

# Has the honey bee a future?



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# Some facts about honey bees

- **Pollinate 60% of all commercial crops**
- **Contribute £400m annually to the economy**
- **Pollinate 70% of winter forage for birds and small wild animals**



# More facts about honey bees

- **Around 6 billion honey bees in UK**
- **95% maintained by hobbyists**
- **Population declining by around 25% year on year**



# Reasons for decline

- **Reduction in forage due to farming practices**
- **UK obsession with closely mown grass**
- **Extensive use of pesticides**
- **Foreign importations**
- **Weather**



# Changing farming practices

- Enriching soil
- Reduction of hedges
- Monoculture

**Possible solution – wildlife corridors**



# Changing farming practices





# Obsession with mown grass

- Verges
- Publicly owned amenity land
- Industrial estates

**Possible solution – converting unused mown grass into maintained wild flower meadows**



# Obsession with mown grass







# Obsession with mown grass





# Obsession with mown grass





# Extensive use of pesticides

**Neonicotinoids are highly effective, systemic pesticides, applied to seeds that:**

- Kill pollinators over a period of time**
- Affect bees' location senses**
- Are banned in most of Europe but not UK**
- Freely available in most Garden Suppliers**



# Foreign importations



**British dark bee**  
***A m mellifera***

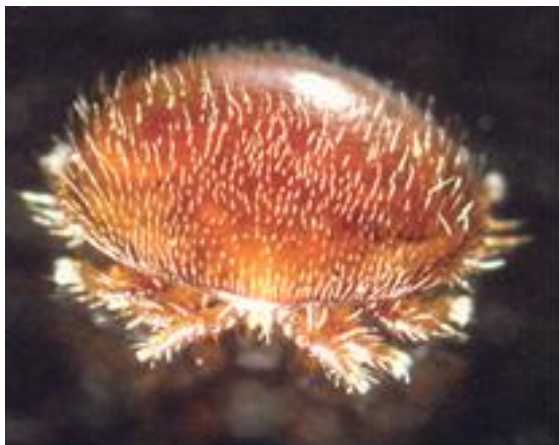
**Italian bee**  
***A m linguistica***



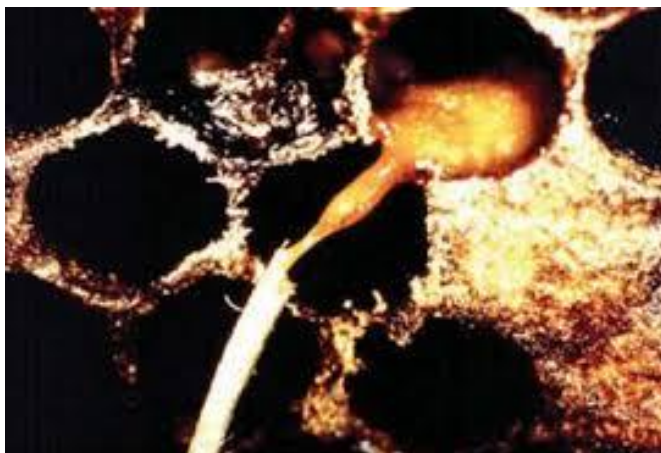
**Carniolan bee**  
***A m carnica***



# Imported diseases



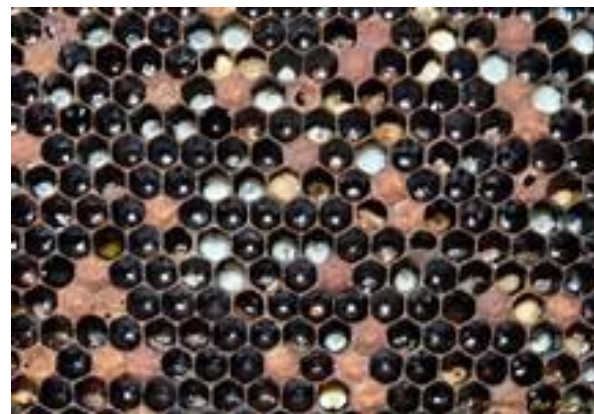
**Varroa mite**



**American  
foul brood**



**European  
Foul brood**



