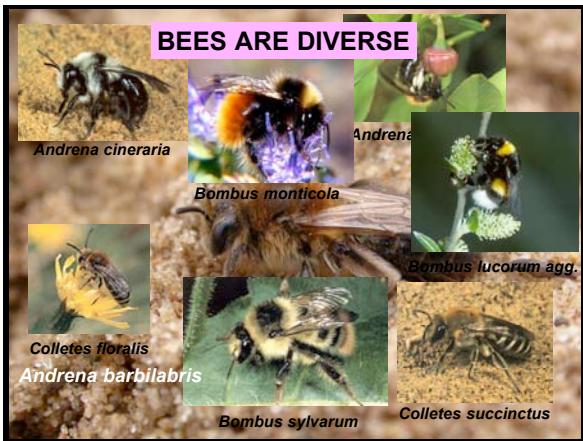




Queen's University Belfast
School of Biological Sciences

Ireland buzzing: bee biodiversity across the island

Robert J. Paxton - QUB
Úna Fitzpatrick - TCD
Tomás Murray - QUB
Mark J.F. Brown - TCD

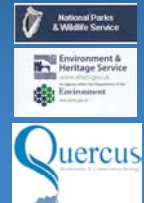


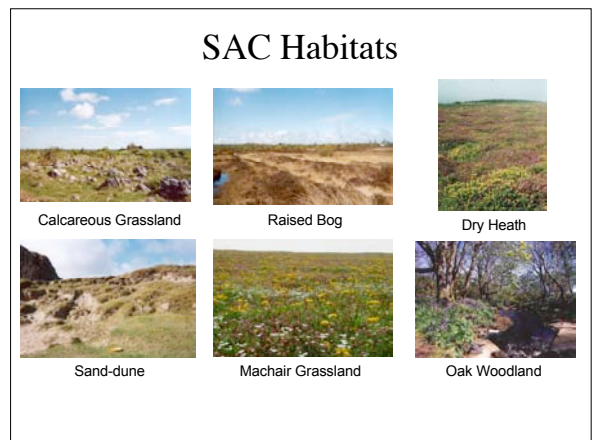
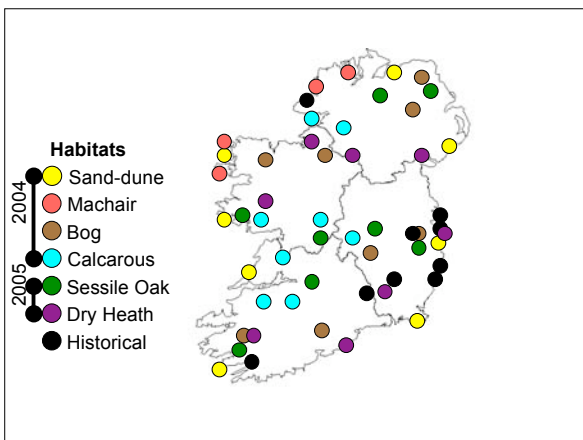



HEA
Higher Education Authority
An tÚdarás um Ard-Oideachas

Conservation genetics of Irish bees - a whole island perspective -

Dr Mark Brown
Dr Úna Fitzpatrick

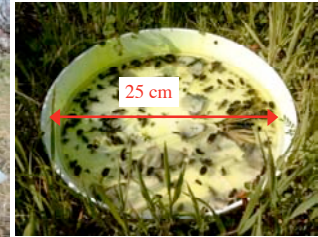
Dr Tomás Murray
Dr Robert Paxton

Sweep netting of bees



Pan traps



Irish bees

(Sub-)Family	Number of species
Colletidae	4 <i>Colletes</i> + 4 <i>Hylaeus</i>
Andrenidae	29 <i>Andrena</i>
Halictidae	8 <i>Sphecodes</i> + 2 <i>Halictus</i> + 11 <i>Lasioglossum</i>
Megachilidae	6 <i>Megachile</i> + 2 <i>Osmia</i> + 2 <i>Coelioxys</i>
Anthophorinae	12 <i>Nomada</i>
Apinae	19 <i>Bombus</i> + 1 <i>Apis</i>

