Leader: Dr. Graham Wyatt, Lecturer of Biology

Title: Why do animals keep evolving into crabs?

Description: This scientific question has been popularized recently by meme culture. But what does it really mean? And more importantly, what can it tell us about macroevolutionary patterns in other groups of organisms, perhaps even our own species? We will examine these questions and others in our discussion of "carcinization" – becoming a crab.

Step 1: Read this article (Watson, Clare. 2022. "Evolution Keeps Making And Unmaking Crabs, And Nobody Knows Why". ScienceAlert)

Step 2: Read over this peer-reviewed paper by Wolfe et al. 2022 (the basis for the ScienceAlert article you read). You will notice the actual paper is much heavier reading than the science news article; *don't worry if you don't absorb all of it*. Feel free to focus on sections that are interesting to you. [Alternate link to paper here]

Step 3: Take some time to reflect on the readings and clarify any "fuzzy" or confusing parts. Then answer the following questions:

Question 1
Describe the primary differences between the science news article by Clare Watson and the peer-reviewed paper by Wolfe et al. that stand out to you.

Question 2
What is meant by "convergent evolution?" Provide an example of convergent evolution (outside of crabs). You may use any source to help guide your answer.

Question 3
As the authors of the peer-reviewed paper concede, many questions remain regarding carcinization and decarcinization. List any remaining questions that you feel scientists should focus on.

Question 4
What is a "phylogenomic" approach? What can it tell us about how crabs evolve?

Question 5
You may not be especially interested in crabs (I myself am a plant biologist), but how could an understanding of convergent evolution provide answers and tools to directly benefit our species?