
Swarming Absconding
Laying workers and
their management
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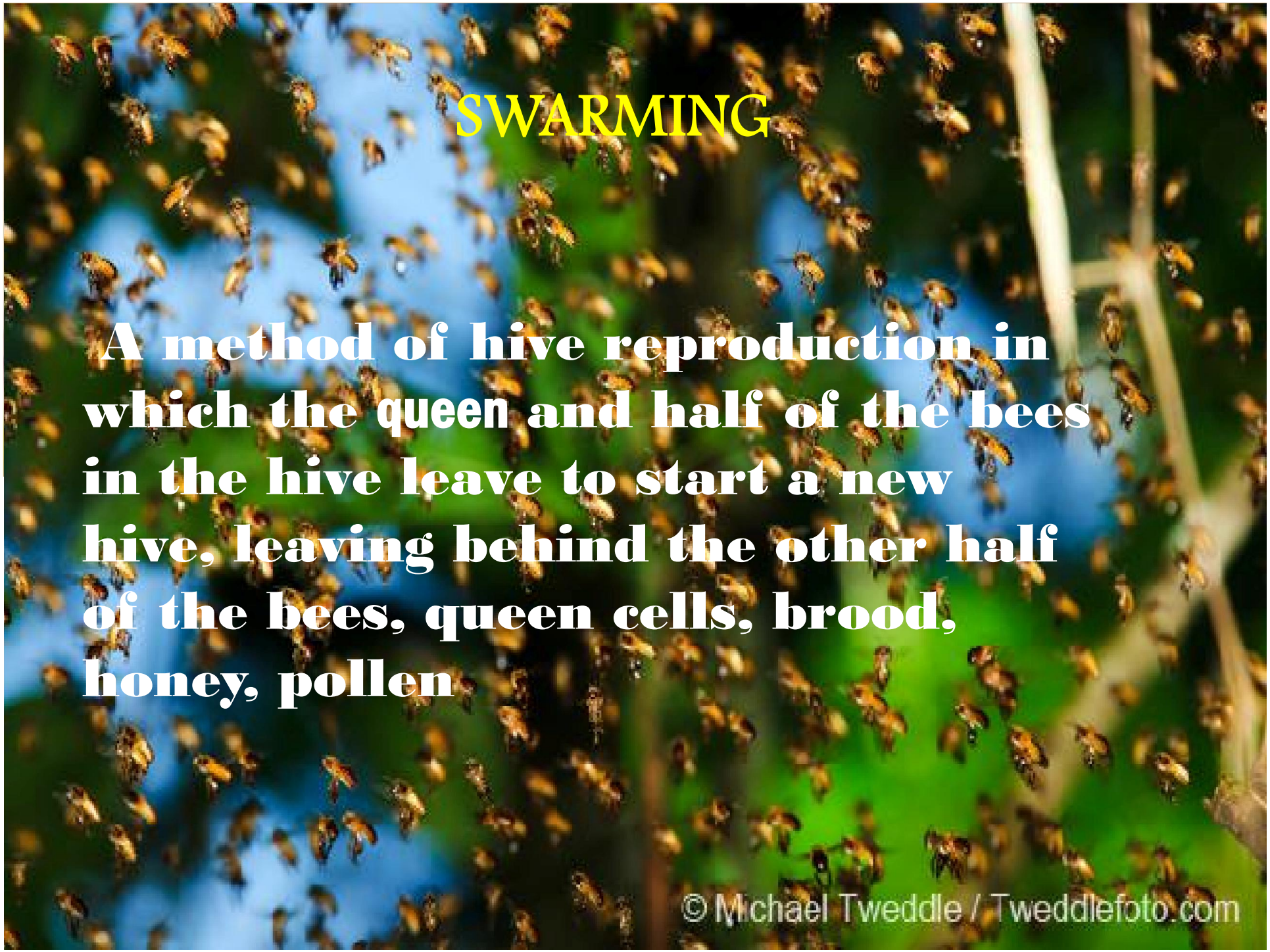
SWARMING
A method of hive reproduction in which the queen and half of