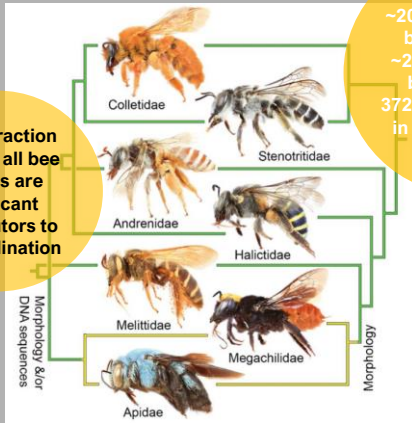


# The other bees - managing wild bees as pollinators

Adapted from Hellström S (2022) The other bees - managing wild bees as pollinators. beeB Multiplier event, march 18, online



(Hymenoptera: Aculeata: Apoidea) are remarkably diverse



~20,355 - species of bees worldwide  
~2,560 - species of bees in Europe  
372 - species of bees in the Baltic states

Only a fraction (12%) of all bee species are significant contributors to crop pollination



The honeybees (*Apis* sp.) remain the single most important crop pollinator worldwide

Concerns about colony losses and disease spread w/ich weaken honeybee populations

Up to 21 species are under active management worldwide as replacement or complements to honey bee pollination

**Bumble bees**  
(Adipae: Bombini)



Eusocial bees with an annual colony cycle.  
Very important pollinators in temperate regions.  
Active at lower temperatures  
Important for effective pollination of tomato, curcubits and blueberry

**Stingless bees**  
(Adipae: Meliponini)



Eusocial bees with pan-tropical distribution  
Effective pollinator of 18 crops  
Important species: *Melipona beecheii*, *Tetragonisca angustula*

**Megachilid bees**  
(Adipae: Megachilidae)



Each female builds her own nest  
Including Mason bees (*Osmia* sp.) and Leafcutter bees (*Megachile* sp.).  
Species that nest in cavities.  
Large populations can concentrated in a small area.

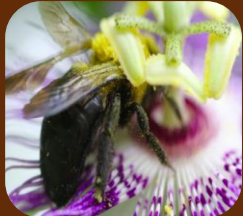
**Megachilid bees**  
(Adipae: Megachilidae)



Alfalfa leafcutter bee (*Megachile rotundata*). Tripling of alfalfa seed production enabled a booming alfalfa industry. Large nesting units are placed in alfalfa fields, and cocoons are extracted and cleaned each year to boost populations

## Other notable examples

Carpenter bees (*Xylocopa* sp.)



As pollinators of passion fruit and Brazil nuts in South America

The Squash bee (*Peponapis purinosa*)



Oligolectic on curcubit plants.  
Efficient pollinator of crops. Nests in the ground close to crops.

Hover flies (Syrphidae)



They are efficient pollinators of crops such as blueberry, and are actively managed!

## Benefits of diverse crop pollinators

### Adaptation to local conditions

Excess honeybee density in the landscape may suppress other bees. Locally managed species are more integral to Ecosystem

### Efficiency

Pollination of certain crops may be much more efficient, creating higher yield and quality compared to honeybee

### Diversification

Complements pollination by honeybees. Less reliance on honeybees may buffer for risks associated with honeybee disease and winter mortality

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