

Washington State University Honey Bee Program

Field Dissection Of the Spermatheca

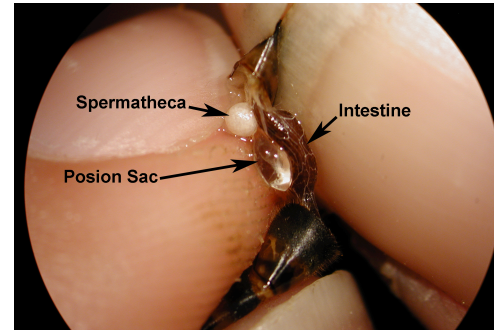
Susan Cobey



Grasp the queen's terminal abdominal segments, dorsally and ventrally (top and bottom). With your fingernails or forceps, pull these segments apart separating them from the rest of the queen's body.

The intestine and a large, shapeless, clear poison sac are exposed. Among this is the spermatheca, a white, spherical structure, about 1 mm in diameter. This will appear whitish and rough in texture, due to a covering net of trachea.

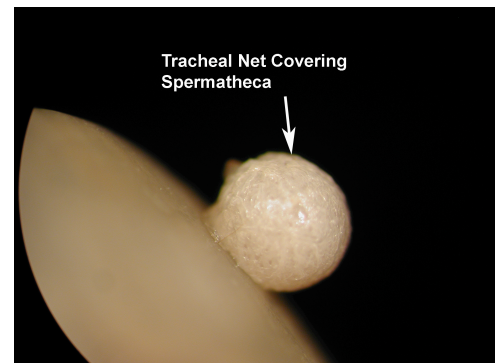
Tease the spermatheca out of the body cavity with your thumbnail. Gently roll the spermatheca between your fingers to remove the tracheal net. This will collapse in a small separated white mass. The color shade and density of the spermatheca indicates the reproductive status of the queen. In the virgin queen, this is crystal clear.



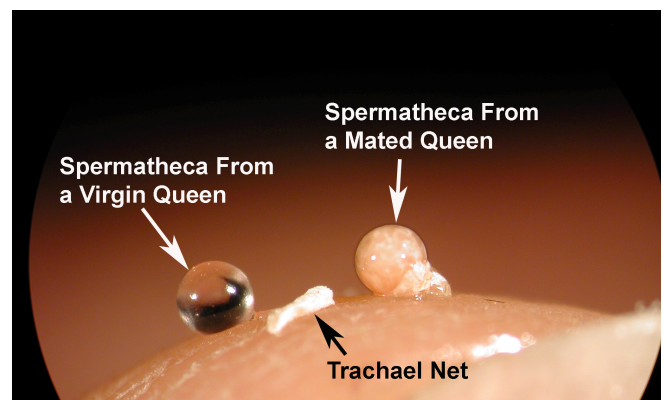
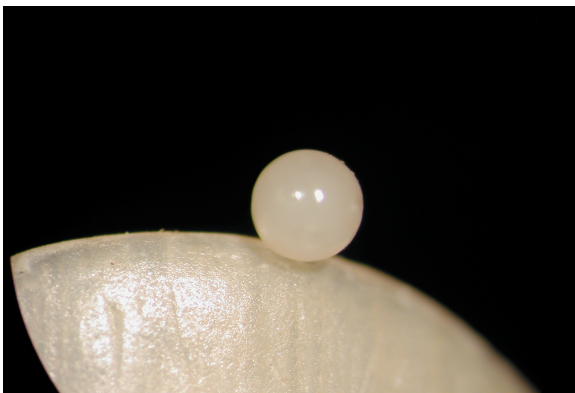
The spermatheca of a well mated queen is the color of drone semen, a creamy, coffee au lait color with a pattern of marbled



swirls. A cloudy or milky whitish appearance, as in the bottom left photo, indicates an inadequate supply of semen. The queen was not mated properly or is old and has used up her stores.



Becoming familiar and with and recognizing the varying degrees of spermatheca coloration and density is a valuable management tool.



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