

Today in APES...

Week #5 Quarter 2 (11/12-11/15)

[\(calendar site\)](#)

Tuesday, 11/12

APES Learning Goal:

- I can predict and analyze natural ecosystem change.
- I can use models to comprehend how the Earth naturally sustains itself.

Daily Question:

What factors affect species diversity?

Activities/Assignments:

1. Finish and Discuss Biodiversity Lab
2. Biodiversity Notes

Have out:
Biodiversity Lab
"Pandora's Promise"
reaction paper

Homework:

1. Evolution Powerpoint
Cornell Notes due
Wed/Thurs 11/13 &
11/14
2. Chapter 4 & 5 test on
Friday 11/22
3. Hotspots activity due
Friday for 12 points
4. Climatograms due Friday
for 21 points.

I still have students missing “Citizenship Contracts” from your 2nd hour class. The students names are as follow: Michelle Anthony, Sydney Buren-Modder, Lucas Campbell, Esperanza Montero, Papa Oppong-Takyi, Cory Simon, and Cindy Tran.. It is imperative that I get these **ASAP**.

AP Exam Registration information

2013-2014 school year

- Registration for May, 2014 AP exams at Chandler High School is now open. We will again be using an online registration system through “Total Registration”. Follow the steps below to get registered for your AP exams, or visit the *CHS webpage* → *Programs* → *AP Program* and follow the links provided.**

AP Exam Registration information

2013-2014 school year

- Log on to our Total Registration page at
- <https://user.totalregistration.net/AP/030045>
- If you have never logged on to this system before:
 - Enter your email address at the bottom of the page and click “NEXT”
 - Now you will be prompted to reenter your email address and create a password.
- If you have used TOTAL REGISTRATION for last year’s AP testing or this year’s IB registration, click the link to “LOGIN HERE”
- Read all of the information carefully.
- A few highlights:
- The cost is **\$92 per exam**.
- If your AP class is a one-semester class, please register and pay by Dec. 13, 2013.
- Students must register online and pay for all exams **before 3:00pm** on Friday, **February 28, 2014**. If you are eligible for Free and Reduced Lunch, you can indicate that in the on-line registration process. Most of the fees are covered by the state.
 - You will be responsible to pay the **\$10 not covered (per test)**.
 - You must bring in a copy of the F/R Lunch verification to the bookstore with your registration.

AP Exam Registration information

2013-2014 school year

- Fill in all required information on the registration site.
- Select the exams you will be taking AND the teacher/period for each class.
- **** If you are registered to take IB exams this year, be sure to answer YES to the question “Are you taking any IB exams this year?”. Then, when prompted, click on the IB exams that you have already registered to take. ****
- Although you are selecting your method of payment on the form, you will not be paying online.
- Once your registration is complete, PRINT a copy of the form.
- Take the **copy** and **your payment** to the bookstore during regular bookstore hours.
- ***Do not let lack of funds keep you from testing. Scholarship opportunities are available.***
- Please contact Mrs. Mary Kandarlis at ***kandarlis.mary@cusd80.com*** or
- 480-812-7709 if you have any questions.

Today in APES...

Week #5 Quarter 2 (11/12-11/15)

[\(calendar site\)](#)

Wed/Thurs, 11/13 & 11/14

APES Learning Goal:

- I can effectively express viewpoints on the use of alternative energy and its affect on biodiversity.

Daily Question:

How would alternative energy sources affect species diversity?

Activities/Assignments:

1. Finish Biodiversity Notes
2. "Fishbowl" discussion
3. Eco-column data collection

Have out:

- ✧ Evolution PPT Notes for 2 stamps
- ✧ "Pandora's Promise" reaction paper

Homework:

1. Chapter 4 & 5 test on Friday 11/22
2. Hotspots activity due Friday for 12 points
3. Climatograms due Friday for 21 points.