TOTAL: 100 species



Colletes floralis



Colletidae

8 spp

Andrenidae

29 spp

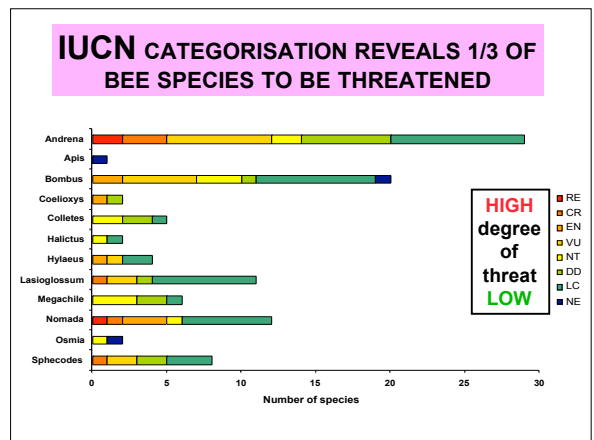
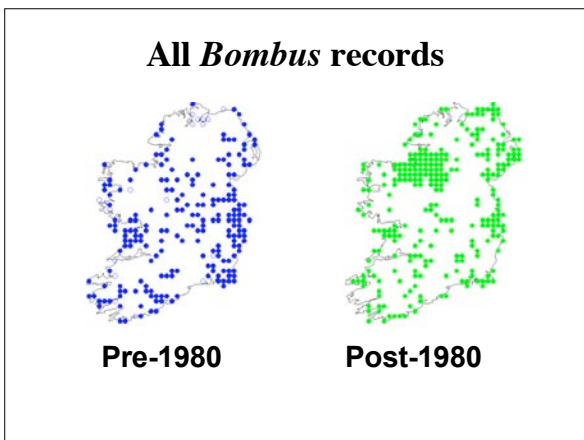
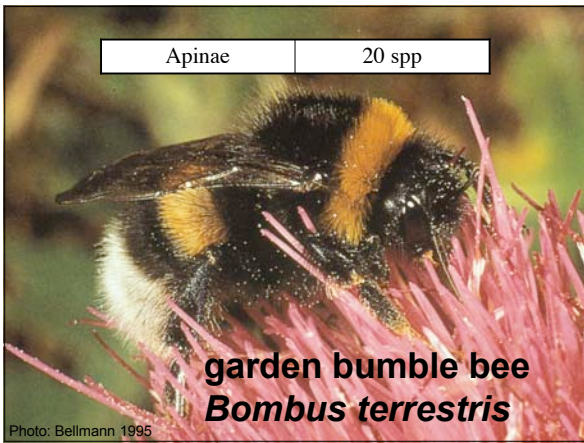
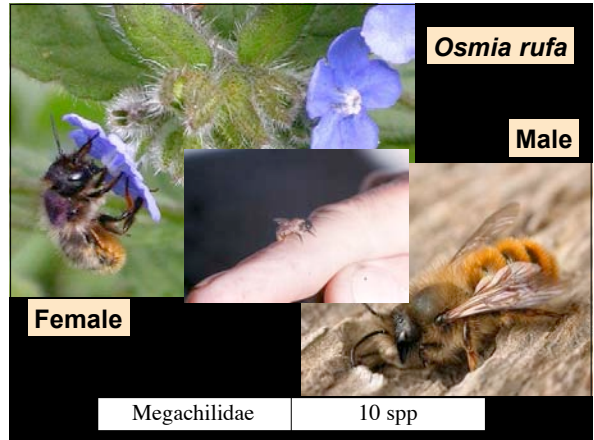
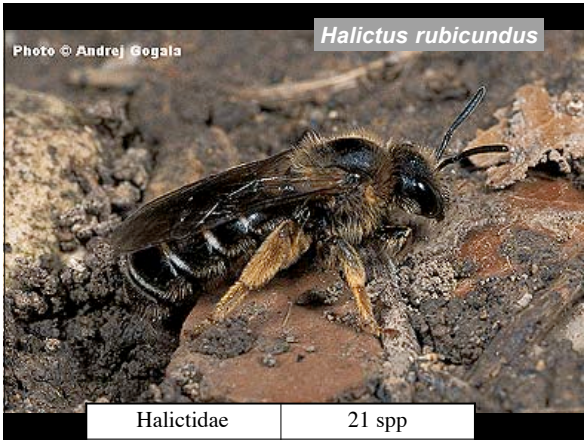
Andrena scotica

