

Claims

1. A beehive entrance tunnel comprising:
 - an elongate tubular tunnel adapted for fitment to the base of a beehive, the tunnel comprising an interior defined by at least an upper tunnel surface portion, wherein the tunnel comprises a first opening located at one end to thereby define a hive entrance; and
 - wherein the tunnel further comprises a second opening located in the upper tunnel surface portion to thereby define a tunnel exit.

2. A beehive entrance tunnel for a beehive having an outer wall with a beehive entrance aperture, wherein the tunnel comprises:
 - an elongate structure having an entrance aperture at a first end and an exit aperture located at or proximate an opposing end; and
 - wherein the tunnel further comprises opposing sidewalls, each opposing sidewall comprising an outwardly orientated contour located proximate the entrance aperture, the contour operable to form a seal with the beehive outer wall and facilitate pivoting of the exit aperture within the beehive while maintaining that seal.

3. A beehive entrance tunnel comprising:
 - a floor surface and a ceiling surface spaced apart by a sidewall;
 - a first aperture in the sidewall defined between the floor surface and ceiling surface at a first tunnel end;
 - a second aperture located in the ceiling surface and orientated perpendicular to the tunnel entrance.

4. A beehive entrance tunnel according to any of claims 1 to 2, wherein the tunnel comprises a ceiling surface, and wherein the exit aperture is located in the ceiling surface

5. A beehive entrance tunnel according to any of claims 1 to 4, wherein the tunnel has a height providing for no more vertical space than is required by one bee.

6. A beehive entrance tunnel according to any preceding claim, wherein the tunnel provides a path which extends between the exterior of the beehive to a location near the active cluster within the hive.
7. A beehive entrance tunnel according to any preceding claim, wherein the tunnel comprises a sealing surface shaped for engagement with the outer wall of the hive, and shaped to allow movement of the tunnel to desirably position the tunnel exit while retaining the seal with the outer wall of the hive.
8. A beehive entrance tunnel according to any preceding claim, wherein the tunnel comprises an interior height of about 8 to 10mm.
9. A beehive entrance tunnel according to any preceding claim, comprising an entrance width of about 50 to 150mm.
10. A beehive entrance tunnel according to any preceding claim, wherein the tunnel comprises a length of about 50 to 200mm.
11. A method of installing a beehive entrance tunnel in a beehive, wherein the method comprises the steps of:
 - providing the beehive entrance tunnel as claimed in any previous claim;
 - inserting the tunnel into a gap in the outer wall of a beehive such that a seal is created between the region of the tunnel proximate the tunnel entrance and the outer wall of the beehive; and
 - pivoting the tunnel exit aperture to thereby locate the exit proximate a hive cluster.
12. A method according to claim 11, wherein the tunnel comprises an interior height of up to 10mm, an entrance width of at least 50mm and a length of at least 50mm.
13. A method of modifying a beehive, comprising:
 - providing a beehive having a hive entrance; and

modifying the beehive by adding or forming a beehive entrance tunnel having a proximal entrance end at the hive entrance and a distal exit end that extends into an interior of the hive,

wherein invading pests entering the hive encounter host bees in the tunnel.

14. A method according to claim 13, wherein the tunnel comprises at least 2 sections, a first section in which bees must move substantially horizontally to advance towards the hive interior and a second section in which bees must move substantially vertically to exit the tunnel and gain access to the interior.

15. A method according to claim 12, 13 or 14, wherein for a pest not yet in the tunnel, there is no line-of-sight from any position inside the hive to the outside.

16. A method according to any of claims 12 to 15,

wherein during use of the beehive bees enter the beehive by proceeding along the tunnel; and

wherein the tunnel is sufficiently elongated that when host bees are present invading bees or wasps or other pests entering the beehive via the tunnel encounter host bees in the tunnel resulting in attacks in the tunnel by host bees on the invading pests.

17. A method according to any of claims 12 to 16, wherein when bees are present the tunnel exit is at or adjacent the bee cluster.

18. A method according to any of claims 12 to 17, wherein the tunnel is 100mm or greater in length, measured from the entrance to the first point at which bees can exit the tunnel.

19. A method according to any of claims 12 to 18, wherein the tunnel is 150mm or greater in length, measured from the entrance to the first point at which bees can exit the tunnel.

20. A method of modifying a beehive, comprising:

providing a beehive having an exterior wall, a hive interior and an entrance through the wall that allows access and egress of bees to and from the hive interior; and

forming a beehive entrance tunnel sealed to the entrance that is at least 30mm wide, up to 12mm high and extends at least 100mm into the hive interior.

21. A beehive, comprising:

(i) an exterior wall,

(ii) a hive interior, and

(iii) an entrance through the wall that allows access and egress of bees to and from the hive interior;

wherein the hive further comprises

(iv) a beehive entrance tunnel having a proximal entrance end at the hive entrance and a distal exit end that extends into the hive interior,

wherein bees enter the beehive by proceeding along the tunnel;

wherein in use of the hive the tunnel is sufficiently elongated that when host bees are present invading pests, e.g. bees or wasps, entering the beehive via the tunnel encounter host bees in the tunnel resulting in attacks in the tunnel by host bees on the invading bees or wasps.

22. A beehive according to claim 21, wherein the tunnel is 100mm or greater in length, measured from the entrance to the first point at which bees can exit the tunnel.

23. A beehive according to claim 21, wherein the tunnel is 150mm or greater in length, measured from the entrance to the first point at which bees can exit the tunnel.

24. A beehive, comprising:

(i) an exterior wall,

(ii) a hive interior, and

(iii) an entrance through the wall that allows access and egress of bees to and from the hive interior;

wherein the hive further comprises

(iv) a beehive entrance tunnel sealed to the entrance that is at least 30mm wide, up to 12mm high and extends at least 100mm into the hive interior.

25. A beehive according to any of claims 21 to 24, wherein the tunnel entrance, also referred to as its proximal entrance end, is sealed to the hive entrance.
26. A beehive according to any of claims 21 to 25, comprising a plurality of tunnels (iv).