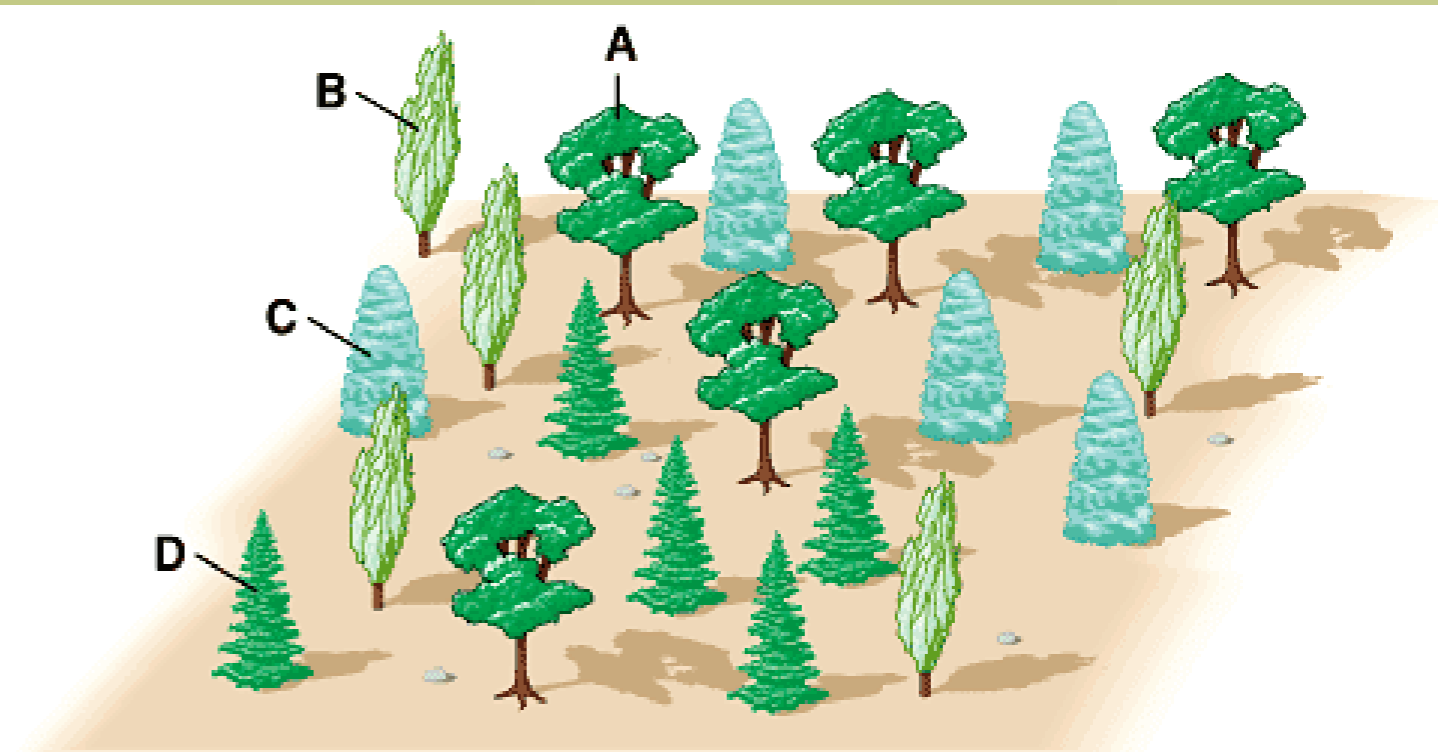
Biodiversity Factoids

- ~ 2,000,000 spp. have been described
- ~ 10-30,000,000 species actually exist (est.)
- ~ 8,000,000 – 22,000,000 spp. unidentified
- ~ 40 – 60% of all spp. occur in two areas:
 - * tropical rainforests
 - * coral reefs

1. In groups of 4-5 QUIETLY Calculate the diversity of the library. analyze the class data and answer the questions. Use the formula's given in your class notes!!
2. When all groups are done we will come back to class and share data and analysis!

Comparison of Two Communities

- Richness (number of species)
- Relative abundance
- How do we describe these differences?



