

THE BUZZ STOPS HERE

an exhibition of encaustic artwork
about the science and conservation of bees

Art.Science.Gallery.
Austin, TX

in partnership with

International Encaustic Artists

April 18 - May 30, 2015

© Art.Science.Gallery. 2015
cover design + layout by H. Gillespie
all images are © by the artists
and are used here by permission



916 Springdale Rd.
Building 2 #102
Austin, TX 78702
512.522.8278
www.artsciencegallery.com

ENCAUSTICS

REPURPOSING THE ARCHITECTURE OF INSECTS

Art has substance, literally. This substance, or medium, can take any form, including products manufactured by fellow animals. Of the world's animal-derived media, it is the wax of honey bees (*Apis* spp.) that has most profoundly impacted artists, particularly those creating encaustics. The honey bee is a builder and an architect, and the wax comb constructed by a society of honey bees transcends a bodily product; it serves as the substrate that houses and shelters brood and food, and the platform for all of the nest activities, including dancing, which can communicate the location of food to nestmates.

Artists have resourcefully sampled from countless humans and nonhuman animals in the pursuit of their creations. Artists have used living and dead bodies, body parts, organs, tissues, cells, bodily fluids (blood, excreta, carminic acid in cochineal extract) and outgrowths (feathers, nails, hair). Examples of such works include ant colonies displacing colored sand, a preserved shark in a tank, the incorporation of tanned pig hides, and textiles dyed with cochineal.

At least as innovative a pursuit can be the co-opting of animal products that were originally secreted or constructed for use by the animals themselves. Some animals secrete bodily fluids that supply nutrition, or that protect their own bodies. Artists sample nutritious secretions when taking milk from cows (casein paint; *Le Luxe II* by Henri Matisse) or honey from honey bees (binder, or main focus of work; *Honey Pump* by Joseph Beuys¹). Entire museums house art made of exudates produced by insects to protect themselves, including silk from moths^{2,3} and lacquer from lac bugs^{4,5}. Many nonhuman animals are architects⁶, and artists occasionally collaborate with these

architects or appropriate their creations, using the silk-woven cases constructed by caddisfly larvae⁷, the cocoons of silkworm moths⁸, webs of spiders^{9,10}, paper nests of wasps¹¹, and nests of birds¹². The architecture of innumerable other animals holds unrealized potential for the human artist, from mud dauber wasp nests to beaver dams.

Of all the animal sources for art media, many of which arise from insects¹³⁻¹⁵, it is the wax comb of honey bees that is the most versatile, malleable, and magnificent of nonhuman animal constructs. Wax can be melted, reshaped, sculpted, pigmented, and indefinitely reused. A wax work can encase elements, or resemble a palimpsest in its layered translucency. Stingless bees (e.g., *Trigona* spp.) produce wax as nest construction material that has been used in rock art and figurines in Australia^{16,17} and pre-Columbian sculpture using the lost-wax process in Latin America¹⁸. Honey bees (*Apis* spp.), however, produce the intricate combs of wax much of the world associates with beeswax (Figs. 1,2), and to which encaustics owes its greatest debt.

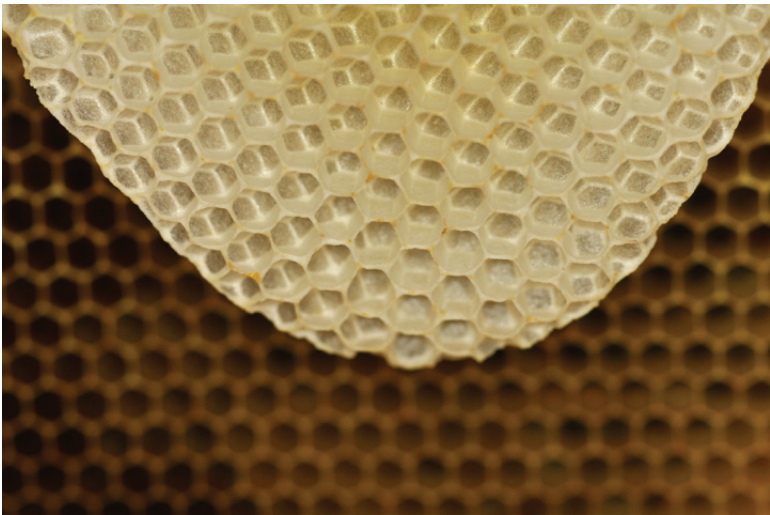


Figure 1. Freshly constructed wax comb by Western honey bees (*Apis mellifera*). Photograph by Barrett Klein.



