



# Spring 2019

## MCCB NEWS

### MCCB Spring 2019 Conference

Here we go again! MCCB Spring 2019 Conference (May 17 - 19) at the RAM Center on Higgins lake is shaping up to be great. To make it even better some advance preparation may be helpful for two events being planned.

- a) **Annual MCCB Photo Contest:** It's the return of the popular photo contest and silent auction. This event is at its best with more photo entries. Please keep your eyes open and camera/phone ready to snap some biological images. The more participation the merrier. See pages 9-10 of this newsletter for the entry form and more information (also on the website). Be sure to check out page 11 for help with suggestions to reduce production cost.
- b) **5K Run/Walk:** Enjoy the beautiful scenery of the Higgins Lake Area by participating in this MCCB fitness event. All are encouraged to participate. The event was rained out last year, so we are hoping for better weather this time. Forms will be available at the Conference, but some might want this advance notice to start training early.



### Upcoming Events

**2019 Fall MCCB Meeting:** The Fall MCCB meeting will take place **Friday Oct 4 - Saturday Oct 5 at Lansing Community College.** Reserve your calendar now!

**Summer Teaching Positions:** Muskegon CC will be looking for a number of part time positions this summer. Especially critical will be an Environmental Science course with lab. Pass along to colleagues and have them send me their CV and teaching experiences to [shawn.macauley@muskegoncc.edu](mailto:shawn.macauley@muskegoncc.edu).

**cafe press**  
Perfect.  
For every passion.™

Don't forget to visit the MCCB website to get your Café Press Merchandise!  
<https://www.cafepress.com/mccb>

#### Inside this issue

Spring Conference .....	1
Upcomimng Events .....	1
Fall Conference Highlights .....	2
MacCready Reserve Hike .....	3
Crispr Craze.....	4
Multiple Choice Questions.....	5
Fellow Biologists.....	6
Board Meeting Notes.....	8
MCCB Mission.....	8
Photo Contest Application.....	9-11

## Website Info

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:

Isis Arsnoe  
[mccbmembership@gmail.com](mailto:mccbmembership@gmail.com)  
and/or Susan Dentel  
[sdentel@wccnet.edu](mailto:sdentel@wccnet.edu)

## FALL MCCB Conference Highlights

Participants kicked off the event with dinner at the Grand River Brewery and got to hear a fascinating talk titled, "Common Mergansers: Innocent victims in the war against Swimmer's Itch," presented by Dr. Curt Blankenspoor of Jackson College. For more info, check out his website: [Swimmer's Itch Solutions](#)



## Hike through the MSU-MacCready Reserve...



Members attending the Fall 2018 MCCB meeting in Jackson got the opportunity to hike through the MSU-MacCready Reserve led by Dr. Steven Albee-Scott of Jackson College. The hikers got to enjoy the beautiful scenery until the hike had to be cut short due to an impending thunder storm!



## Summary of: The CRISPR Craze

Saturday, October 20, 2018

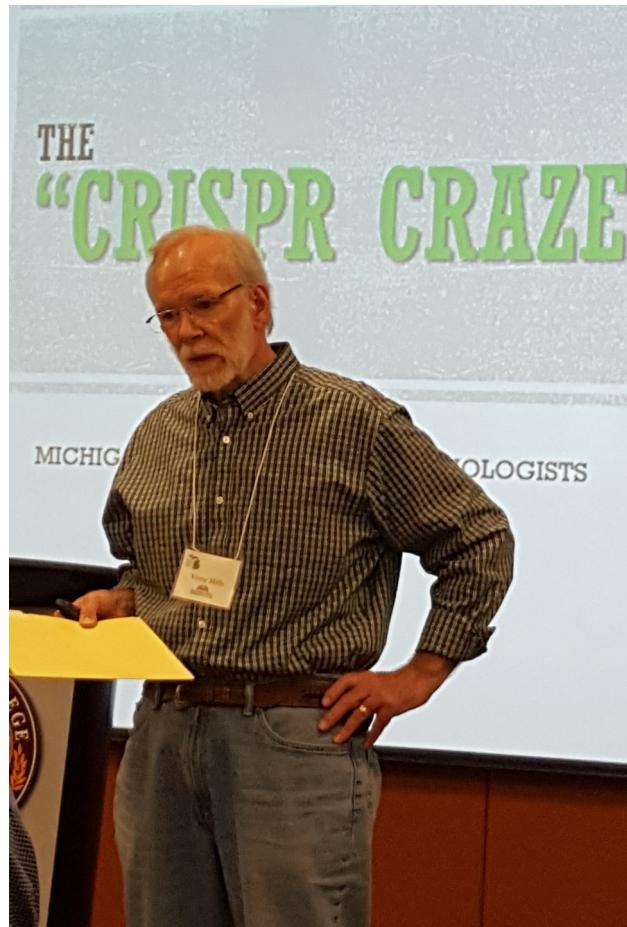
Presented by Verne Mills – Kalamazoo Valley Community College