Community 1

A: 25% B: 25% C: 25% D: 25%



Community 2

A: 80% B: 5% C: 5% D: 10%

Biogeographical Changes

- Richness declines from equator to pole
- Due to:
 - Evolutionary history
 - Climate

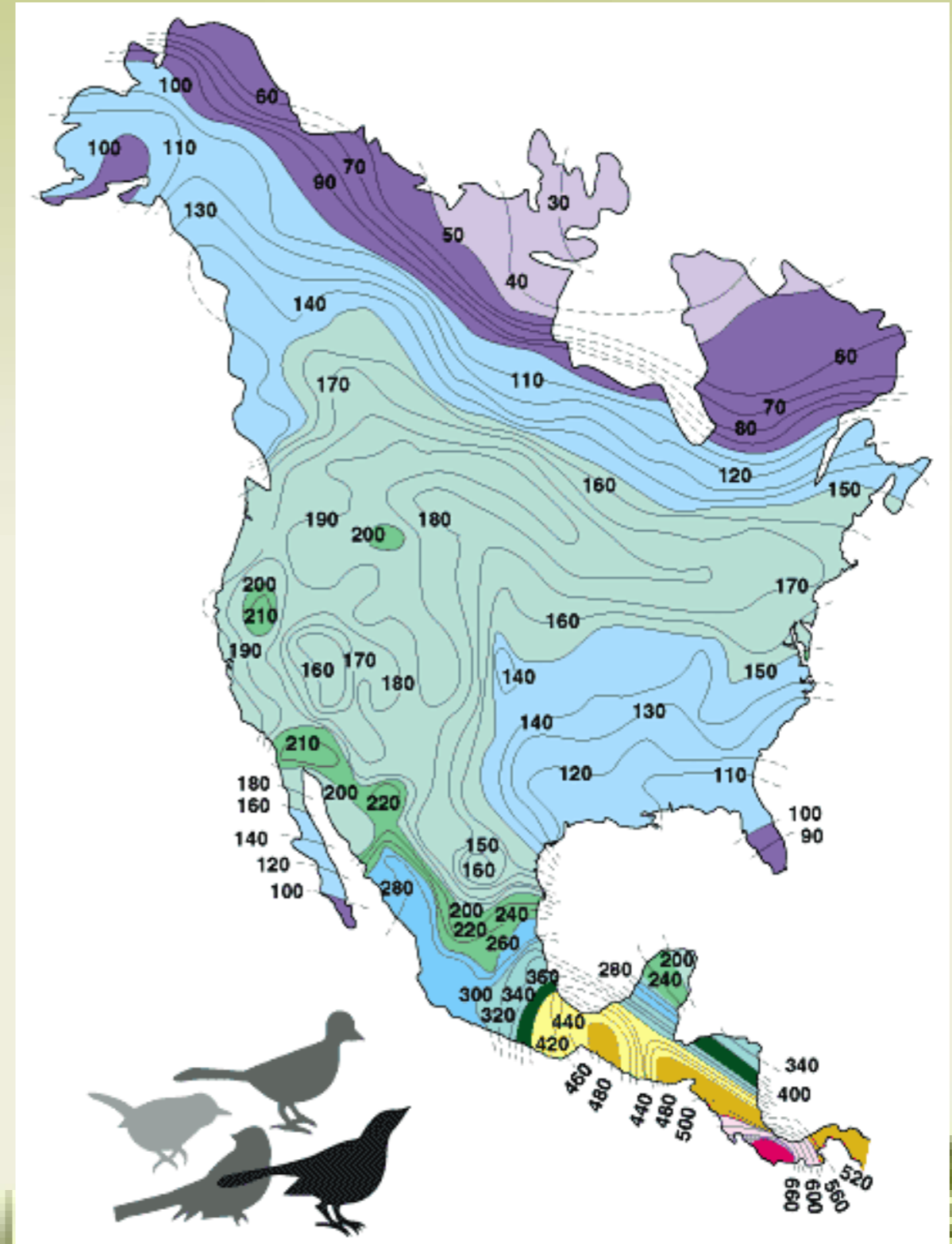


Fig 53.23 Bird species numbers

Geographic (Sample) Size

- Species-area curve
- The larger the geographic area, the greater the number of species

