

# EVERSION OF THE DRONE ENDOPHALLUS

Susan Cobey     [www.honeybee.breeding.com](http://www.honeybee.breeding.com)

## THE PARTIAL EVERSION

To obtain semen, eversion of the endophallus is a two-step process, the partial and full eversion. To induce the partial eversion, grasp the head and thorax of the drone between the thumb and forefinger, ventro-dorsally. Roll or crush the thorax between your fingers. The abdomen of mature drones will contract and a pair of horn like, yellow-orange cornua is exposed. If the abdomen remains soft or the cornua are clear, lacking color, the drone is immature and will not yield semen.



Mature Drone



Immature Drone

## THE FULL EVERSION

To expose semen, the partial eversion is completed by stimulating further contraction of the abdominal muscles. The buildup of pressure and compression of hemolymph and air sacs force the full eversion of the endophallus. Grasp the base of the dorsal abdomen close to the thorax, with the thumb and forefinger. Apply pressure along the sides of the abdomen, starting at the anterior base and working toward the posterior tip. Squeeze and roll your fingers together in one steady forward motion, forcing the complete eversion. The endophallus will flip up with force, exposing semen. Hold the drone downward to avoid contamination with your fingers.



The two steps of the eversion process are preformed within a few seconds. The exposed semen is a creamy, marbled color, with an underlying bed of white mucus. Young drones may have only a thin layer of semen. The semen of older drones is darker, more tightly clumped and easier to separate from the mucus. Have a plentiful supply of mature drones, as not all will yield semen. Keep drones warm and well fed. Inactive drones are difficult to evert and perish quickly.