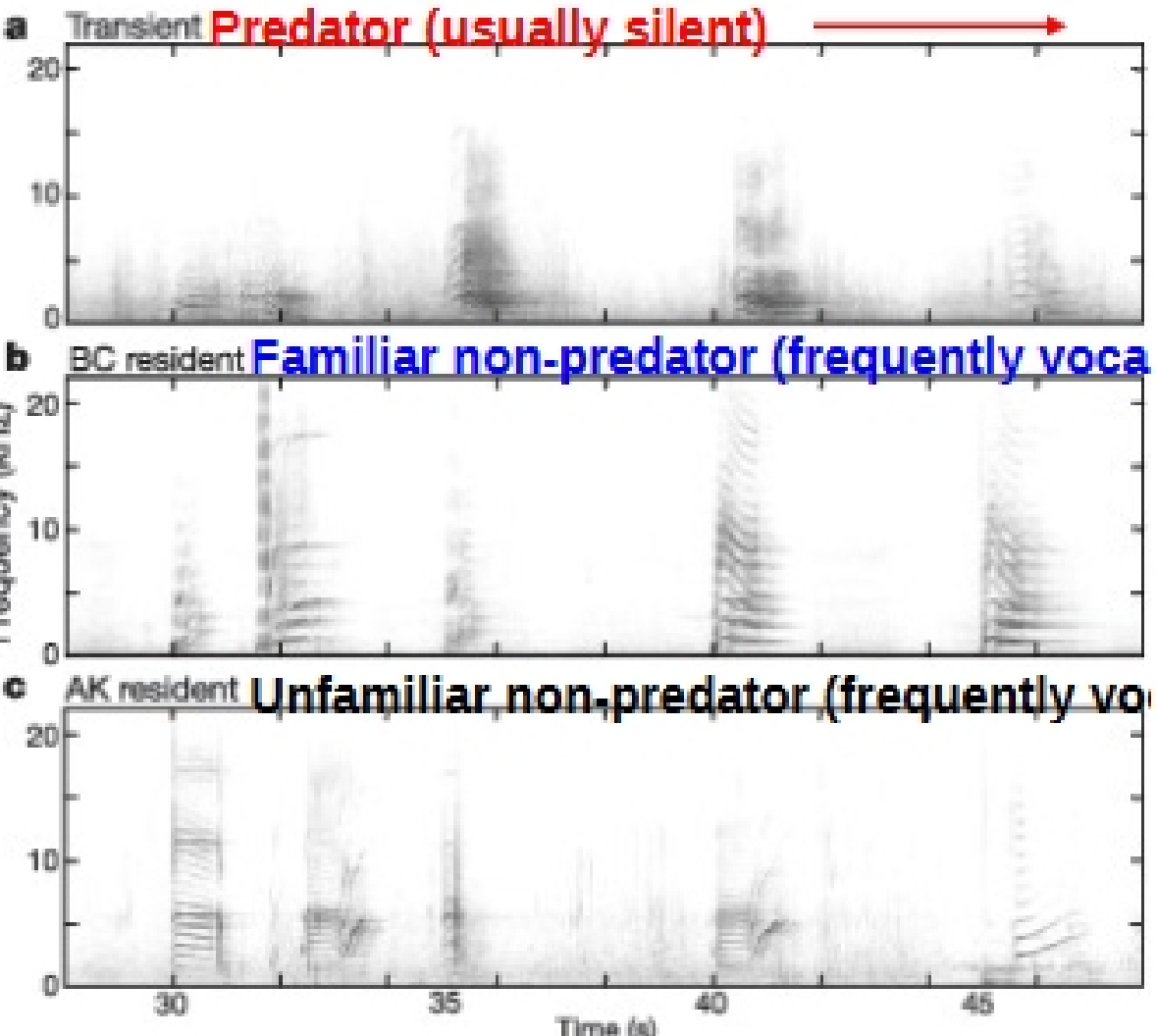


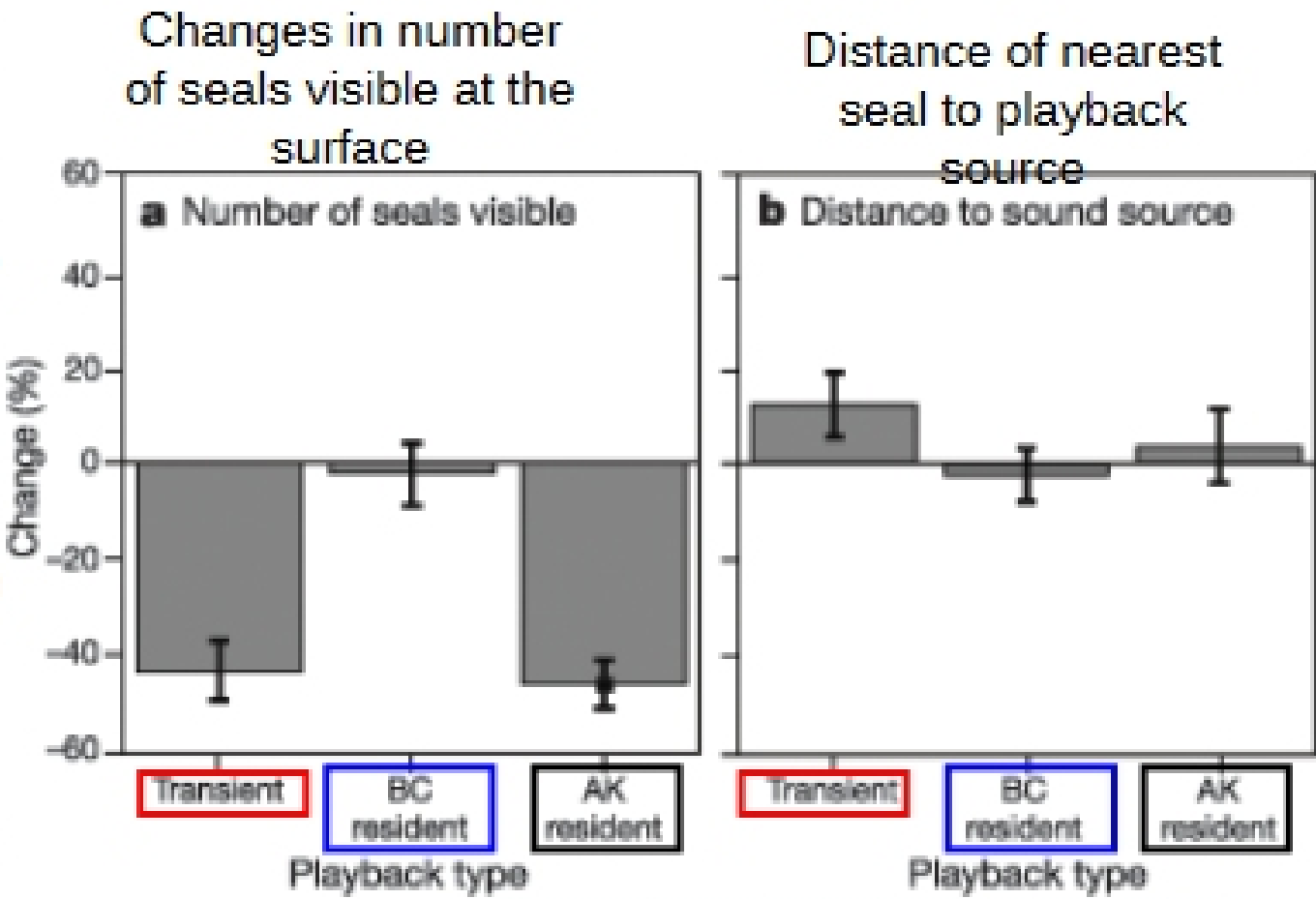
**Predation.** One species benefits, the other incurs a cost; also herbivory & parasitism. Important in adaptive evolution: predator and prey adaptations.