the bees in the hive leave to start a new hive, leaving behind the other half of the bees, queen cells, brood, honey, pollen
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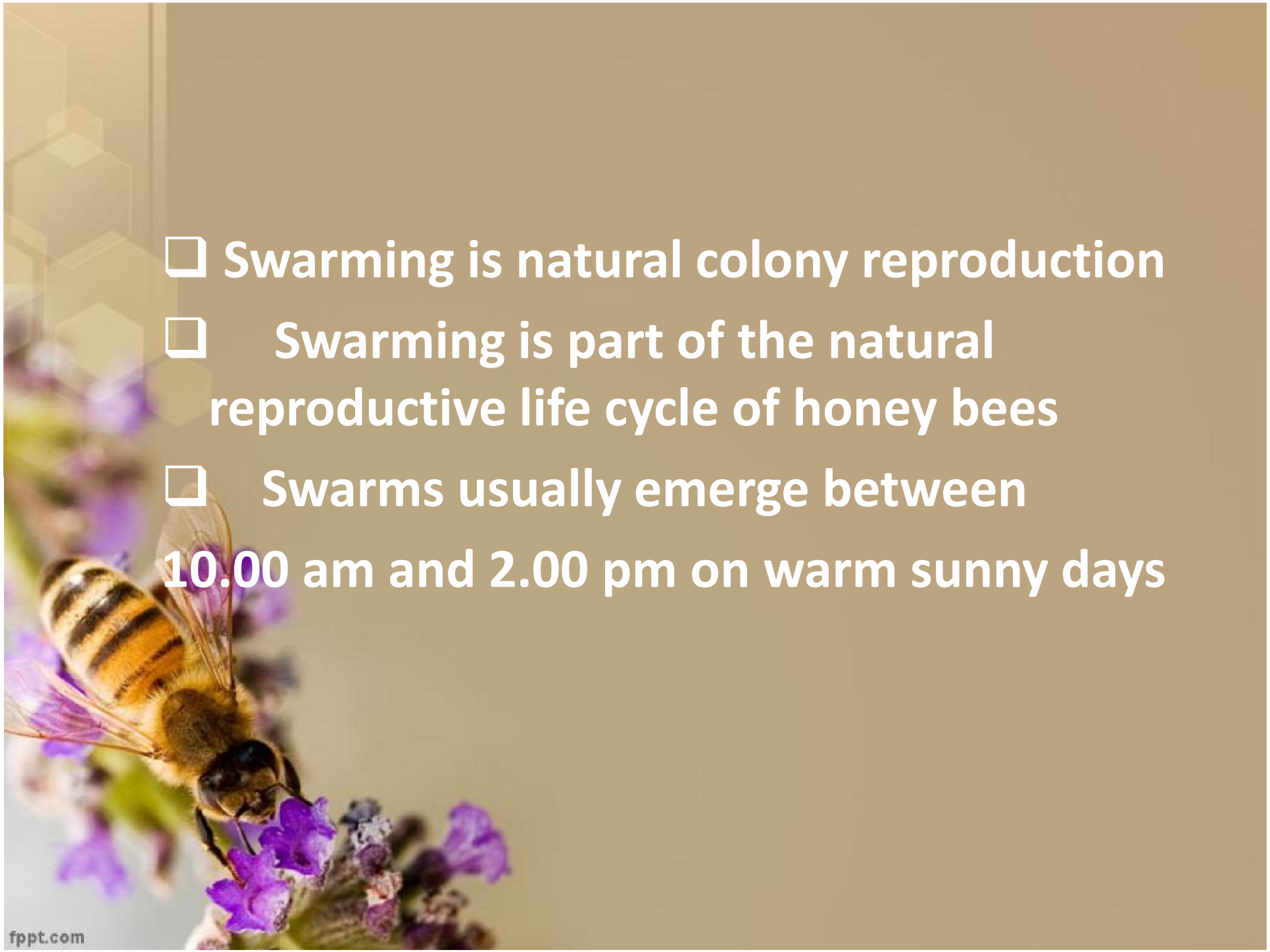