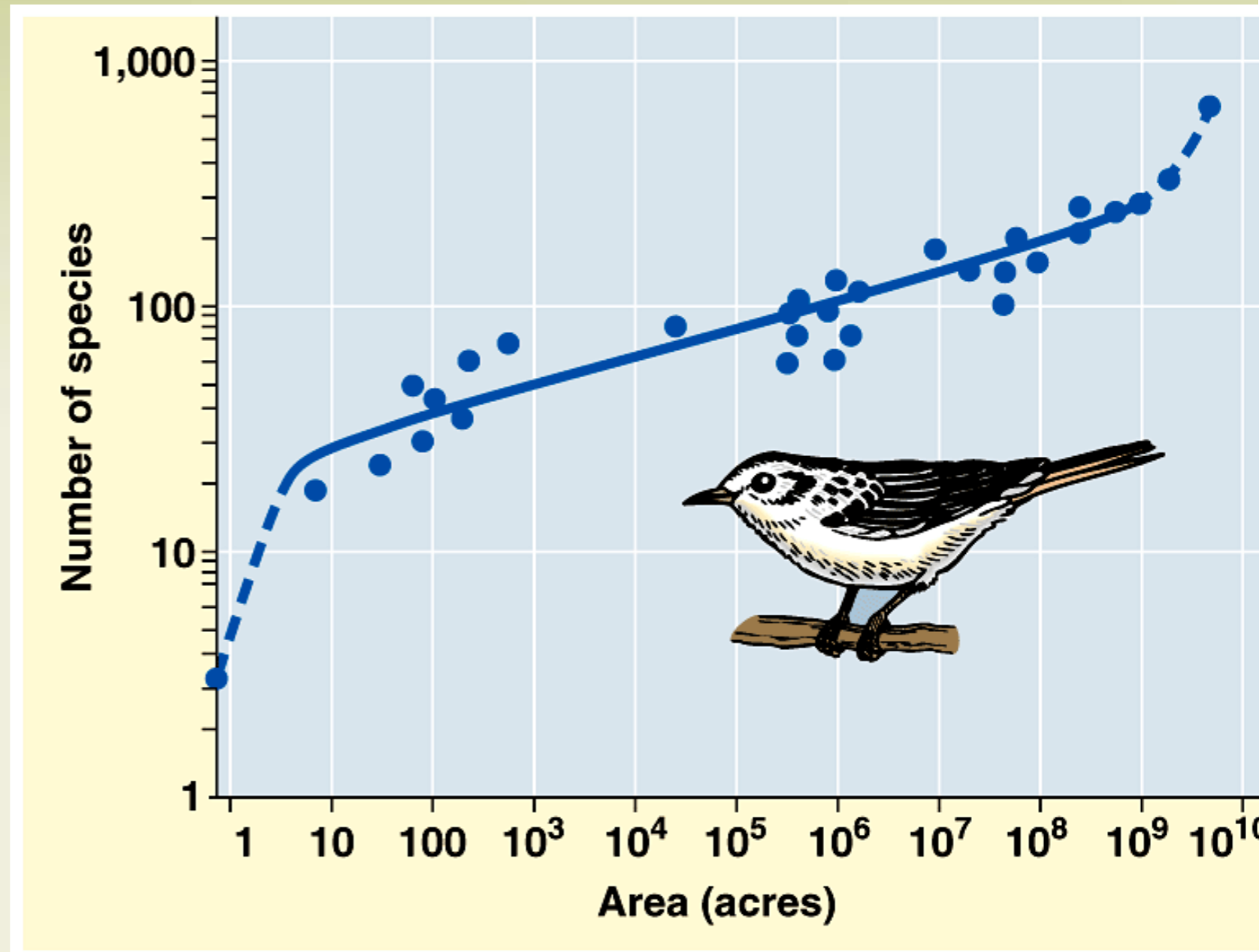


Fig. 23.25 North American Birds

Species Richness on Islands

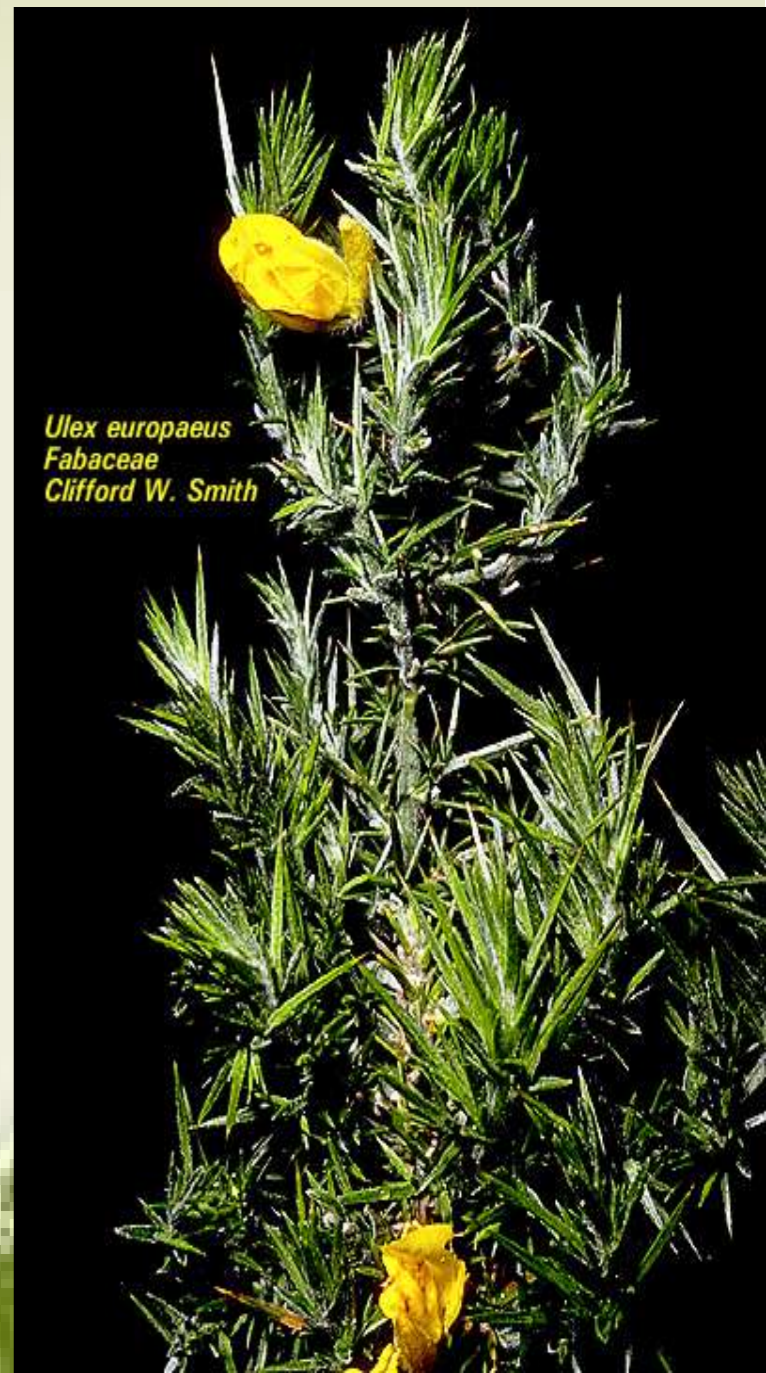
- Depends on:
 - Rate of immigration to island
 - Rate of extinction on island
- These in turn depend on:
 - Island size
 - Distance from mainland

How do species move?

- Humans (accidental and intended)
- Animals (sticky seeds and scat)
- Wind and ocean currents (+ or -)
- Land bridges
- Stepping stone islands
 - affected by climactic changes (glaciation)
 - ocean levels
 - short-term weather patterns

What allowed colonization?

