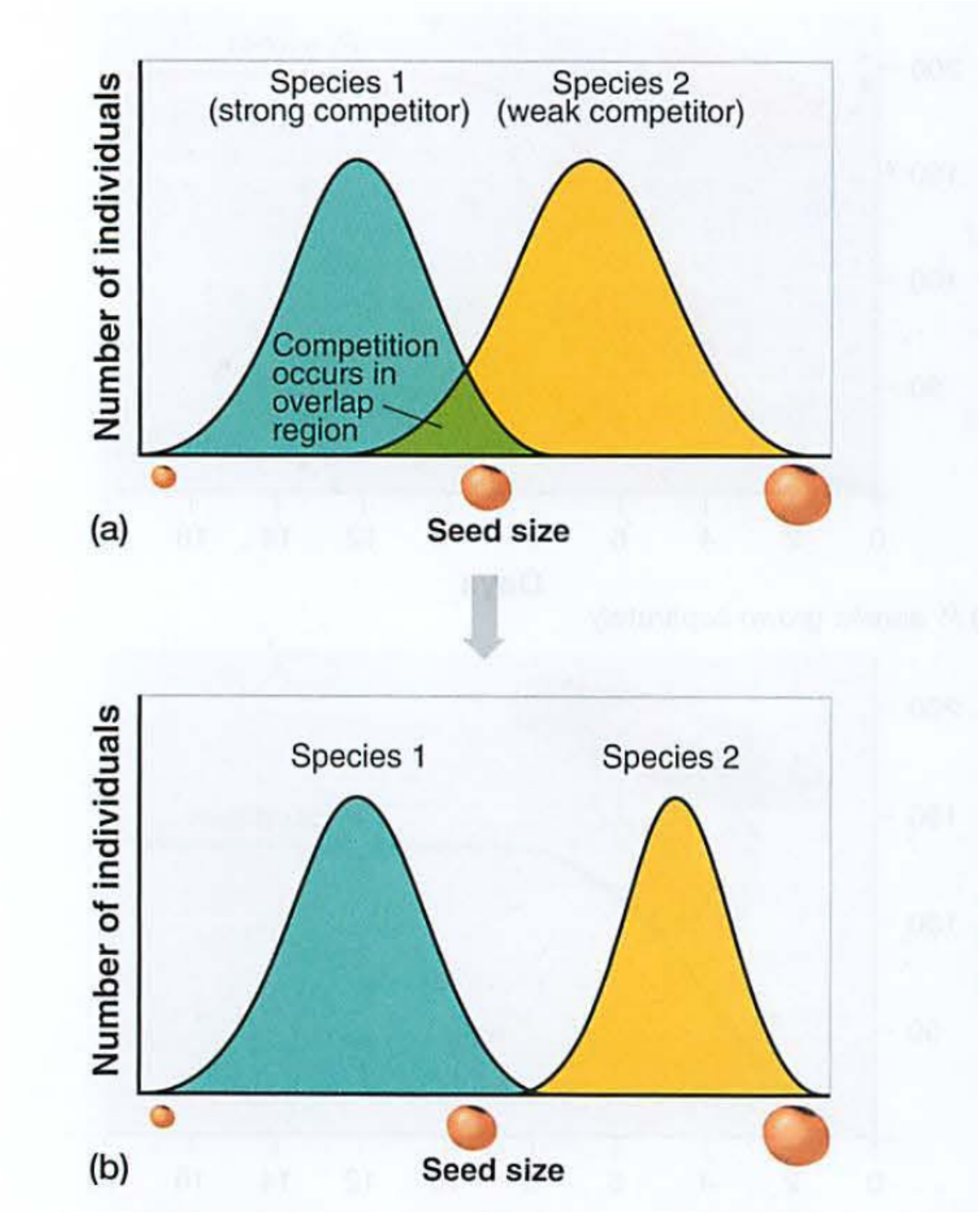
Module 20: Community ecology

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Competitive exclusion principle: two species competing for the same resources cannot co-exist, leads to...

Resource partitioning: time, space, type of food (one species picks one, the other survives)



Screenshot 2024-11-14 at 14.43.13.png

Relationships:

- **Predation:** predator and prey, one lives, the other dies
- **Symbiotic:**
  - Mutualism: both benefit
  - Commensalism: one benefits, no harm to the other

- **Non-symbiotic:**Parasitism: one benefits, harm to other

TABLE 20.1 Interactions between species and their effects

Type of interaction	Species 1	Species 2
Competition	–	–
Predation	+	–
Parasitism	+	–
Herbivory	+	–
Mutualism	+	+
Commensalism	+	0

Screenshot 2024-11-14 at 14.43.56.png

Review: keystone species vs. indicator species:

Keystone species-many others depend on it, removal has an impact much greater than their relative population

e.g. beavers: create habitat for others (dams), so they are also "keystone engineers", only they don't wear funny hats.

Here's what a keystone looks like:

In architecture, if you remove the **keystone**, the arch collapses. Cool term, right?

This is different from a **capstone** (seniors might like this): a capstone is what you put on top of a finished structure

Another example: "**keystone predators**" e.g. sea stars, which eat mussels, clearing space on rocks for other species

Indicator species-signal health of a system, like some fish or worms signify water quality, also known as "bioindicators"

Succession: one species takes over another in time

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