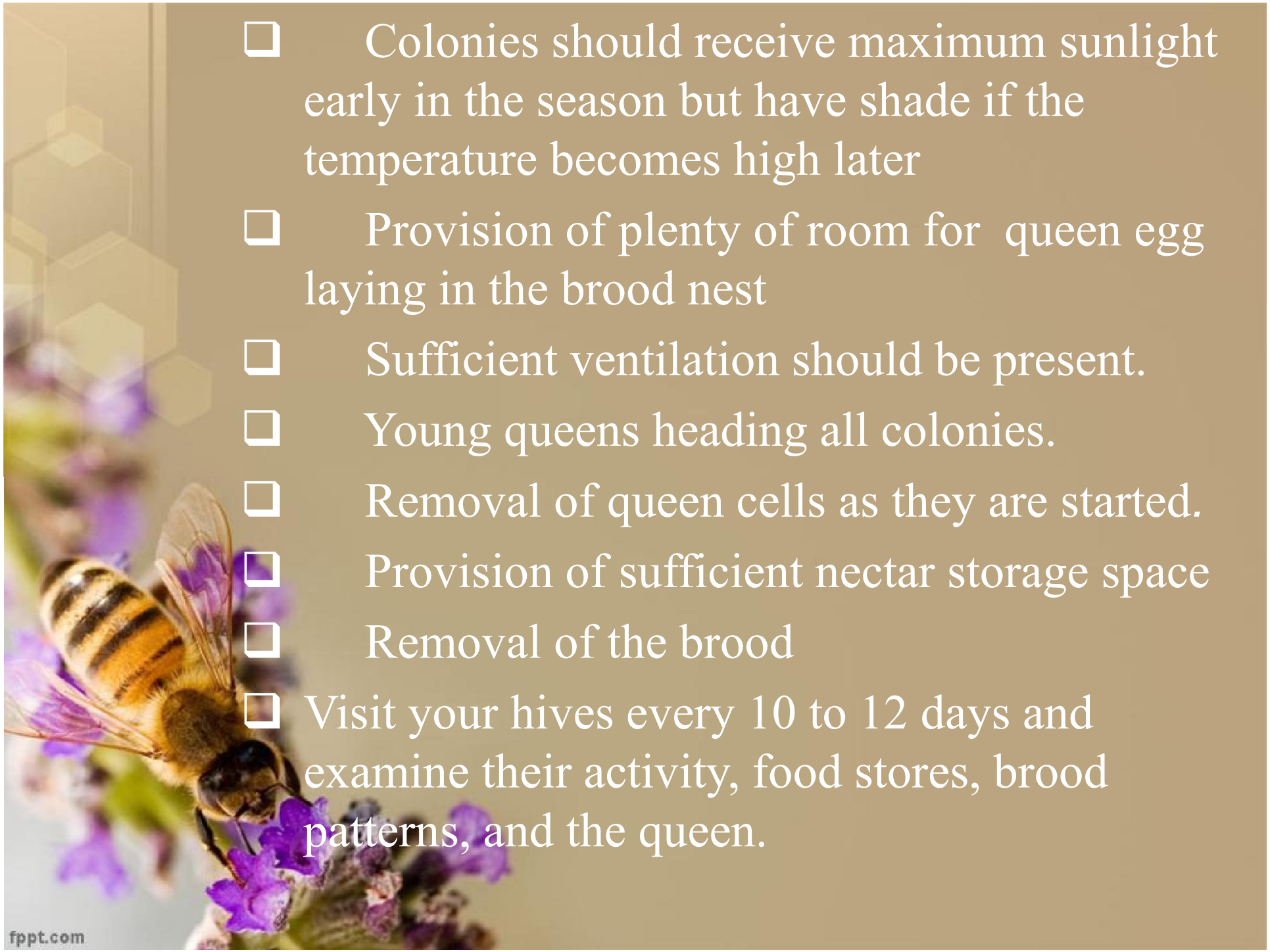
- Swarming is natural colony reproduction
- Swarming is part of the natural reproductive life cycle of honey bees
- Swarms usually emerge between 10.00 am and 2.00 pm on warm sunny days

