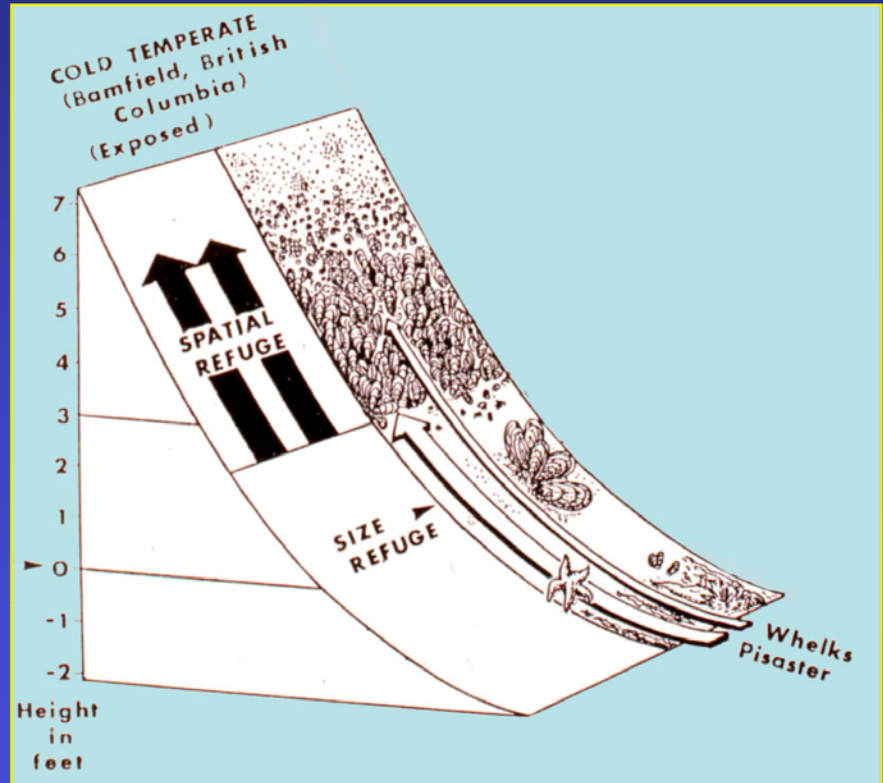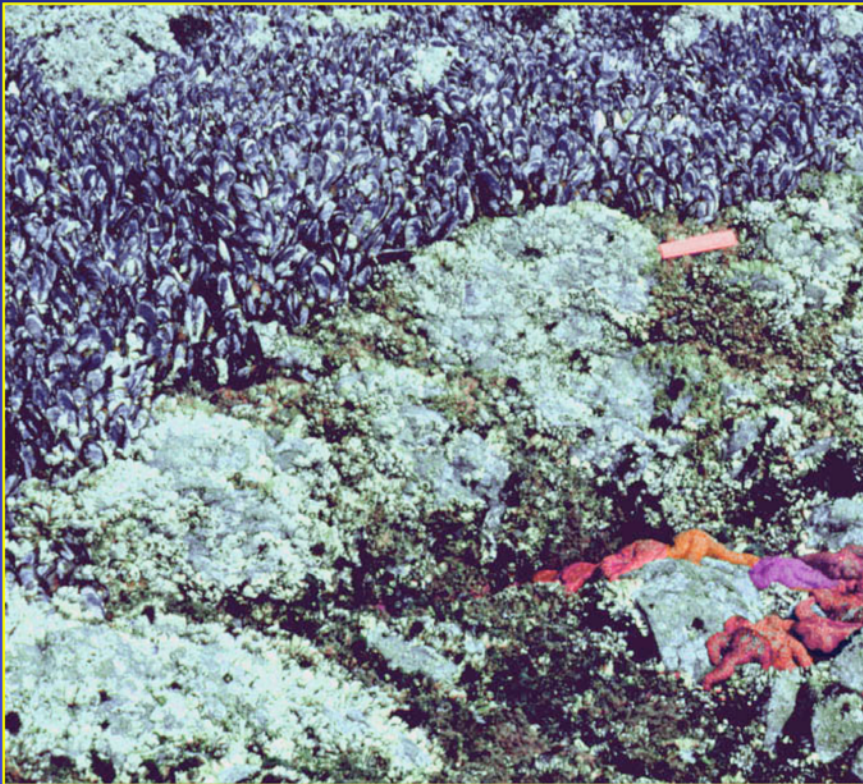**Observation:** mussel beds exhibit an abrupt lower boundary

Old paradigm: tides provide a spatial refuge from predation; large mussels are in a "size refuge"

New evidence: predators can take prey at varying rates throughout the intertidal zone; largest predators can take largest prey

Ecological processes involved beg a dynamic model.

recruitment

immigration

emigration

growth
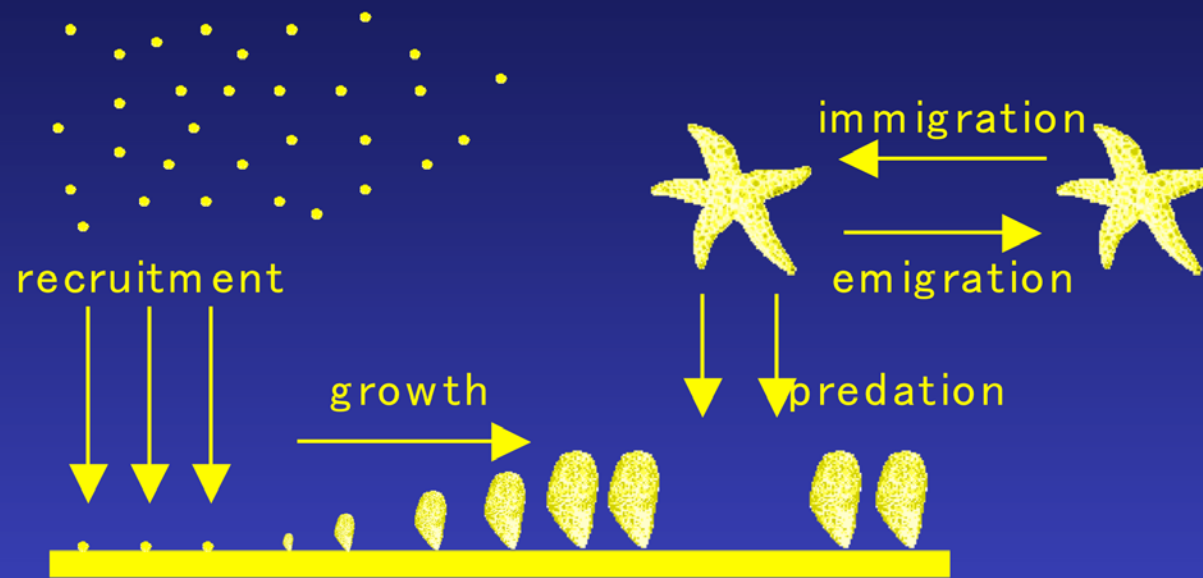
predation

$x-h,$ $y+h$	$x,$ $y+h$	$x+h,$ $y+h$
$x-h,$ y	x, y	$x+h,$ y
$x-h,$ $y-h$	$x,$ $y-h$	$x+h,$ $y-h$

Observations suggest that rates of recruitment and predation depend on configuration of prey. This suggests a spatially explicit model.