



MCCB NEWS

Fall 2016



What's in this Issue:

- *Fall 2016, MCCB Conference Information, pg. 2-3.*
- *Highlights from the Spring Conference, pg. 4-7*
- *Upcoming Conferences, pg. 8*

Fall 2016 MCCB Conference



Grand Rapids Community College
October 14 and 15

Please visit our website at: <http://www.mccb1.org/>

You will find information concerning conferences, job positions, general information about our organization as well useful web resources on our website. If any MCCB member knows about biology positions, upcoming relevant conferences, seminars, or workshops being held in Michigan (as well as throughout the U.S.) please email information to: Katie LaCommare (mccbmembership@gmail.com) and/or Susan Dentel (sdentel@wccnet.edu).

Fall 2016 MCCB Conference: Grand Rapids Community College

For the agenda, registration and details about the Fall 2016 MCCB Conference please visit the MCCB website at: <http://www.mccb1.org/conferences.htm> .



Tentative Agenda

Friday:

- 5:30 – 7PM - Registration
- 6 – 7 Dinner – Asian Excitement Buffet (Sounds exciting, eh?!)
- 7 – 8:30 PM – Speaker and Q&A: **Ashley Hannah Sanderlin** (Neuroscience Program, Ph.D. Candidate; **Cognitive and Geriatric Neurology Team (CoGeNT)**; Michigan State University) She will discuss Alzheimer's disease and the relationship of body mass index and brain volume in individuals with Mild Cognitive Impairment.
- 8:45 PM - ?? – Local Beer and Cheese pairings at GRCC! We will have a selection of growlers from local Grand Rapids breweries. There will also be different cheeses to pair with the beer! For those non-beer drinkers, there will also be root beer available.

Saturday:

- 7:30 – 8:30 - Registration and Breakfast
- 8:30 – 9:00 - Travel time to Blandford Nature Center from GRCC (carpools will be arranged)
- 9:15 – 11:15 - Blandford Nature Center – Edible and Medicinal Plant Guided Walk

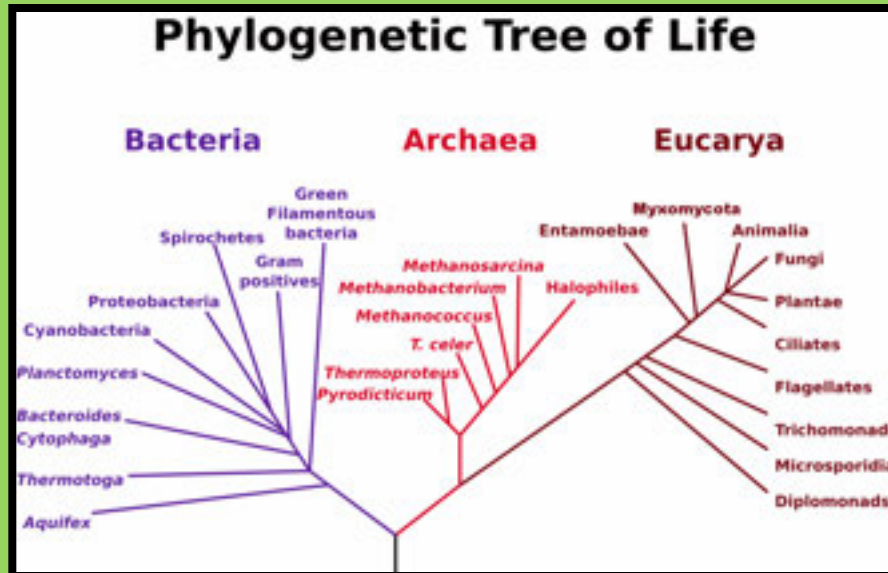
Edible and Medicinal Plants

Michigan's local landscape is overflowing with nutritious and delicious food, healing herbs, and powerful medicines. In a two-hour guided walk led by Kristin Tindall, Master Naturalist at Blandford, we will be introduced to common Michigan plants and their uses. This outdoor walk around Blandford Nature Center will be relaxed and fun, and will occur whatever the weather! So come prepared with appropriate outdoor attire and good walking shoes.

- 11:15 – 11:45 - travel back to GRCC
- 11:45 – 12:45 - lunch and general membership meeting
- 12:45 – 1:35 – **Rachel Schwallier** (Faculty, Biology Department, Grand Valley State University) speaking on carnivorous plants
- 1:45 – 2:35 – **Panel:** Dave Klungle, Nicole Thorwall, Jamie Grit - former GRCC students who have successfully transferred to and completed baccalaureate degrees (and beyond) will speak to the best advice they received (or should have) from their CC professors.
- 2:35 – 3 - Coffee break and vendors
- 3 – 3:50 – **The Biology of Mindfulness**



Highlights from the Spring 2016 MCCB Conference at
MacMullan Conference Center.



Exploring the Tree of Life - Maggie Hanes (EMU), by Lynnda Skidmore

Who said Taxonomy was a stagnant area of Biology? Big changes have been happening with the continued use of DNA sequencing to identify relationships between organisms. In the session "Exploring the Tree of Life" Maggie Hanes (EMU) wowed us with some major changes in our taxonomic world. Since the 1980s taxonomy has divided all living things into 3 Domains - Bacteria, Archea and Eukarya. Maggie focused her information on the eukaryotic organisms branch.