Figure 2. Parallel sheets of comb with honey bees (*A. mellifera*).
Photograph by Barrett Klein.

What begins as scales, produced from eight wax glands and projecting from the bellies of honey bee workers (Fig. 3), is the material that has lit cathedrals for centuries, sealed goods from food to formal decrees, and made possible art techniques that have helped shape our appreciation of the world. Western honey bee (*A. mellifera*) wax primarily consists of hydrocarbons and esters, but includes an estimated 300 chemical constituents¹⁹. Paired wax glands produce scales, each of which is extracted from a pocket on the underside of the abdomen by spines forming a brush on the hind leg²⁰. Wax is passed from hind leg to mouth, where the bee chews wax clumps until softened before adding them to the comb²¹. Wax production is costly, with 1,100 scales yielding one gram²² and one gram yielding 20 cm² of comb surface²³.

Art.Science.Gallery., under the direction of Hayley Gillespie, and International Encaustic Artists (IEA) have partnered to assemble *The Buzz Stops Here*, an exhibit focusing on the science and conservation of bees in which encaustic artists reflect on the very material with which

their art is primarily defined. Seventeen pieces by twelve artists are featured. Each piece concerns bees and uses hot wax painting in some form. How an artist used beeswax varied, with artists either (1) recycling, by presenting a modified version of the original wax comb, (2) replicating, manufacturing a replica of the comb, or (3) repurposing the wax with no evidence of the original comb structure. All three approaches are on display in this exhibit, sometimes in combination.

Recycling of actual comb exists most conspicuously in three works, each of which uses an apiculturist's frame as canvas. Patti Akesson's *Waggle Dance (Angle)* and *Waggle Dance (Pattern)* each display schematic representations of a honey bee's waggle dance, in which a forager can communicate to her nestmates the direction and distance to an advertised site, while Beate Kratt's *Traces* offers a more philosophical look at the lives of the bees. Replication, or biomimicry, is uniquely represented by Candace Law's *Seeking Insight II*, with a human attempt to learn from and duplicate honey bees' comb-building engineering feat. The remaining works have repurposed the comb by using the melted wax to convey bee-related messages.



Figure 3. Honey bee (*A. mellifera*) with wax scales projecting from the ventral side of her metasoma (posterior body region), against white (left) and in a hive (right). Photographs by Helga Heilmann, photographer with the BEEgroup, University of Würzburg (www.beephotos.de).

Art.Science.Gallery. and IEA have composed an exhibit thematically concentrating on the science and conservation of bees during a time when bee species are under notable threat by a suite of stress-inducing factors, including parasites, pesticides, and lack of flowers²⁴. Many of the artists' works reflect a concern based on these factors. Among these, Erin Anfinson imaginatively depicts fantastical visions of parasitism in the *Collapse* series and Harriette Tsose offers a pesticide-haunted elegy to honey bees in *The Dead Bee Scrolls Triptych*.

The Buzz Stops Here represents a variety of perspectives and inspirations tied to bees, well beyond the threat of colony collapse disorder and bees' declining health. Barbara Walton found inspiration by directly observing a swarm of honey bees for three days (*Swarm #1* and *Swarm #2*). Anastessia Bettas found her direction when researching a scientific account of honey bee navigation by Cheeseman et al.²⁵ (*Bee Journey*). Taking a completely different approach, Phaedra Taylor chose to probe the rich folklore and fairy tales of honey bees to produce her dreamlike *Telling the Bees*.

It may be worth noting the fitting irony that melting down one of nature's grandest works of engineering and architecture is at the core of creating each work of encaustics. The beautiful works celebrating the lives and plight of bees in this exhibit are a testament to our appreciation of the pollinators, the honey-makers, and the architects who form societies that, in some ways, are more highly derived than our own. Art can educate and inspire, and by recycling, replicating, or repurposing the very material produced by species in trouble, artists can more intimately explore issues and challenges we all face in an environmentally uncertain future.