Why do bee swarm

- Poor ventilation
- Defective comb
- Egg-laying becoming restricted because empty cells are filled with honey
- Decline of pheromone reproduction by the queen
- Disease
- Starvation
- Disturbance from humans or animals
- Pest infestation
- Overpopulation

METHODS OF PREVENTING SWARMS

- Reversing brood chambers
- Reorganizing the Hive
- Splitting a Hive



- Colonies should receive maximum sunlight early in the season but have shade if the temperature becomes high later
- Provision of plenty of room for queen egg laying in the brood nest
- Sufficient ventilation should be present.
- Young queens heading all colonies.
- Removal of queen cells as they are started.
- Provision of sufficient nectar storage space
- Removal of the brood
- Visit your hives every 10 to 12 days and examine their activity, food stores, brood patterns, and the queen.

DEMAREE METHOD

- **STEP 1**

Remove the hive from its floorboard and put a new box with 8 drawn frames

- **STEP 2**

Go through the original brood box and locate the queen. Place her with two frames of sealed brood in the centre of the new box.

- **STEP 3**

  Place a queen excluder on this box and put a super or several supers above the excluder.

- **STEP 4**

  Put the original brood box with remaining unsealed brood on top. Fill up the gap with 2 frames of drawn comb, one on each side. The foraging bees will return to the bottom box where the queen is and the nurse bees will stay with the brood, as if they had swarmed.

  Fit inner cover and roof on the stack.

