

Geography Alumni of The University of Massachusetts Amherst,

Over winter break I applied the \$450 I was awarded last year to attend the American Beekeeping Federation annual conference in Jacksonville, Florida in December, 2015.

My time at the conference was well spent. I was able to establish several valuable connections in my research on urban beekeeping. I also gained valuable knowledge regarding the approaches to beekeeping at the various scales of the industry—from hobbyist beekeepers to commercial truckers. This conference helped me identify several of the major concerns at each scale of beekeeping. Varroa mites have consistently been the primary driver of colony loss, especially since the 1980s and the rapid dissemination of a variety of pesticides. The resulting loss of immune system strength in most American colonies has led to the more recent epidemic of Colony Collapse Disorder (CCD).

During the conference I discovered that CCD was much more of an issue for commercial beekeepers, rather than hobbyists. The scale, demands, and methods of commercial beekeeping are the most common factors associated with this disproportionate occurrence of CCD. I spent a lot of my time at the conference looking for “urban” beekeepers—who I have classified as any beekeeper (though they are overwhelmingly hobbyist beekeepers) that keeps bees in residential or metropolitan areas, rather than on a farm or open field. The dearth of such beekeepers helped inform the direction that my thesis has subsequently taken.

After this conference I was extremely curious as to why, given the rise of sustainability movements and the push for urban agriculture, it was so difficult to find urban beekeepers. Thus I have finally honed my research approach to discovering, through ethnographic interviews and surveys and policy research, how the various beekeeping regulations of individual towns and cities in Massachusetts shape the apicultural landscape of the state.

During the conference I also managed to solidify a working relationship with the head of the Massachusetts Apiary Inspection Department, Kim Skyrn. With her assistance, I am compiling data on the number of beekeepers, by county, who are registered with an associated beekeeping organization. I intend to create an open source web-based map that can be used by beekeepers in the state to continuously compile data on varroa mite infestations, varroa mite treatment methods, honey production, and instances of bear attacks on hives—all of which are issues which inform public policy and influence the beekeeping regulations that towns adopt. This information will also prove useful in my assessment of the beekeeping landscape of Massachusetts in regards to the policies created to promote the nationally recognized benefits of pollinators (ecosystem services, economic benefits, and sustainability) and to reduce the threats posed to honey bees (varroa mites, pesticides, bears and other pests, etc.).

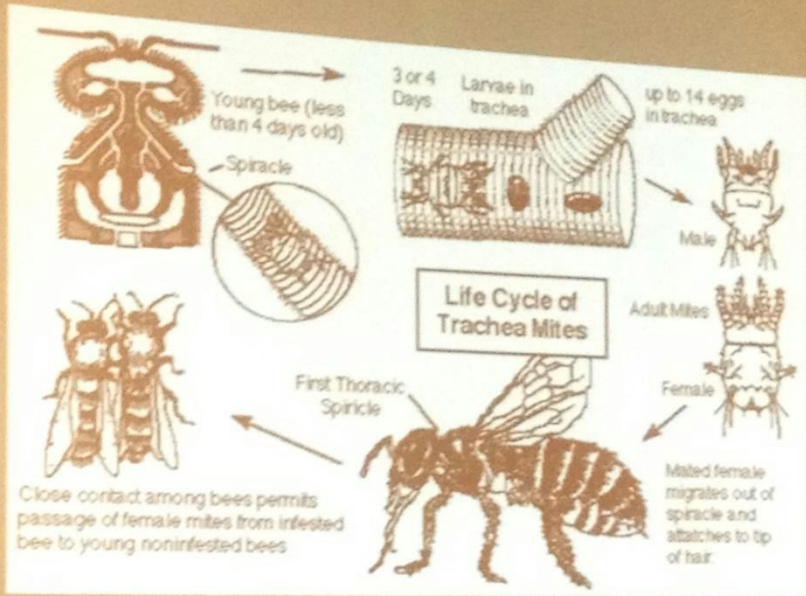
I would like to wholeheartedly thank the Geography Alumni who supported me in this. Your funds were extremely useful in helping me focus my research and make the necessary connections to do so!

Sincerely,

Devin Clark



Tracheal Mites



THE MITE POPULATION CYCLE

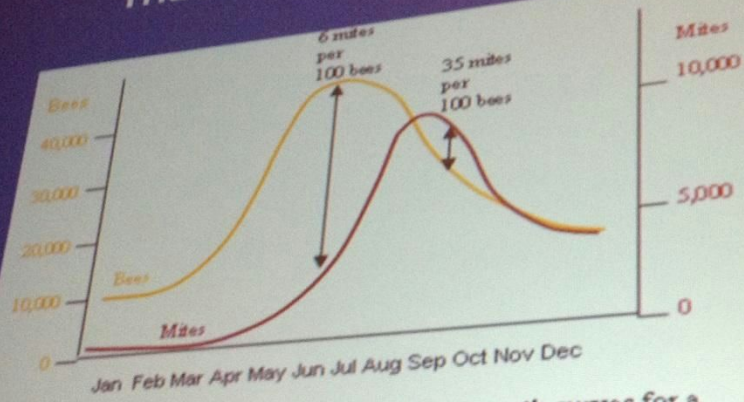


Figure 1. Simplified bee and mite population growth curves for a temperate climate. The mite growth curve lags behind the bee curve. Note how the number of mites per hundred bees greatly increases in fall. A colony is unlikely to survive a fall infestation rate this high.

Notice what happens in August and September