Bee, Bird and Bat habitats

Irish Bee species

One third of our 98 bee species are threatened with extinction

Why are bees important?

- Pollination of food crops:
  - Oilseed rape
  - Peas
  - Beans
  - Apples
  - Soft fruit
- Pollination of wildflowers, trees
- Green image for Irish food
- Production of honey

Why bees are declining?

- Reduction in flowers
  - Pollen (protein)
  - Nectar (carbohydrate)
- Lack of continuity of flowers
  - Bees need food all year round = a diversity of flowering plants in the landscape
- Less nesting sites

<table>
<thead>
<tr>
<th>Trees / Shrubs</th>
<th>Climbers</th>
<th>Wildflowers</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>January</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Willow</td>
<td>Dog rose</td>
<td>Primrose</td>
</tr>
<tr>
<td>Hazel</td>
<td></td>
<td>Bluebell</td>
</tr>
<tr>
<td>Blackthorn</td>
<td></td>
<td>Dandelion</td>
</tr>
<tr>
<td>Holly</td>
<td></td>
<td>Clover</td>
</tr>
<tr>
<td>Crab apple</td>
<td></td>
<td>Vetches</td>
</tr>
<tr>
<td>Whitethorn</td>
<td></td>
<td>Knapweed</td>
</tr>
<tr>
<td>Gorse / furze / whins</td>
<td></td>
<td>Heather</td>
</tr>
<tr>
<td><strong>December</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
How farmers can help Bees

- Allow space for a diversity of flowers grow and flower
  - along farm roadways
  - around farmyards
  - field margins
  - field corners

**Field Margins**

- Fence off from livestock
- Cut or graze after flowering
- Do not fertilise
- Do not spray

**Routinely trimmed hedgerows**

- Side trim to a triangular shape
- Leave as high as possible
- Allow new individual thorn trees mature at irregular intervals
- Allow wildflowers grow at the base

*If spraying insecticides in crops:*

- Spray early morning or late evening when honey bees are less active
- Notify local beekeepers
Bee Boxes
Why? Some solitary bees are cavity nesters and nest in hollowed twigs or holes in wood or masonry.

- Solitary bees
  - Mining bees - in ground
  - Mason bees - often in masonry - but not widespread in Ireland
  - Sweat bees - in ground
  - Leafcutter bees - holes in stone walls, stems
  - Yellow faced bees - tiny bees - holes in stumps of trees

- Making a Bee Box
  - Wood - not treated with insecticide / preservative
  - Selection of hole sizes - between 3/8 and ¼ inch
  - Clean smooth holes
  - Selection of holes - Include hollow stems eg bamboo
  - Holes must not interconnect - dead-end required
  - Pack with subsoil - substitute clay bank

- Placing a Bee Box
  - Near flowering plants
  - At least 40 cms off the ground
  - Sheltered and sunny - south to south-west
  - Fix firmly - bees will be navigating home
Bee, Bird and Bat habitats

Sand Habitat for Bees

Why?

- Most solitary bees in Ireland are mining bees, and make their nests in bare ground or in south facing banks of stable soil, clay, sand or peat.

- Place 1 tonne of Builders Sand in a mound in a field
  - Sunny location
  - South facing slopes
  - Exposed to direct sunlight

- Fence off

- Strim annually to keep shading vegetation under control

- Do NOT spray

- Keep receipt

Bumblebee queens may also use the sand heap to ‘hibernate’ over winter.
Bird Nestboxes

- **Open-fronted**
  - Robin
  - Pied Wagtail
  - Wren

- **Nestbox with hole**
  
  Hole size determines which species use it

  - Blue Tit: 25mm
  - Coal Tit: 25mm
  - Great Tit: 28mm
  - Tree Sparrow: 28mm
  - House Sparrow: 32mm
  - Starling: 45mm

  Boxes for other bird species may be used

- Locate on a tree / post / external wall of a farm building
- Face between North and North-East
- Locate over 2.5 m above ground level
- Tilt slightly forwards to allow moisture drain out
- Mark location
- Clean boxes annually in February
Bat Boxes

**Why?**
- Provide alternative roosts
  - Used April to October

**9 Resident Irish Bats**
- Common pipistrelle
- Soprano pipistrelle
- Nathusius’ pipistrelle
- Natterer’s bat
- Whiskered bat
- Daubenton’s bat
- Brown long-eared bat
- Leisler’s bat
- Lesser horseshoe bat

**Locate Bat Boxes**
- In groups of 3 per tree / post / building in different directions
- Near hedgerows or feeding areas
- Over 4 m above ground level
- Away from lights
- Mark location

**Keep 1 metre radius clear of branches / ivy**