

BIO 4AE3

11 Sep 2023

ecology evolution  $\left\{ \begin{array}{l} \text{incidence} \\ \text{prevalence} \\ \text{distribution} \end{array} \right.$

\*  $\left\{ \begin{array}{l} \text{How DO WE FIND OUT} \\ \text{ABOUT EVOLUTION?} \end{array} \right.$

experimental evolution

phenotypic  
genotypic.

observation.

ancient DNA (Poinar)

$\left\{ \begin{array}{l} \text{SYMBIONT vs MUTUALIST} \\ \text{vs PARASITE} \\ \text{vs COMMENSAL} \end{array} \right\}$

$\rightarrow$  Symbiosis = 'close association'  
 $\rightarrow$  free-living

benefits to host?

Benefits to symbiont?

symb. non-symb.	parasitoid	parasite	$\left\{ \begin{array}{l} \text{NATURAL} \\ \text{ENEMY/} \\ \text{VICTIM} \end{array} \right.$
	predator	grazer	
	kills host	doesn't kill host	+/-

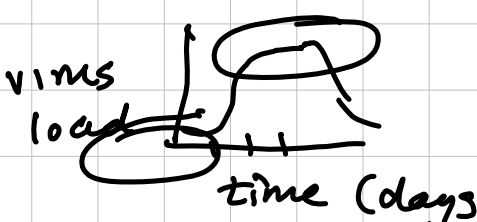
microparasites

intensity indep.  $\left\{ \begin{array}{l} \text{viruses, bacteria, fungi} \\ \text{(? prions?)} \end{array} \right.$

macroparasite.

$\left\{ \begin{array}{l} \text{nematodes, trematodes,} \\ \text{ticks, leeches} \end{array} \right.$

• time scales •



where do parasites come from?