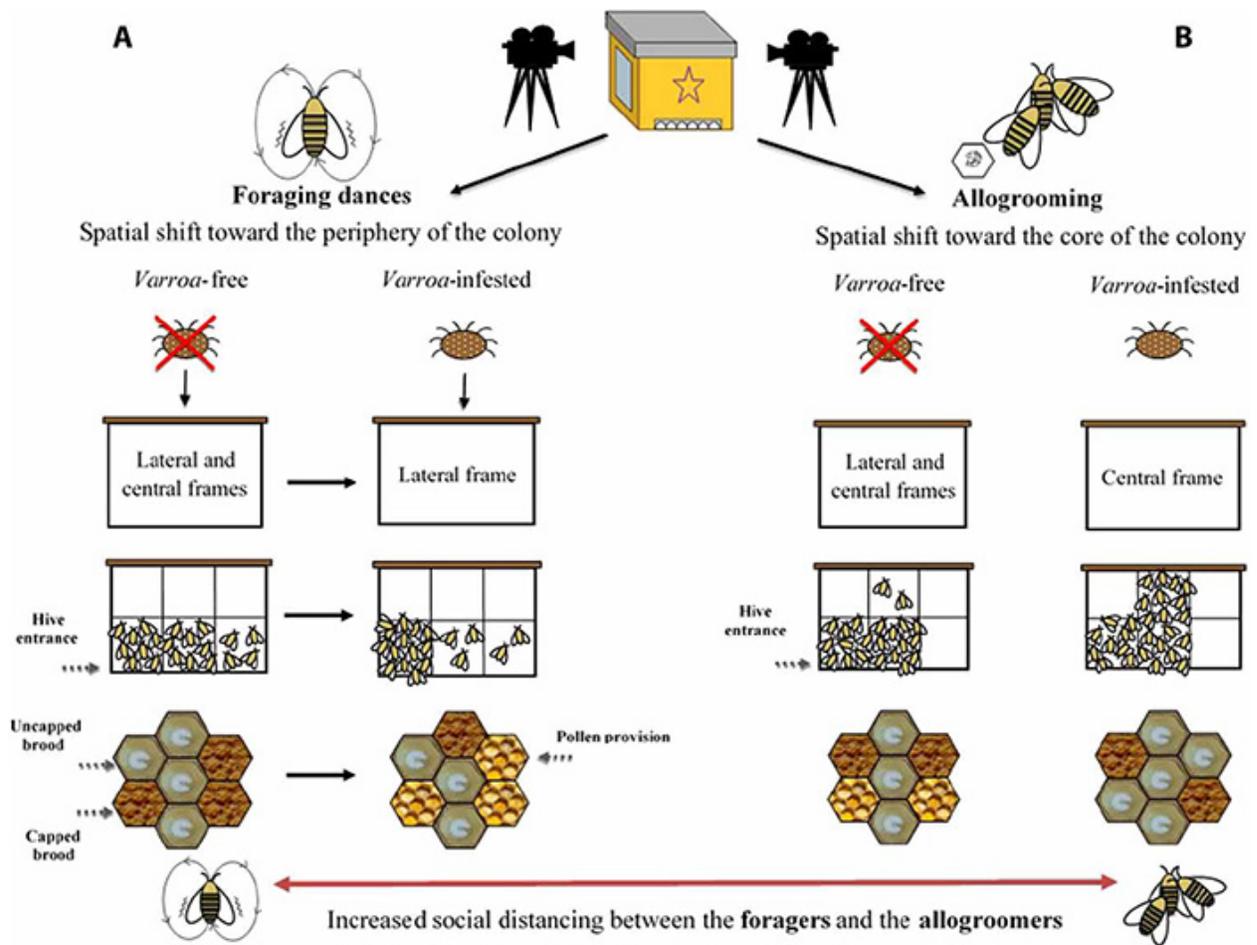


Illustrations of Honeybee hive activity based on data from "Honey bees increase social distancing when facing the ectoparasite *Varroa destructor*," by Michelina Pusceddu, Alessandro Cini, Simona, et al, *Evolutionary Biology* 2021, Published under creative commons 4.0



Above: To read the changes in activity correctly - note where the hive entrance is located. Another depiction of this activity is on page 2.

Life cycle of the *Varroa destructor* mite

- 1 A female mite hitchhikes into the hive on the back of a forager bee
- 2 A bee takes the mite to a brood cell containing a bee larva, near the hive's core
- 3 After the cell is sealed, the mite lays eggs. The first is male, the rest are female
- 4 The young mites feed on the developing bee. Once mature they mate
- 5 Adult female mites leave the cell with the bee. The male mite dies



Here is another diagram showing the change in bee behavior between parasite free and parasite infected hives.

- **Waggle dance** used to communicate the position of food to other bees
- **Allogrooming** removes debris and parasites from another bee
- =0.1% of observations per behaviour