BARRETT ANTHONY KLEIN
University of Wisconsin – La Crosse
barrett@pupating.org

REFERENCES

1. Beuys J. 1997. Honey is flowing in all directions. Heidelberg, Edition Staeck, unpagged.
2. China National Silk Museum. <URL: <http://en.chinasilkmuseum.com>>. Accessed 4 April 2015.
3. The National Silk Art Museum. <URL: http://nationalsilkmuseum.com/The_Museum.php>. Accessed 4 April 2015.
4. Museum of Lacquer Art Münster. <URL: http://www.museum-fuer-lackkunst.de/en/museum_of_lacquer_art>. Accessed 4 April 2015.
5. Wajima Museum of Lacquer (Urushi) Art. <URL: http://www.city.wajima.ishikawa.jp/art/home_english.html>. Accessed 4 April 2015.
6. von Frisch K. 1974. Animal Architecture. Harcourt Brace Jovanovich, Inc., New York, NY, USA.
7. Duprat H, Besson C. 1998. The wonderful caddis worm: sculptural work in collaboration with Trichoptera. Leonardo. 31:173-177.
8. Kadonaga K. 2001. Kazuo Kadonaga. Los Angeles, CA, Japanese American Cultural and Community Center. 48pp.
9. Cassirer I. 1956. Paintings on cobwebs. Natural History. 65:202-220.
10. Bristowe WS. 1974. Art on a cobweb. Animals. 16:62.
11. Paperwasp, by Kristian Brevik. In: ECLOSION: a juried group exhibition of insect-inspired art. Art.Science.Gallery., Austin, TX, USA. p.37. <URL: <http://issuu.com/artsciencegallery/docs/eclosioncatalogue>>. Accessed 4 April 2015.
12. Curtis E. 1983. Joseph Cornell: Dime store connoisseur. Archives of American Art Journal. 23:13-20.
13. Hubbell S. 1987. Onward and Upward with the Arts. The New Yorker. 63 (Nov-Dec):79-89.

14. Klein BA. 2003. Par for the palette: Insects and arachnids as art media. In: *Insects in Oral Literature and Traditions*. Motte-Florac, E. and J.M.C. Thomas, eds. Peeters, Paris, France. <URL: <http://pupating.org/culture.php>>. Accessed 4 April 2015.
15. Klein BA. 2007. Insects in Art. In: *Encyclopedia of Human-Animal Relationships: A Global Exploration of Our Connections with Animals*. Bekoff, M., ed. Greenwood Press, Westport, CT, USA. 1:92-99. <URL: <http://pupating.org/culture.php>>. Accessed 4 April 2015.
16. Brandl E. 1968. Aboriginal rock designs in beeswax and description of cave painting sites in western Arnhem Land. *Archaeology & Physical Anthropology in Oceania*. 3:19-29.
17. Langley MC, Taçon, PSC. 2010. The age of Australian rock art: a review. *Australian Archaeology*. 71:70-73.
18. Crane E. 1983. *The Archaeology of Beekeeping*. Cornell University Press, Ithaca, NY, USA.
19. Tulloch AP. 1980. Beeswax – composition and analysis. *Bee World*. 61:47-62.
20. Snodgrass RE. 1956. *Anatomy of the Honey Bee*. Comstock Publishing Associates, Ithaca, NY, USA.
21. More D. 1976. *The Bee Book*. Universe Books, New York, NY, USA.
22. Brown RH. 1981. *Beeswax*, 2nd ed. Bee Books New and Old, Burrowbridge, Somerset, UK.
23. Seeley TD. 1985. *Honeybee Ecology: A Study of Adaptation in Social Life*. Princeton University Press, Princeton, NJ, USA.
24. Goulson D, Nicholls E, Botías C, Rotheray EL. 2015. Bee declines driven by combined stress from parasites, pesticides, and lack of flowers. *Science*. 347. DOI: 10.1126/science.1255957
25. Cheeseman JF, Millar CD, Greggers U, Lehmann K, Pawley MDM, Gallistel CR, Warman GR, Menzel R. 2014. Way-finding in displaced clock-shifted bees proves bees use a cognitive map. *Proceedings of the National Academy of Sciences, USA*. 111:8949-8954.