

Getting Intimate with Bees, Bee Beards & Bee Bikinis

by SUSAN COBEY, TIMOTHY LAWRENCE AND KATHY GARVEY

It's heavy. It's hot. It buzzes. And it tickles. It's the ultimate educational and entertaining activity for beekeepers. Passionate about their fascination of honey bees, the interest in sharing experiences and ideas often goes to the point of obsession. This includes getting intimate with bees and literally looking a bee in the eye. Donning a bee beard provides this experience and an educational opportunity to demonstrate the stimulus response behavior of honey bees.

It's the feeling of being inside of a swarm; the loud buzzing, heavy fanning, the heat generated, the sharp prickle of tarsal claws, the amazing and unforgettable sensations. The pleasant citrus-like scent of the nassanoff pheromone pervades and stimulates the bees to form a cohesive unit. The thrill of looking an individual bee in the eye is often difficult to convey to a non-beekeeper audience observing.



Sue Cobey & Tim Lawrence's Double Bee Beard Wedding Photo. Photo by Ben Lorenzen, 1981

For educational purposes as well as the simple pleasure of the experience, Tim Lawrence and Sue Cobey have organized bee beard events for more than three decades. The first was a double-bee beard at their wedding reception. The invited guests included 15,000 bees, quite appropriate considering they met wearing bee veils at a Northern California commercial queen rearing business.

Over the years the venues of bee beards and bee bikinis have included several locations in 5 states. A favorite was the 4 women bee bikinis at Ohio State University's Rothenbuhler Honey Bee Laboratory. A beautiful sunny spring day, bee pheromones filled the air and returning foragers from field colonies joined the event. Determined to outdo the guys' bee beards, the spectator crowd was awed with the bee bikinis. Considering the hive is a matriarchy, this seemed appropriate.

The staging area was near a large apiary and returning foragers, attracted by the pheromones, joined the swarming party on their return flights. The air was thick with bees and these settled in, increasing the size of the clusters. The large number of bees and the multiple swarms established allowed the making of several beards and bikinis and to move the swarms between people. The weather was perfect and the spring nectar flow strong. Of those watching, any fears soon turned to delight.

As a send off event for Sue's departure from University of California, Davis to Washington State University in the Spring 2012, Sue put on a bee beard fest. The former UCD Harry Laidlaw Honey Bee Lab crew; Sue Cobey, Elizabeth Frost, student Tylan Selby, volunteer Brian Fishback, and visiting scientists Jakub Gabka from Poland and Roger Beelen from Brazil, all donned bee beards in quick succession. Jakub's bee beard was featured on the October cover of the *American Bee Journal*.

With the move to WSU for both Tim & Sue, bee beards have become a favored

event at the Washington State University summer workshops. This year Tim built eleven bee beards in a single afternoon for willing participants. The initial desire to be a spectator quickly turned to "me next" as beekeepers lined up for their turns.

The beekeeping showmanship of bee beard making provides lots of fun, yet the success of a smoothly run event requires preparations and training of the bees. Safety must also be a priority as these are venomous insects. A seasoned bee-beard coordinator who adheres to the necessary preparations and precautions is essential. If seasonal and weather conditions are not right, the event must be postponed until the proper circumstances are met. The person being covered with bees must be comfortable unveiled, accustomed to routine stings, and be calm and willing to



In preparation, establishing a swarm on a stand with a caged queen and jar of syrup.



Tim breaks the cluster to begin training bees.

listen and follow directives of the bee beard coordinator.

Preparations and timing are critical as conditions play a major role. The event is best performed in the spring or early summer when the essential elements are available; a high population of young nurse bees in colonies; a steady nectar flow; and several days of predictable warm, sunny weather.

The spring swarm season is optimal, as colonies have a high population ratio of young nurse bees. An awareness of a change in the weather, overcast conditions or a drop in the barometric pressure must be recognized as these can change the temperament of bees. Temperament can also be affected by the availability of nectar. A morning flow cut off in the afternoon can result in foragers returning empty.

To obtain a high proportion of young nurse bees for the event, it's essential to

shake bees from the brood nest of several colonies. Young bees tend to have good temperament, less venom and are less defensive, compared to field bees. Young bees also have a high tendency to cluster and stay with the queen. Ensuring these factors are present make it much easier to shape and form the cluster and to train the bees.

Training the bees to swarm and re-cluster in a natural manner increases the ease of making bee beards and eliminates the need to scoop and scatter bees where they are desired. The training involves establishing a swarm, breaking and reforming the cluster. This allows maintenance of control and allows a person to step easily into and out of the bee beard or bee bikini activities.

To establish the initial swarm, nurse bees are shaken from the brood nest of several colonies into packages. Caged mated queens are placed in the packages to stabilize the bees and the packages are fed thin syrup and held a few hours or overnight in a cool, dark, well-ventilated room. The swarm stands are set in place. The stand consists of a post with a wooden cover supporting a jar of syrup and shading a one-foot square piece of hardware cloth suspended below. This screen provides support and a place for the bees to cluster.