- **STEP 5**

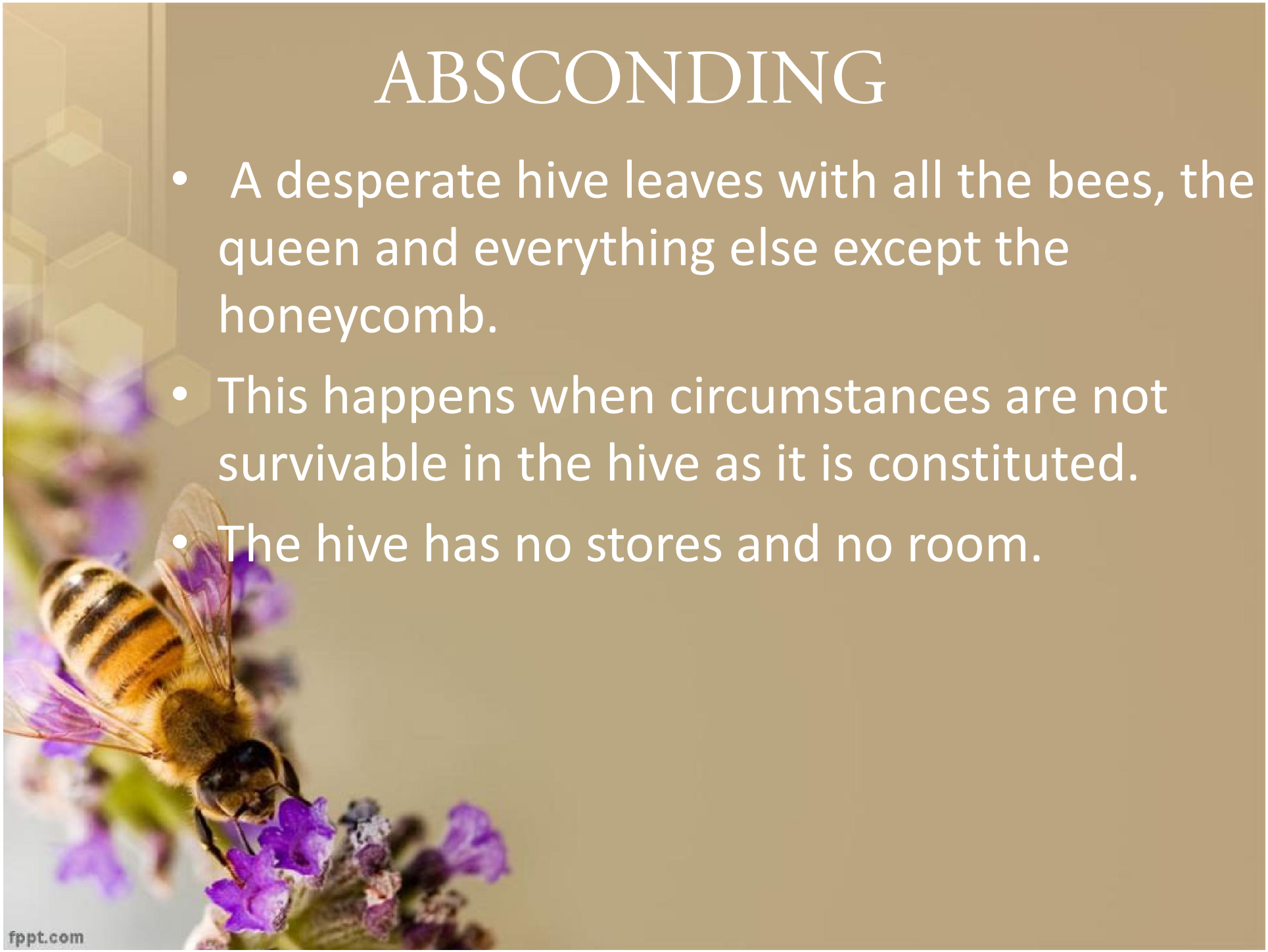
After 7 to10 days, inspect the hive and destroy any queen cells that may have developed in the top brood box. After then none can be started above since larvae less than three days will not be available. As the brood hatches, the combs will be filled with honey.

- **STEP 6**

The procedure of separating most brood from the queen is repeated after 9 to10 days with queen cells destroyed in the top box. Once demareeing is completed the swarming drive is extinguished.