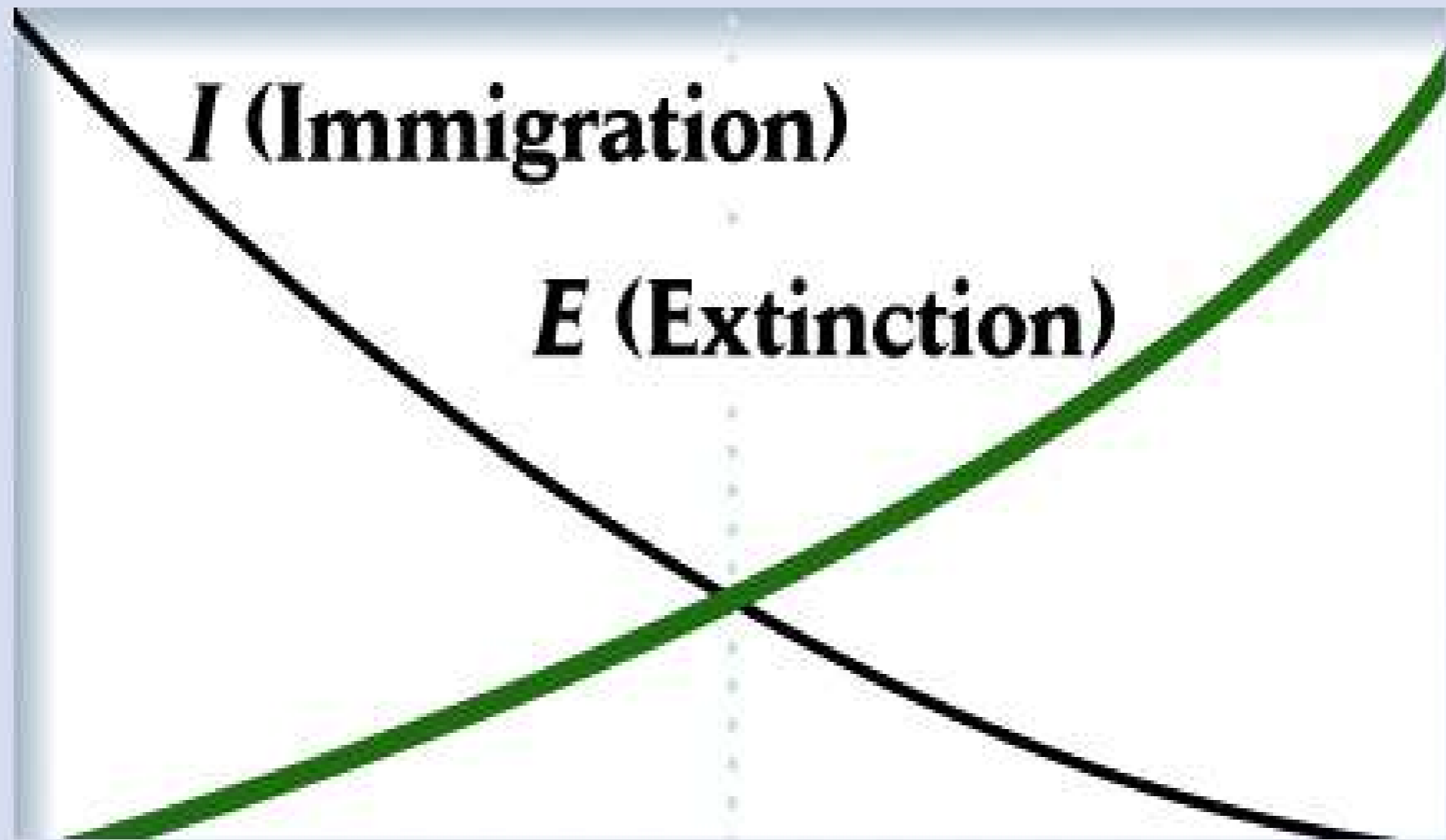
- Niche opening
- No competition
- Endemics not utilizing resources
- Accessibility to colonists



Theory of Island Biogeography

- 1. Immigration rate decreases as island diversity increases**
- 2. Extinction increases as island diversity increases**
- 3. Species equilibrium on islands is a balance of immigration and local extinction**