*Orcinus orca* calls



pages 1178-1179

*Phoca vitulina* response (most common prey)



Nature 2002

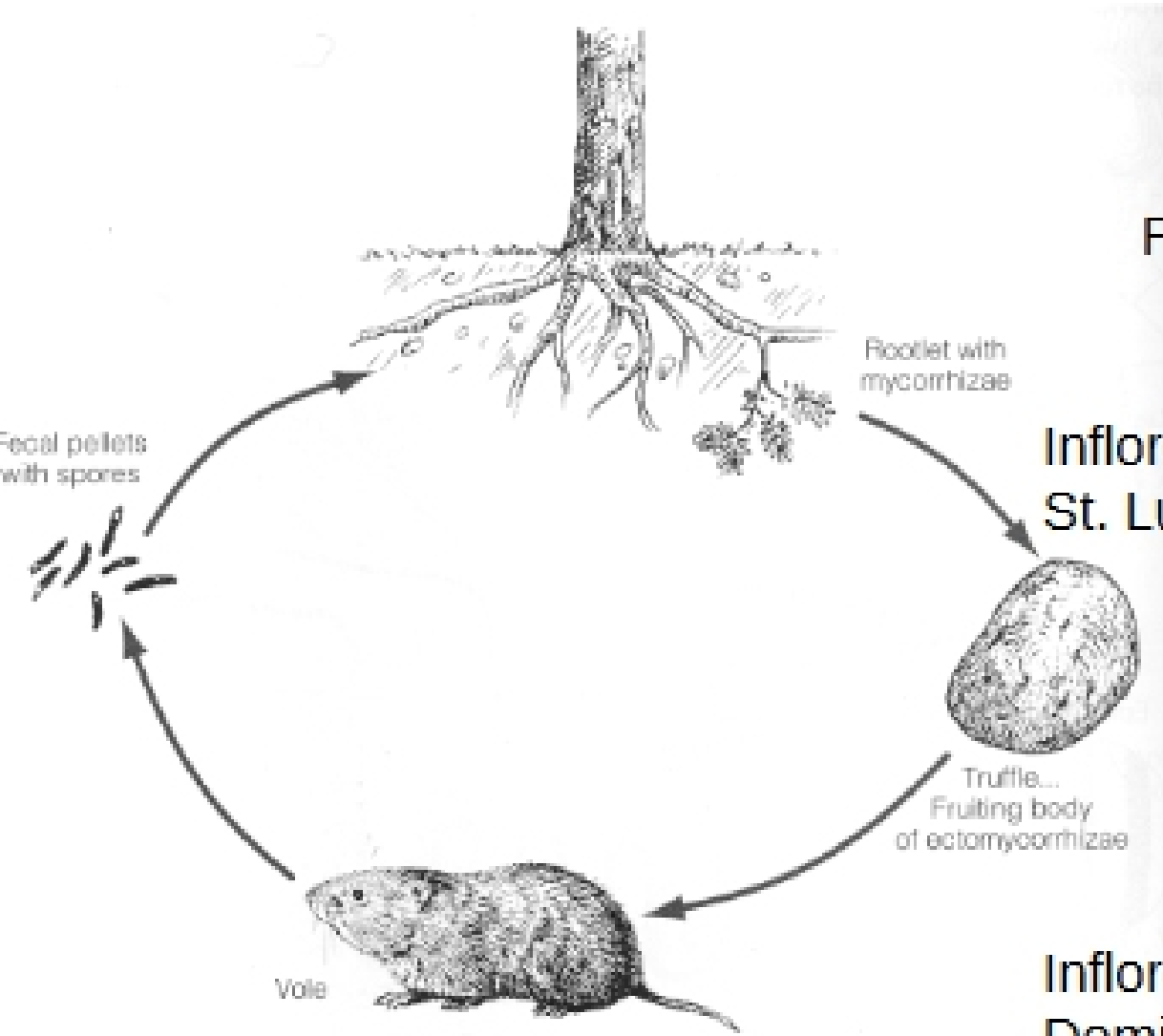


Plant defenses against herbivory.