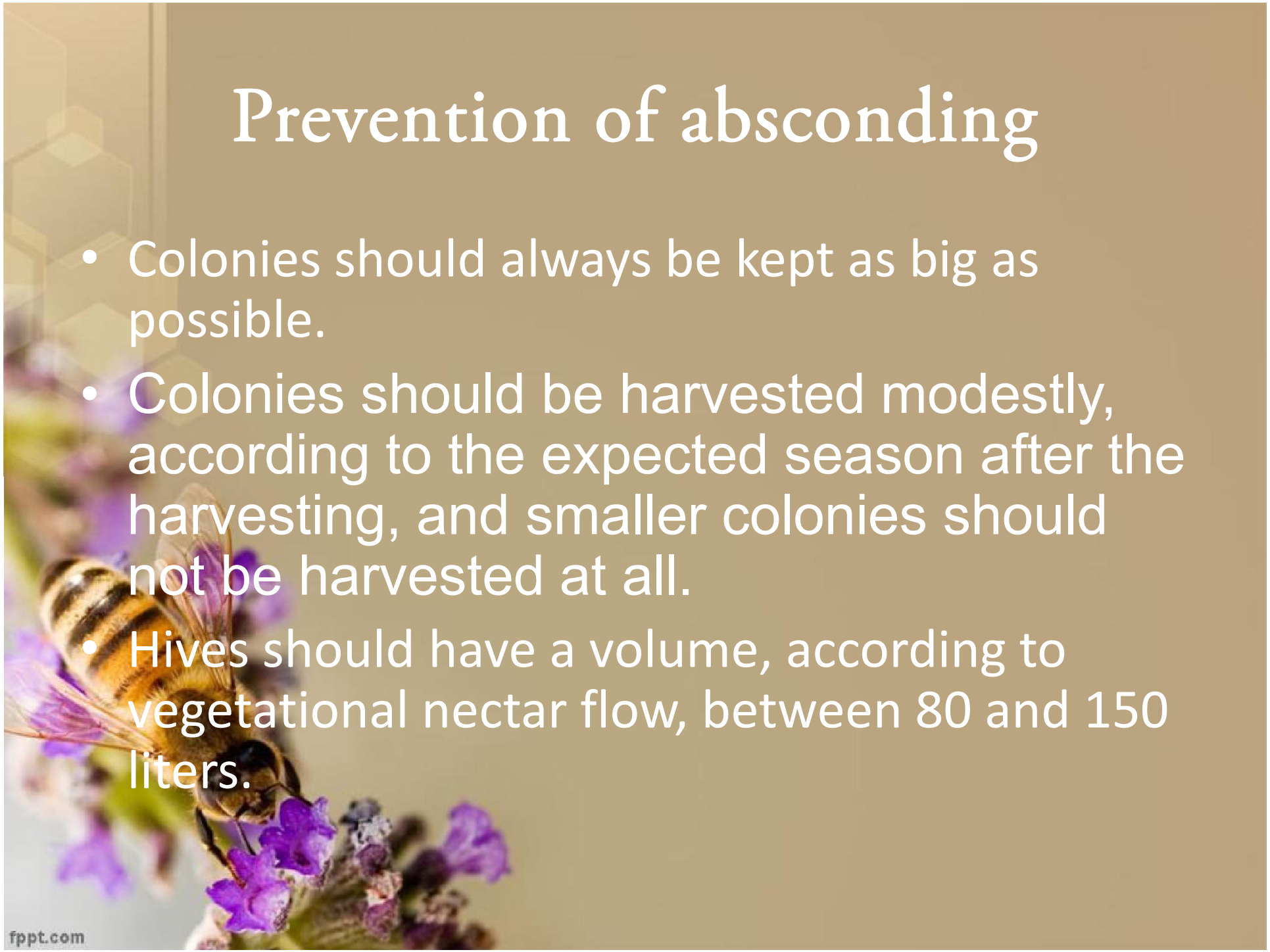
ABSCONDING

- A desperate hive leaves with all the bees, the queen and everything else except the honeycomb.
- This happens when circumstances are not survivable in the hive as it is constituted.
- The hive has no stores and no room.



Prevention of absconding

- Colonies should always be kept as big as possible.
- Colonies should be harvested modestly, according to the expected season after the harvesting, and smaller colonies should not be harvested at all.
- Hives should have a volume, according to vegetational nectar flow, between 80 and 150 liters.