Maggie introduced us to several websites that diagram the groups of living things. Most of these sites use Cladistics, which is an approach to biological classification in which organisms are categorized based on shared derived characteristics that can be traced to a group's most recent common ancestor and are not present in more distant ancestors. Therefore, members of a group are assumed to share a common history and are considered to be closely related. Although traditionally such cladograms were generated largely on the basis of morphological characters and originally calculated by hand, genetic sequencing data and computational phylogenetics are now commonly used in organizing groups.

Tree of Life Continued from page 4

Open Tree of Life website aims to construct a comprehensive, dynamic and digitally-available tree of life by synthesizing published phylogenetic trees along with taxonomic data. In September 2015, the first draft of the Open Tree of Life was published, in which information from nearly 500 previously published trees was combined into a single online database, including 2.3 million species, which is free to browse and download. Surprising to me was that of the eukaryotes about 70% of them are unicellular.

The more one digs into the science of grouping and organizing living things the more interesting and complicated it becomes. In addition to the addition of newly discovered organisms there is also the new, and often surprising, information about the relatedness of organisms. For example, animals are more closely related to fungi than to plants, according to DNA analysis. Visit the Open Tree of Life website and browse around to how much there is to Taxonomy.

Annual Photography Contest Winners

Mark Roberts, Kris Nitz and Tami Port

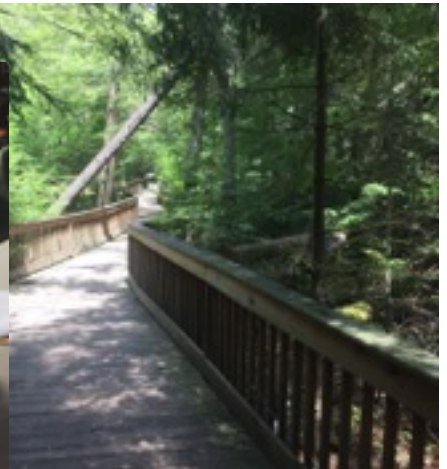


DNA Ancestry: The Sagas at our Fingertips - Jon Cleland-Host (SVSU), by Lynnda Skidmore

What can we learn from analyzing our DNA? Of course, as biologists we would answer that with "A whole lot!". Jon Cleland Host introduced us to the business of Genome Analysis by highlighting the information that can be found by having our DNA analyzed by companies such as 23andme.com. He explained the importance of mitochondrial DNA and Y chromosome DNA to identify and trace back our ancestors. Mitochondrial DNA comes from our mother and the Y chromosome DNA is inherited through the father's lineage. For people who had their DNA analysis done, Jon discussed the chromosome/ancestry page and explained how to navigate through the information and even use other ancestry companies (Gedmatch.com and Ancestry.com) to glean a clearer picture of our past relatives.

He explained about haplogroups, which is information a DNA analysis will provide. A haplogroup is a combination of alleles at different chromosome regions that are closely linked and that tend to be inherited together. Haplogroups pertain to a single line of descent, usually dating back thousands of years. As such, membership of a haplogroup, by any individual, relies on a relatively small proportion of the genetic material possessed by that individual. In human genetics, the haplogroups most commonly studied are Y-chromosome (Y-DNA) haplogroups and mitochondrial DNA (mtDNA) haplogroups.

Jon also shared several stories of the amazing connections people can find from having their DNA analyzed. For example, his father, Gerald Host found out he was related to a childhood friend, after they were in their seventies. Jon also touched on the health information that can be learned from our genes. Like many of us, we are curious and excited to learn new things. Most teachers are lifelong learners and strive to share this enthusiasm with their students. An important point Jon emphasized was that our ancestors are essential for our being here and we owe them gratitude for their contribution to us having life. Because of their intelligence and survival we are here. His shirt said "Danke Vorfahren!", meaning Thank You Ancestors, in German.



Upcoming MCCB Conferences:**Spring 2017 (June 2-4)****MacMullan Conference Center****Other Conferences of Interest:****2017 Michigan Science Teacher's Association** (March 23-25) Novi, MI**2017 NSTA Conference** (National Science Teachers Association), March 30-April 2, LA, California**2017 HAPS** (Human Anatomy & Physiology Society), May 24- 28 ,Salt Lake City, Utah**Mission of MCCB:**

MCCB (Michigan Community College Biologists) serves as a state-wide forum for sharing instructional techniques and new ideas for teaching college-level biology. The organization fosters communication, friendship, and unity among the biologists of the twenty-nine community colleges in the State of Michigan. Two state-wide meetings are held annually

Founded in the early 1980's, MCCB began as an offshoot of COSIP (the College Science Improvement Program). Two COSIP groups were originally created in Michigan: a southern group of colleges (associated with the University of Michigan/Dearborn and directed by Dr. Hertzler) and a northern group of colleges (associated with Central Michigan University and directed by Dr. Carl Scheel). The initial meeting to form a statewide organization of community colleges occurred at Delta College in 1981. The first slate of officers was elected at that time, with Eldon Enger as President and Janet Dettloff as Vice-President.

- *To promote an interest in biology.*
- *To improve the teaching of biology by providing opportunities to share and discuss instructional techniques and teaching methods.*
- *To provide opportunities for updates on current topics and trends in biology.*
- *To facilitate the exchange of ideas and foster communication, friendship and unity among the community college biologists in Michigan.*