The CRISPR locus is found in the genomes of some archaea and bacteria. It functions as a kind of adaptive immune system, in that it stores copies of genetic sequences from viruses and plasmids which invade the cell. Then, if a second invasion occurs, the CRISPR locus is transcribed, producing many small “guide RNAs” which direct a nuclease called Cas9 to the invading DNA. Cas9 inactivates the invader by producing double-stranded breaks in the foreign DNA.

Virginijus Siksnys (Vilnius University, Lithuania), Emmanuelle Charpentier (Max Plank Institute, Berlin), Jennifer Doudna (University of California, Berkley), and Feng Zhang (Harvard University and MIT) pioneered the development of CRISPR/Cas9 as a tool for precise genome editing. The basic CRISPR tool consists of a simplified chimeric guide RNA bound to the Cas9 nuclease. In some current research, the guide RNA is customized to deliver Cas9 to a target gene or genes where it inactivates the target by making double-stranded cuts. For example, researchers have produced low-gluten strains of wheat by using CRISPR to inactivate most of the genes which encode gluten proteins (doi: 10.1111/pbi.12837).

Other researchers modify the CRISPR tool by disabling the Cas9 nuclease function, instead using it to recruit proteins called transcription factors at the promoters of targeted genes, so that normally unexpressed genes become actively transcribed. This protocol was used to stimulate liver cells in adult mice to produce functional insulin to treat insulin-dependent diabetes in the mouse model (doi: 10.1016/j.cell.2017.10.025).

A third research strategy uses a modified CRISPR tool as a base editor. In these experiments CRISPR delivers a deaminase which can change one DNA base into another at a precisely targeted site in the genome. This strategy has demonstrated successful mutation repair in a mouse model of phenylketonuria, also known as PKU (doi: 10.1038/s41591-018-0209-1), and repair of the mutation which causes β-thalassemia in early human embryos (doi: 10.1007/s13238-017-0475-6).



Vern Mills presenting his talk on the Crispr Craze

# Summary of: The Book “Learning and Assessing with Multiple Choice Questions (MCQ)” by Jay Parkes and Dawn Zimmaro Presentation by Joe Esquibel, Associate Professor of Biology Lansing Community College

A summary of the book "Learning and Assessing with Multiple Choice Questions (MCQ)" by Jay Parkes and Dawn Zimmaro was presented. MCQ have an undeserved negative reputation. Validated research indicates that they can help students learn and are powerful tools for us to assess our students learning. As with any tool, appropriate training and implementation effect how useful MCQ are. Here we discussed common, research validated best practices to best construct these questions.

One of the main themes of this book related to idea that every possible answer option in a question, whether it is right or wrong, should tell you something about the student's knowledge. With this idea there are no throwaway distractor options but instead each distractor represents a common misconception. This allows you to more critically discriminate individuals based on mastery of individual learning objectives. So now if student get a question wrong, you can point to the specific issue that prevented them from truly understanding the content. It takes time and experience to identify these common misconceptions specific to your students.

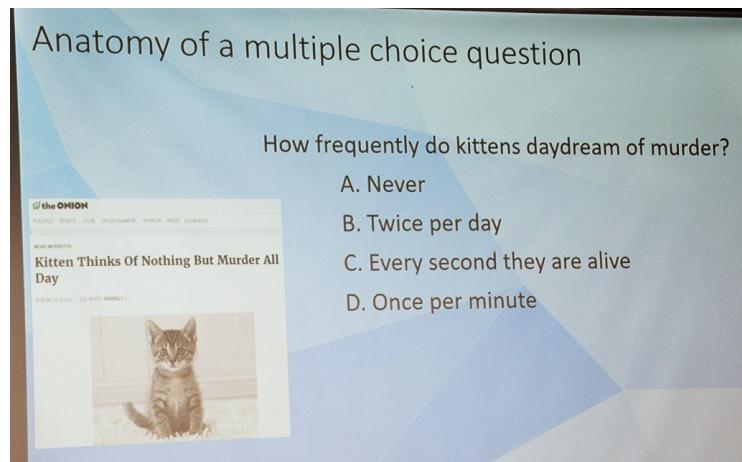


Joe Esquibel giving his presentation on how to structure multiple choice questions.

