



February General Meeting
Tuesday, February 22, 2022
Aldersgate Church, York, PA

Present: approximately 65 members
in attendance

Meeting Minutes

1. **President Welcome – Chris Smith**
2. **Introduction of Guest Speaker – Dr. Meghan Milbrath, PhD**, of Michigan State University presenting *Amazing Bee Anatomy: Amazing Anatomical Adaptations of Apis Mellifera*
 - 🐝 Tonight's presentation was held with members in person, and with Dr. Milbrath participating remotely from her home in Michigan
 - 🐝 The focus of this talk was how honeybee anatomy drives their experience and perception and can guide our care
 - 🐝 Meghan began working bees over 25 years ago, and now manages Sand Hill Apiary, a small livestock farm and queen rearing operation in Munith, Michigan
 - 🐝 Her presentation, with vividly detailed pictures broadcast on large screens, took viewers from the hard exoskeleton, and moved inwards including hair, brain processing and their eyesight features. The journey continued then from the honeybee antennae to the stinger at the end of their abdomen.
 - 🐝 She presented with detailed explanations and pictures to explain the honeybee head, antennae, mouths, thorax, wing locomotion, circulatory system, legs, tracheae and the abdomen.
 - 🐝 She listed ten important glands, and explained the roles of several:
 - Hypopharyngeal gland
 - Royal jelly is produced
 - Bee roles can change over time and the hive knows when and who needs royal jelly
 - Worker bees produce invertase to break down sucrose into glucose and fructose
 - Mandibular gland

- Function changes with age
- Common salivary gland
- Head labial (salivary) gland
- Thoracic (salivary) gland
- Wax gland
 - Produces flakes on underside of abdomen
 - Workers can produce wax at 6-12 days of age
 - Requires rich nutrition
 - Wall to wall brood production is a pre-cursor to swarming and results in a large cohort of wax producers
- Dufour's gland
- Koschevnikor gland
- Nasanov gland
 - Assists with location orientation
 - Dissipates when hive is open during an inspection
 - Bees flare and fan scent from glands to increase scent concentration for returning bees
- Venom gland
- 🐝 Meghan made final comments regarding fat bodies on bees, showing viewers an example of summer and winter bees under x-ray
 - Winter bees require tons of energy which is stored as fat to aid them in their longer than normal life span
- 🐝 Question and Answer session topics included nasanov scent, lemongrass attraction, bee aggression, venom levels at different times and biologic vs economic beekeeping.

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3. Meeting Adjournment

January 25 Meeting Agenda

- 🐝 6:00 pm Meeting Set Up – Registration table, Library table, Audio/Visual hook ups (computer, screens, speakers, microphones, etc)
 - May arrange honey tasting for future meetings

- 🐝 Prior to 6:30 pm – Welcome Committee directs attendees as needed
 - New registrants
 - Library
 - NewBee discussion seating
 - Restrooms

- 🐝 6:30 pm NewBee discussion hosted **by Cecelia's designee**

- 🐝 7:00 pm General Meeting
 - President's welcome
 - Introduce executive team with pics and bios
 - Point out Club Communications Liaison and Club Librarian
 - Treasurer report **by John Shaffer**
 - Dues
 - Developing a budget
 - State of the Bees **by designee**
 - Dedication to Gary for his service to the Club **by Chris**
 - Guest Speaker introduction **by Chris**
 - **Mary Ann Frazier – Where the Wild Things Are**