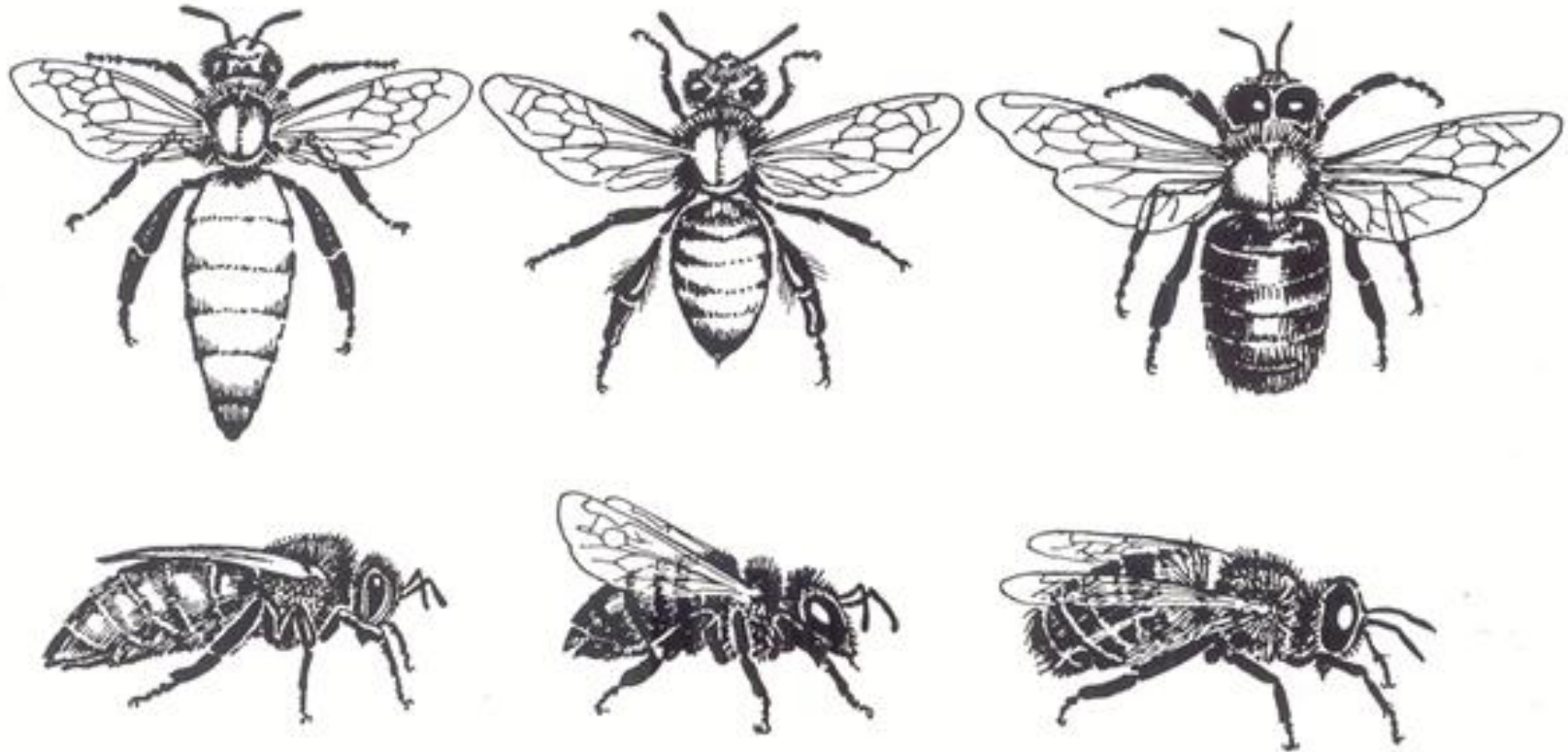


# Weather

**To understand how weather affects bees it is necessary to understand the bees' life cycle**



# Honey bee life cycle



Left to right: queen, worker, drone



# Honey bee life cycle



**Queen starts to lay eggs in mid January**



**Around April / May bees produce queen cells**



**Bees swarm before new queens hatch**





# Honey bee life cycle

**Newly hatched queens**

**MUST**

**mate successfully within 3 weeks  
or will never be able to lay fertile eggs**

**Bad weather may prevent this!**



# Honey bee life cycle

## Honey bees normally live 5 to 6 weeks

- ▶ 0 - 6 days cell cleaning, general hive cleaning
- ▶ 3 - 9 days feeding the brood
- ▶ 3 - 15 days attending the queen
- ▶ 6 - 18 days honey processing
- ▶ 12 - 20 days wax production and comb building
- ▶ 20 - death hive ventilation  
guard duty  
nectar, water & propolis collection

The exception is those bees hatching in October will cluster round the queen and remain largely inactive until the queen starts to lay again around January /February

**These bees have a maximum life span of around 26 weeks**



# Weather

- **Bad weather in Spring prevents queens from mating successfully**
- **Long winters result in “winter” bees dying before “spring” bees hatch**



**We are fighting back**





# **We are fighting back**

- **Breeding native honey bees**
- **Training new and developing beekeepers**
- **Campaigning for wildlife corridors**
- **Lobbying Council to plant wildflowers on waste land rather than cutting grass**



# You can help!

**You can help by:**

- **Reducing use of pesticides**
- **Planting more nectar producing plants**
- **Reducing areas of lawns**
- **Supporting campaigns for wildlife corridors and wildflower meadows**