## Anatomy of a multiple choice question

How frequently do kittens daydream of murder?

- A. Never
- B. Twice per day
- C. Every second they are alive
- D. Once per minute



Once such questions are created, it is a shame to just use them in summative assessments, like in a final exam. These questions are now perfectly suited for formative assessments, employed as part of a lecture to reveal misconceptions in real time to facilitate enhanced content mastery. These questions types can be used as part of the formative assessment cycle, where instruction leads to formative assessment to feedback. By getting this cycle to spin repeatedly during a lecture or unit you can promote learning to consistently winnowing away student misconceptions.



# Fellow Biologists

## A Call To Serve...

Michigan Community College Biologists is currently seeking nominations for **President-Elect** and **Treasurer**. Please keep in mind that this organization is here for us and governed by us. Without biology faculty keeping the organization going, there would be no MCCB. I have seen, first hand, the dedication of your fellow biology colleagues to this organization. They donate their time because they care about an organization that provides many unique opportunities for biology faculty around the state (plus it's fun and you get to know other biologists from different community colleges!).

If you have been a member of MCCB for a while, but have not served as an Executive Board member, please consider donating a little time to help keep this great organization going. If you are new to MCCB, and want to get more involved, please consider nominating yourself for one of the available positions. Now is your time to make your mark on MCCB and help create the future direction of the organization. WE NEED YOU and your unique, individual contributions. Thanks for considering!

The MCCB By-Laws (Article IV) state the following concerning each of these positions:

B. The President-Elect shall assume the duties of the President in his/her absence or inability to serve. In the event of an inability to serve, the President-Elect shall assume the office of President.

D. The Treasurer shall oversee the management of the Organization's fiscal affairs, and shall assist in the development of the budget, present and recommend that budget at the appropriate annual meeting.

Here is more information concerning these positions from those who have held them in the past:

**President-Elect** - As President-Elect, you attend the Executive Board meetings. In most cases, there is one in the summer and one in the winter. Lately, these meetings have occurred at a restaurant in Okemos, MI, due to its central location. After a year as President-Elect, you then become President of the organization. As President you will preside over the general membership meetings (held during conferences) and the executive board meetings. You may get involved in other organization activities as they arise, as well. After a year-long stint as President, you become Past President, where you still attend the bi-annual executive board meetings, but also have the duty of sending out Institutional Membership letters to all Michigan community colleges. So basically, it is a 3-year commitment to the organization once you are elected President-Elect.

**Treasurer** - Overall responsibilities involve receiving and paying bills related to operating expenses of MCCB and filing two annual government forms.

Specific responsibilities include:

- Paying annual stipends in October to the web master, newsletter editor and treasurer.
- Filing two on-line annual government forms for non-profit organizations.
- Establishing a bank account (savings and checking) to deposit and disperse funds.
- Maintaining a PayPal account for MCCB business.
- Delivering an annual written financial report, usually at our winter Executive Board meeting, to include MCCB's overall financial status and the two biannual conference balance sheets for the current year.
- Working with conference planners to facilitate accounting procedures related to their event. Attending Executive Board meetings twice a year.

**Nominations for these positions are due by the end of the day, Friday, March 22, 2019.** If you decide to nominate, please send a brief Bio about yourself to be included on the ballot.

Thank you for all that you do to provide an outstanding networking and professional development organization to all Michigan Community College Biologists.

Tim Periard  
MCCB Nominations Chair

## MCCB Officers

Lynnda Skidmore  
(President)

Mark Robertson  
(Past President)

Susan Dentel  
(Secretary)

Darrell Davies (Treasurer)

Isis Arsnoe  
(Membership Chair)

Tim Periard  
(Nominations Chair)

Erica Staton  
(Newsletter Editor)

## July 13, 2018 MCCB Executive Board Meeting Notes

### **President's Report:**(Lynnda Skidmore)

- We need to think of ways to increase membership. Possibly request adjunct emails from representatives. Motion made to contact campus reps and offer free membership for new adjunct/part-time faculty for one year. Lynnda will write letter, Darrell will look over.
- We need to personally contact a college or two to recruit conference sponsors. Susan will contact Pam Nuttal (Kirtland Community College), Tim will contact Mid-Michigan Community College, Lynnda will contact Gogebic CC.
- We also need to recruit campus representatives and facilitate better communication.