Toward dusk the swarms are established on the posts. The queens are removed from the packages and their cages tied to the hardware cloth on the stands. The package bees are shaken and encouraged to cluster on the stand with light smoke, attracted by their queen. A jar of sugar syrup is placed on the stand and the newly established swarms are left to settle overnight.

The next morning, three to four hours before the big event, the training begins in earnest. The swarm, clustered on the hardware cloth, is lightly shaken so about half of the bees become airborne. The bees will reform the clusters with their caged queens on the stands. The clusters are broken several times, at increasingly more

frequent time intervals, leading up to the first bee beard.

Each time the swarm clusters are broken, the bees in flight are encouraged to reform their clusters. A light smoking of the bees on the ground will encourage these bees to rejoin the cluster. The bees very quickly become accustomed to the behavior of breaking the cluster and reforming.

Pheromone lures are used to control, form, and maintain the bee beard cluster. Several live mated queens and a synthetic queen mandibular gland pheromone, QMP, and/or nassanoff gland pheromones can be used. For greater success, a piece of beeswax impregnated with geraniol and citral, major components of nassanoff pheromone, can also be used.

After the bees are trained, it's now time to replace the stand with the person to be bee-bearded. In preparation and to discourage bees from clustering on unwanted areas of the face or body, a dab of insect repellent is used around the eyes, face, ears and women's cleavage. If it makes the person more comfortable cotton balls can be inserted into the ears to prevent crawlers. Tight-fitting clothing should be worn so bees do not get stuck in the folds or between the skin and clothing.

Now ready, beekeeper attendants with smokers are nearby to address any safety issues. The person to be bee-bearded stands next to the swarm on its post. The cluster is again broken and this time the stand is removed. The person takes a step into the location where the support post previously stood. The caged queens are removed from the post and attached to the person, usually around the neck. Pheromone lures can be strategically located on the person's body to help shape the bee cluster.

Once the bees are settled and shaped, the person can move, walk around and solicit a kiss or handshake from the beekeeping audience, provided participants are willing. When several swarms are established it's common to make several bee beards and



(l) Tim shakes the swarm from the stand while Sue takes position, 2005. (r) Steve Sheppard, WSU Field Day Workshop, 2013



A four bee Bikinis at Ohio State University, 2005 (l to r) Jeri Wright, Sue Cobey, Christen Corey and Berma Esmen



Bees forming on Nick Naeger with his New World Carniolan T shirt.



Liz Frost with several swarms forms a body bee beard, UCD 2012.

take a group photo once all the bee beards are formed. Or, bee beards can be made in sequence, one person jumping out and another standing in, prepped and waiting. Or, several swarms can be combined on one person, willing and capable to take the heat and weight of the bees.

Emphasizing safety precautions, preparations must include an established signal, in case the person covered with bees feels a need to get out quickly. The signal should be non-verbal, as bees covering the chin and mouth can make it difficult to talk. A simple hand signal works well.

Getting out and removal of the bees is easy. The bee-covered person stands next to the staging stand or next person to be bee-bearded and takes one jump straight up. The cluster drops to the ground and the person takes a few steps back and slowly walks away from the area. The beekeeping attendant helps remove the queens and pheromone lures, and brushes off the remaining bees, while providing cool white smoke.

Bee removal is the most likely time a sting or two will occur. This is usually the result of improper movements; waving the arms; shaking back and forth; walking forward into the cluster; or wearing clothing that can trap the falling bees. The practice of bee bearding should be limited to seasoned beekeepers because a sting under the cover of bees can be difficult to remove. If several stings occur during the process, it's time to remove the bees. Calmly, the attendant beekeeper is signaled with a prior determined signal. The beekeeper coordinator instructs the bee-bearded person to proceed through the steps as described above. Once the person signals they want out, the bee removal process should start immediately in a deliberate and calm manner.

When the bee bearding activities are finished, the bees are hived. A hive box, or boxes supplied with the caged queens and combs with food stores are placed in the staging area. The bees are shaken in.



Roger Beelen and Jakub Gąbka, visiting scientists at UCD in 2012, transfer bee beards between them.

Jamie Strange, WSU Field Day Workshop





Tim Lawrence bee beard demonstration at WSU Field Day Workshop, 2011

When settled, the colony can be moved to an apiary after dark.

To spectators, this looks fun and easy. Though behind the scenes proper preparations are necessary to assure the event runs smoothly. Bee beards are not for the novice, as this can be dangerous if conditions are less than optimal. Attempts should not be made by the inexperienced. Fear and panic can induce mass stinging. No one should be allowed to be bee bearded unless they have experience with bees, routine stings and are completely comfortable with the process. An emergency plan must always be in place, supported by qualified emergency personnel available to administer oral antihistamines and epinephrine as appropriate.

The objective of this seemingly hammy event is to share a passion, celebrate these amazing animals, and demonstrate the behavior of the honey bee superorganism in a positive way. On a more personal level, it gives beekeepers the experience of being inside a swarm. A bee beard event, well planned and performed safely and professionally, is a marvel to the public and an intimate experience for the beekeeper.

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