Also important in shaping communities.



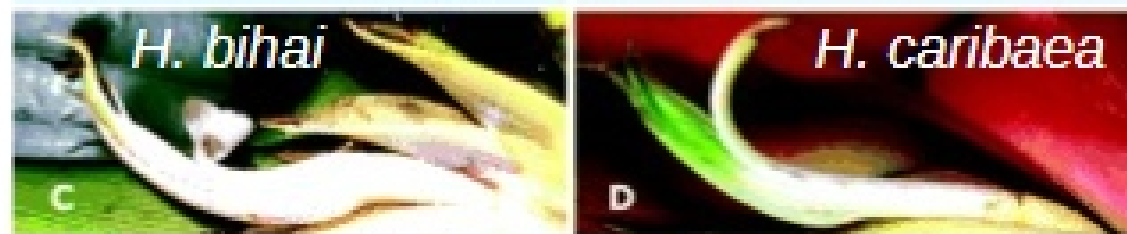
**Mutualism.** Both species benefit from the interaction. Some are obligatory: both species cannot persist without the other; others are facultative: the association is nonessential. Overlooked as a mechanism in community structure; it may be more significant than either competition or predation.



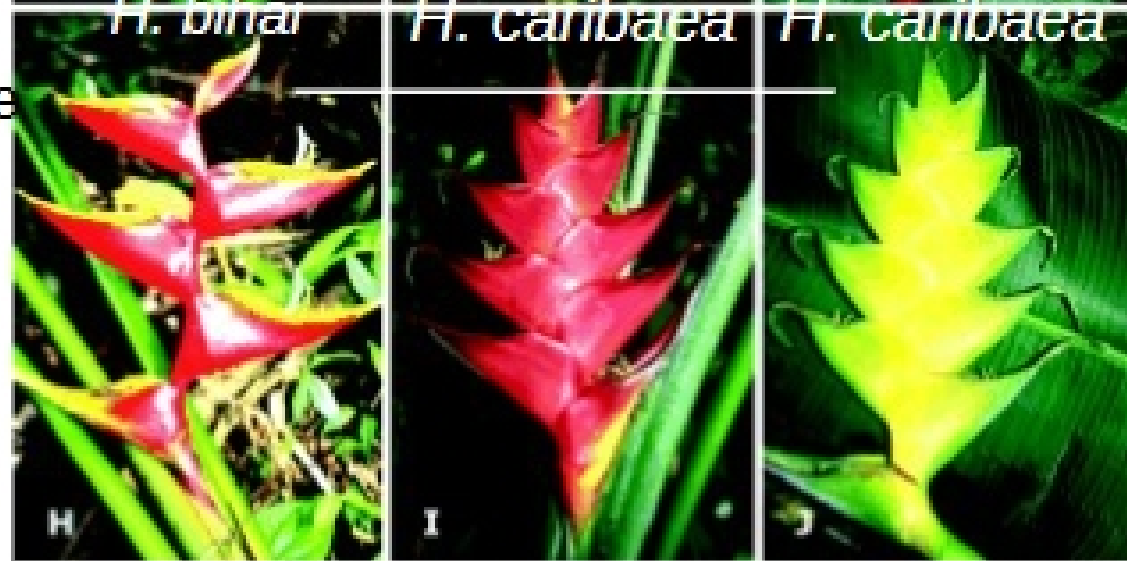
Bill



Flower



Inflorescence Dominica



Also important in adaptive evolution

## SOME questions from February 17th

1- When determining human population growth, do we only consider natural death or all causes?

2- In the barnacle example, are you saying that *Balanus* is better suited to the environment and that if desiccation was not a problem at the higher water level, they would force out the *Chthamalus*?

3- Assuming two species occupy the same ecological niche, why couldn't they both co-exist assuming they were equally fit?