Anthophorinae

12 spp

Nomada marshamella

Photo: Müller et al. 1997



**IUCN
REGIONAL RED LIST OF
IRISH BEES**

2006

C. Fitzpatrick, T.E. Murray, A. Brown,
R.J. Paxton & M.J.F. Brown

THE STATE OF
IRELAND'S BEES

<http://www.npws.ie/PublicationsLiterature/RedLists/>

Fitzpatrick, Murray, Paxton & Brown 2007 Cons. Biol. 21: 1324-1332

Bombus terrestris

IUCN: LEAST CONCERN

Pre-1980

Post-1980

Bombus sylvarum

IUCN: VULNERABLE

Pre-1980

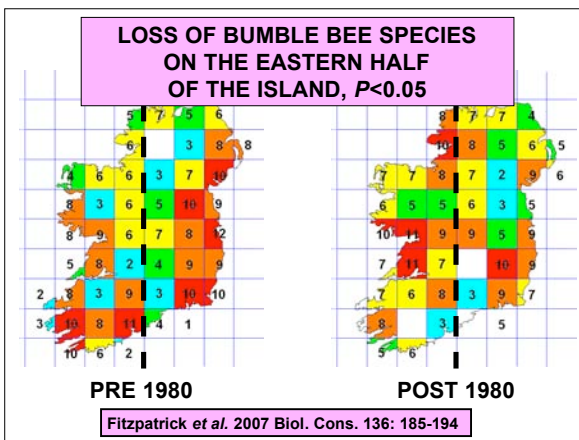
Post-1980

Bombus distinguendus

IUCN: ENDANGERED

