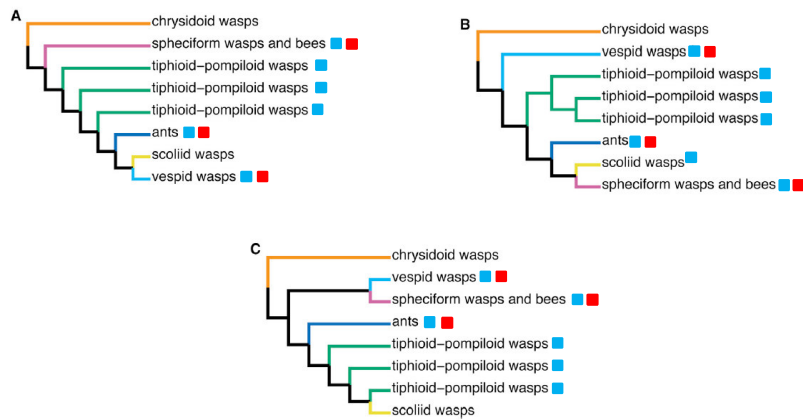
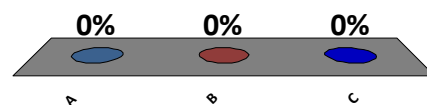


Among the hymenoptera are several groups of species characterized by eusociality (most members of the colony are sterile females who help their mother raise sisters). Eusocial clades in the phylogenies are indicated by red boxes. Blue boxes indicate clades that construct nests.



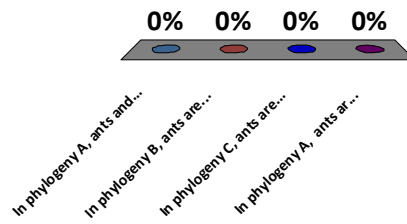
Which phylogeny is the most parsimonious for the evolution of eusociality?

- A. A
- B. B
- C. C



Which of the following statements is true?

- A. In phylogeny A, ants and vespid wasps are sister taxa.
- B. In phylogeny B, ants are more closely related to scoliid wasps than they are to bees.
- C. In phylogeny C, ants are more closely related to tiphid wasps than they are to vespid wasps.
- D. In phylogeny A, ants are more closely related to vespid wasps than they are to bees.



Which of the following statements is true?

- A. In phylogeny A, eusociality is a synapomorphy for ants and vespid wasps.
- B. In phylogeny B, eusociality is a synapomorphy for ants and vespid wasps.
- C. In phylogeny C, eusociality is a synapomorphy for ants and vespid wasps.
- D. In phylogeny B, it is likely that bees evolved eusociality independently of ants.