### **Treasurers Report:** (Darrell Davies)

- RAM has new contract which includes charges for AV equipment, etc. The cost of this conference center is getting expensive. We should potentially rethink the use of RAM for spring conferences and host at community colleges.

### **Secretary Report:** (Susan Dentel)

- RAM is currently held for May 10-12<sup>th</sup>, 2019, however, we haven't paid a deposit yet.

### **Nominations:** (Tim Periard)

- Looking for someone to serve as president elect.
- Possible conference at LCC in 2019.

### **Membership:** (Isis Arsnoe)

- 49 members (currently paid), number of members higher, but not up to date with membership dues
- Perhaps better systems to remind people to renew membership.

### **Web Master:** (Ryan Bodary)

- Will post photos from the spring conference as people send them.
- Hosting arrangement is changing from an old server to a new server.
- Will discuss more at next meeting the possibility of posting clips/excerpts from conferences (with copyright/release speaker forms), members ability to modify their own profiles and membership/login (currently public and admin member).

### **New Business:**

- Fall 2018 Conference: JCC
- Spring 2019 Conference: Kirtland Community College/RAM

## 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 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

## Calling all Nature Photographers!

This is your chance to share your best photos with other biologists.



\*Subjects can be anything related to biology - landscapes, scenery, macro photography, animals, flowers, micro photography, etc.

\*Each person may submit 1, 2 or 3 photographs (photo size either 8 x 10 or 11 x 14 mounted on a stiff material (Matte board or foam board)).

\*Bring your photo(s) and Registration form to the Spring 2019 MCCB Conference. Print off the form from the [www.mccb1.org](http://www.mccb1.org) website or below in this letter and fill it out.

\*Prizes will be awarded as determined by attendee voting. Each conference attendee may vote twice by tickets. Voting ends Saturday afternoon with awards given during dinner.

\*All submitted photos will be entered in a silent auction with earnings donated to MCCB. Bidding will start at \$5 and at the end of the auction (Saturday afternoon) highest bidders will be determined. Hopefully many people will be able to take home a beautiful photograph.

On page 3 of this document are some suggestions to reduce cost of photograph prints and matting and framing.

# Enter the 5th MCCB Photography Contest

## Registration Form

Your Name: \_\_\_\_\_  
School: \_\_\_\_\_  
Contact phone: \_\_\_\_\_  
Contact email: \_\_\_\_\_



- \* Photo Entry #1 Title:
- \* Photographer's Name:
- \* Check the category

of your photo:     animal     plant     Scenery     misc./other  
Shooting/Subject Information:

- \*\* Photo Entry #2 Title:
- \*\* Photographer's Name:
- \*\* Check the category

of your photo:     animal     plant     Scenery     misc./other  
Shooting/Subject Information:

- \*\*\* Photo Entry #3 Title:
- \*\*\* Photographer's Name:
- \*\*\* Check the category

of your photo:     animal     plant     Scenery     misc./other  
Shooting/Subject Information:

## **Ways to Reduce Cost to Photographer:**

**Printing photographs and mounting and framing them can all be expensive.**  
**There are some ways to reduce the cost of the whole process. Here are some suggestions;**

- **If you have a color printer at home you can purchase photo paper at Office Depot, Staples, Meijer, etc. and print your own at home.**
- **Have the photograph printed somewhere else and then you attach it to a matt board or foam board cut to the same size with spray adhesive (from Michaels, JoAnnes or other craft stores).**
- **Sign up with Walgreens, CVS, Meijer or Costco, etc at their photo dept. Easily done online. They will send discount coupons for printing almost every week. You can upload your photos, select size and pick them up at a nearby store. I like Walgreens as they have 40% off prints (no quantity limit) a few times a month.**
- **Watch Sunday papers for circulars for Michaels or JoAnnes (craft stores). They often have 50% off coupons for items. Buy a precut matt at the reduced price and behind your photo include a same size mat or foam board.**
- **With enough lead time, thrift stores, garage or estate sales often have inexpensive frames for sale. Purchase them often for less than \$5. Frames are not required for submission of photos, but they do improve the presentation.**