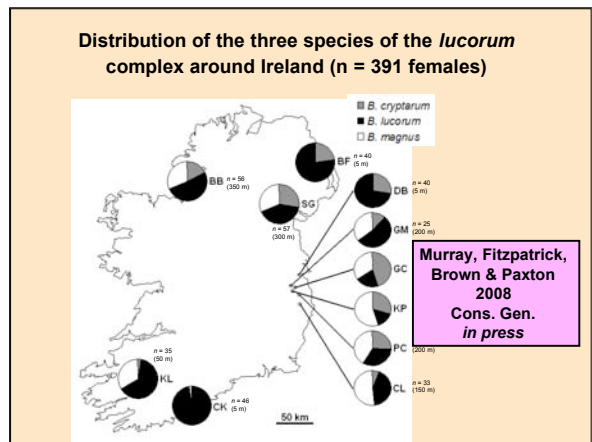
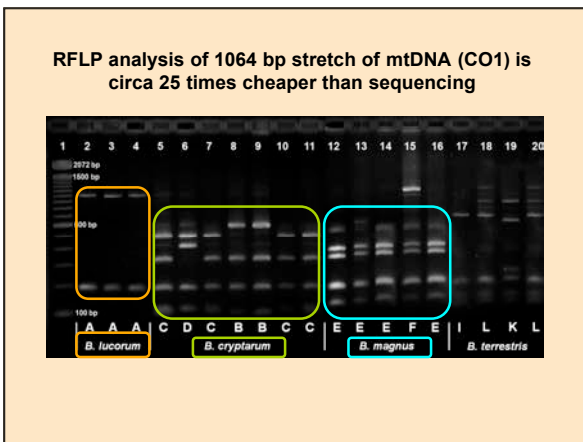
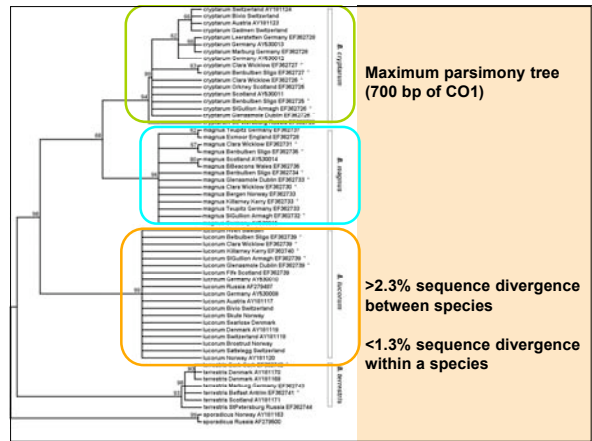
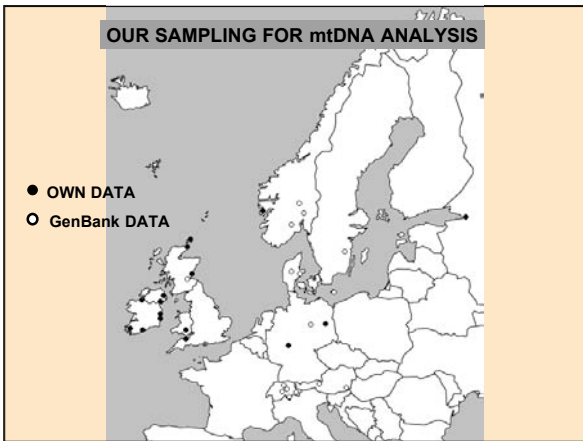
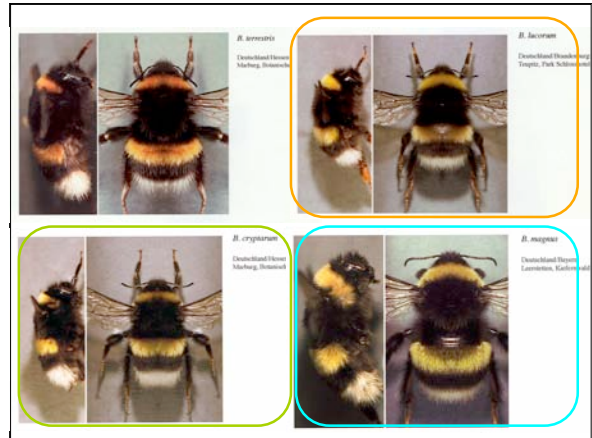
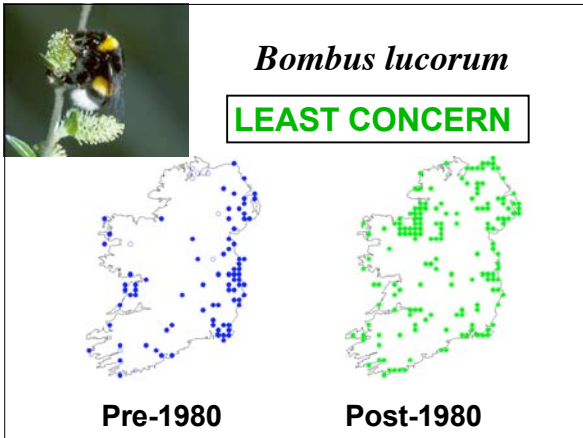
Pre-1980

Post-1980



Drivers of biodiversity loss

- Habitat destruction, degradation and fragmentation →
- Pollution →
- Exploitation →
- Invasive species →



SUMMARY

- **bees are diverse, important faunal elements**
- **many species are threatened**
- **conservation action needed**