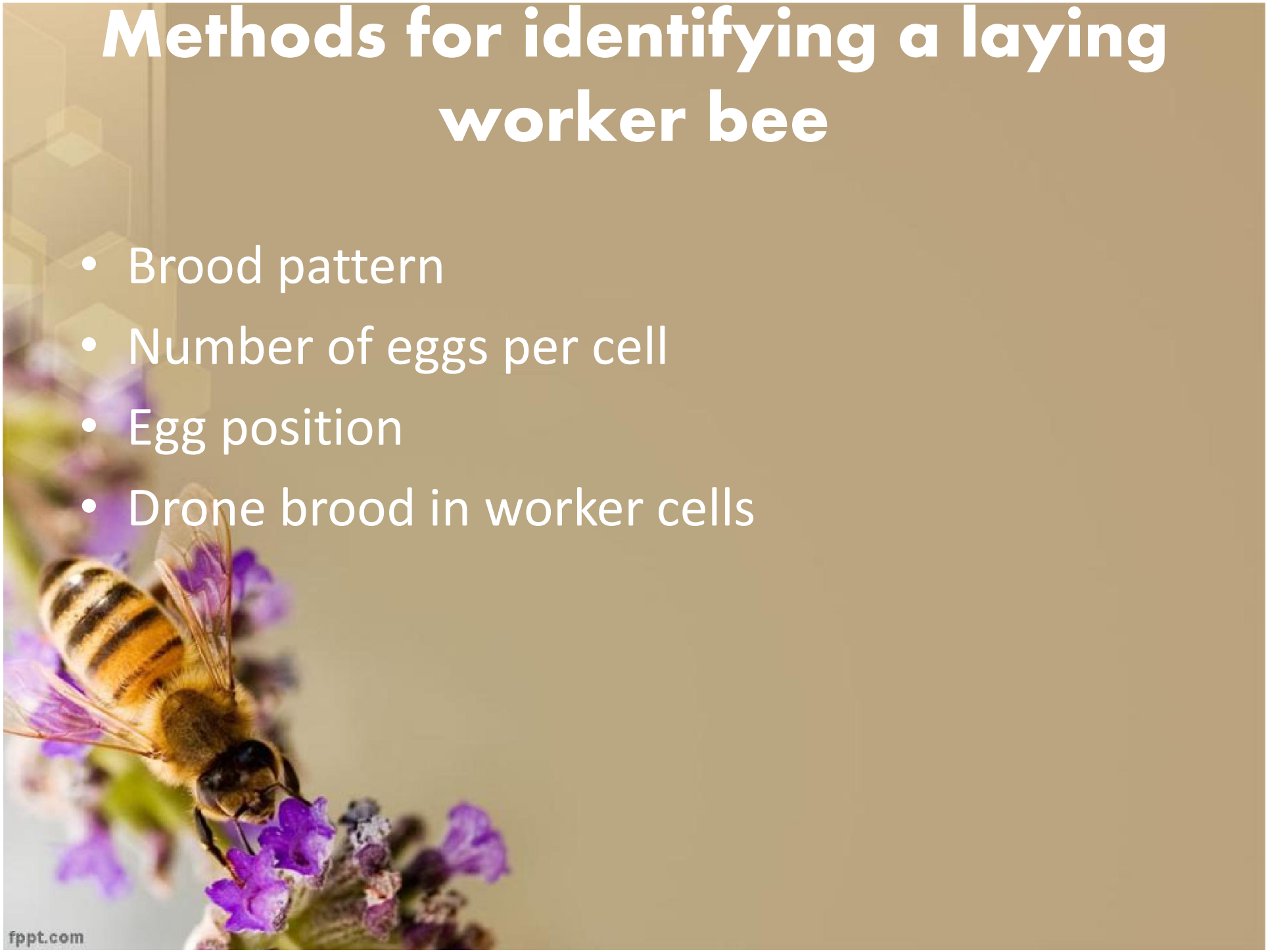
LAYING WORKERS

- Laying Worker is a worker bee that lays unfertilized eggs that develop into drones
- Laying workers are caused if or when a hive becomes hopelessly queenless or queen and brood pheromones drop to negligible levels.

Worker ovary development is normally suppressed by a combination of queen pheromone and brood pheromones, in the absence of a young and vigorous queen, the lack of (or lower level of) pheromones allows some workers to develop ovaries, these are not as well developed as a queen's ovaries would be, but can produce eggs. As there is no mating involved, all the eggs that are produced will be unfertilised

Methods for identifying a laying worker bee

- Brood pattern
- Number of eggs per cell
- Egg position
- Drone brood in worker cells



Drone brood in worker cells

Multiple eggs per cell

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