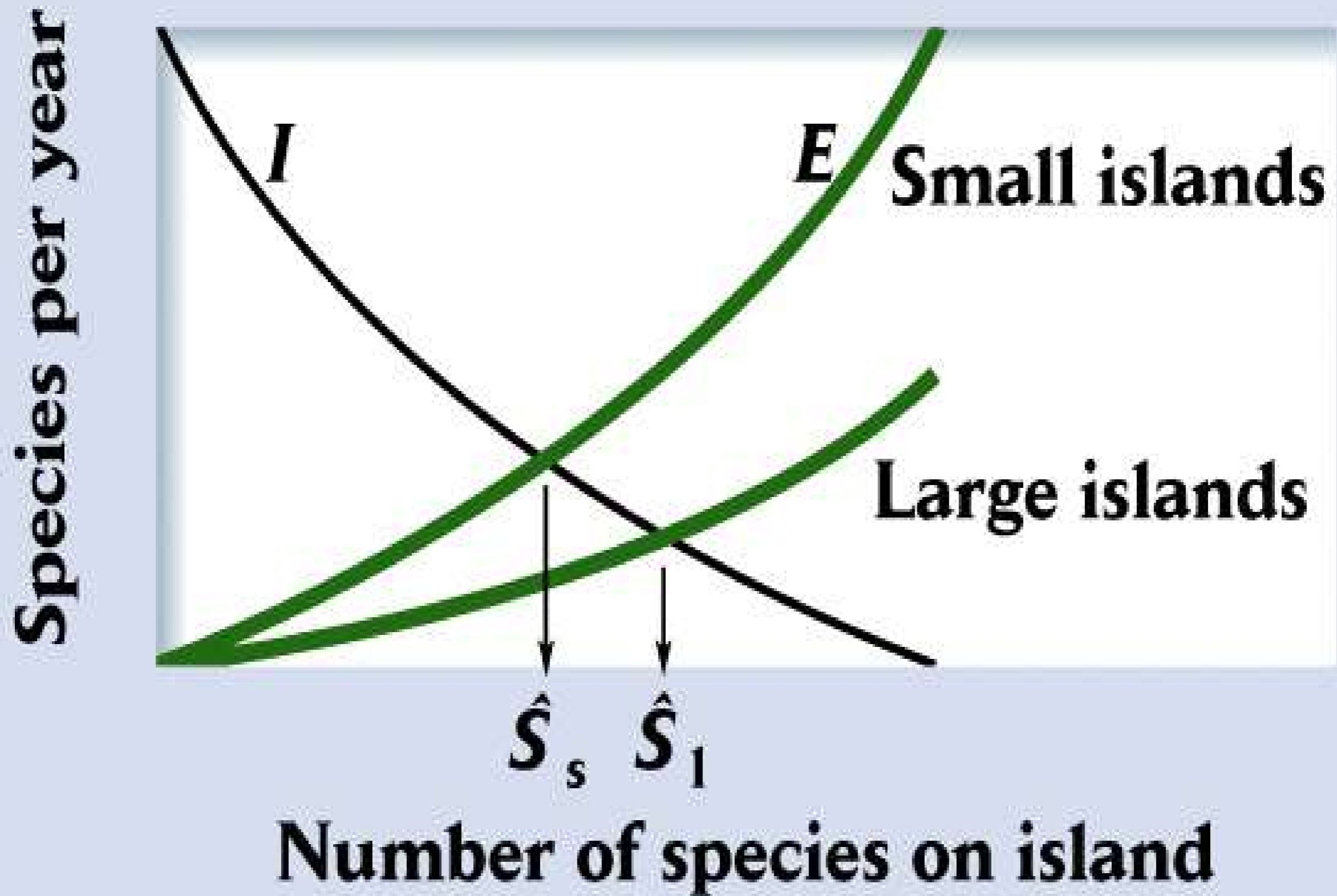
**Rate of immigration
or extinction**



Number of species on island

Theory of Island Biogeography

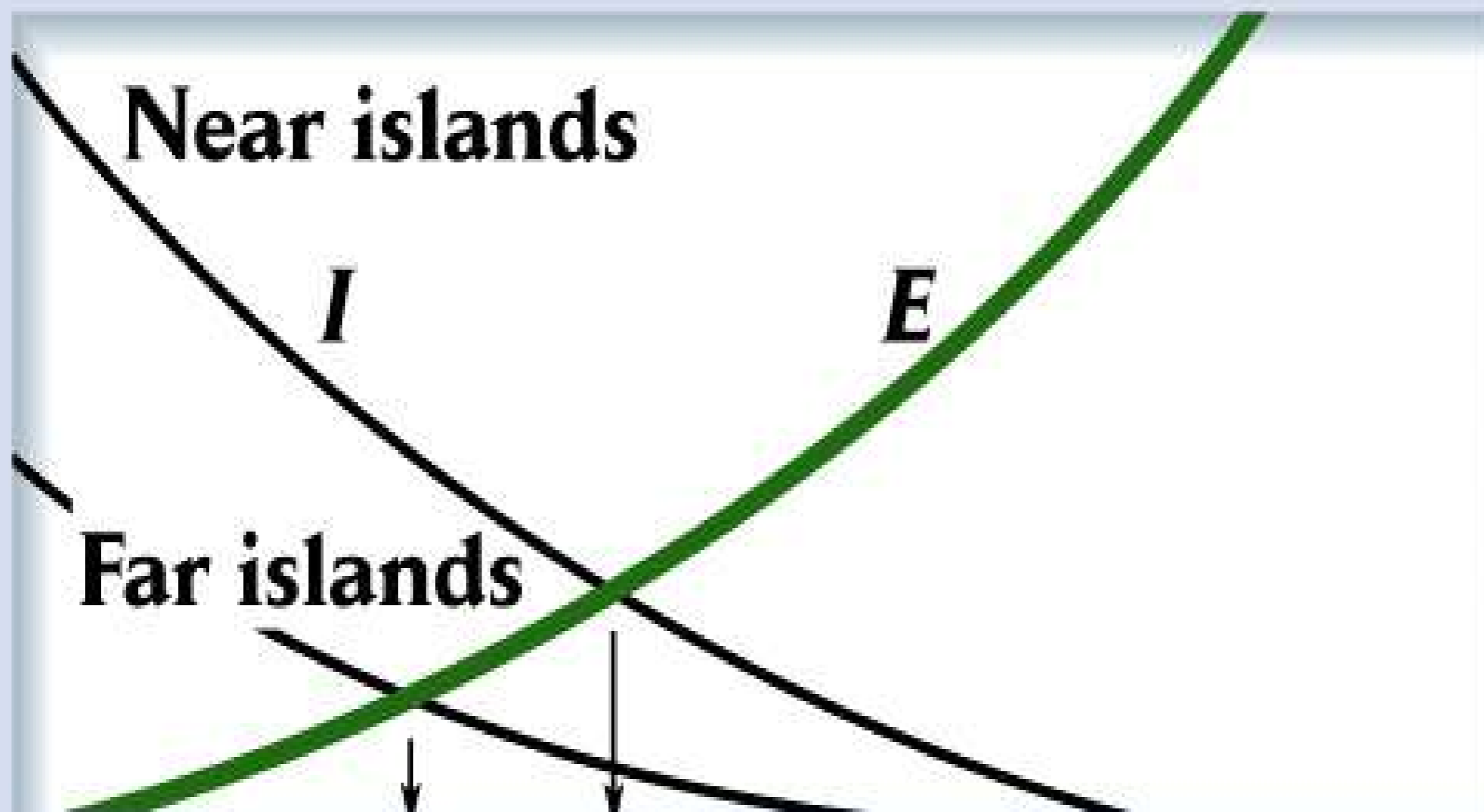
1. Smaller islands have lower total populations
2. Probability of extinction increases with lower population
3. Smaller islands have lower species diversity



Theory of Island Biogeography

1. Islands further from mainland have lower immigration rates
2. More distant islands have lower species diversity

Species per year



Number of species on island

Wilderness Act of 1964

- Wilderness Act of 1964: directed the Secretary of the Interior, within 10 years, to review every roadless area of 5,000 or more acres and every roadless island (regardless of size) within National Wildlife Refuge and National Park Systems and to recommend to the President the suitability of each such area or island for inclusion in the National Wilderness Preservation System, with final decisions made by Congress. The Secretary of Agriculture was directed to study and recommend suitable areas in the National Forest System.



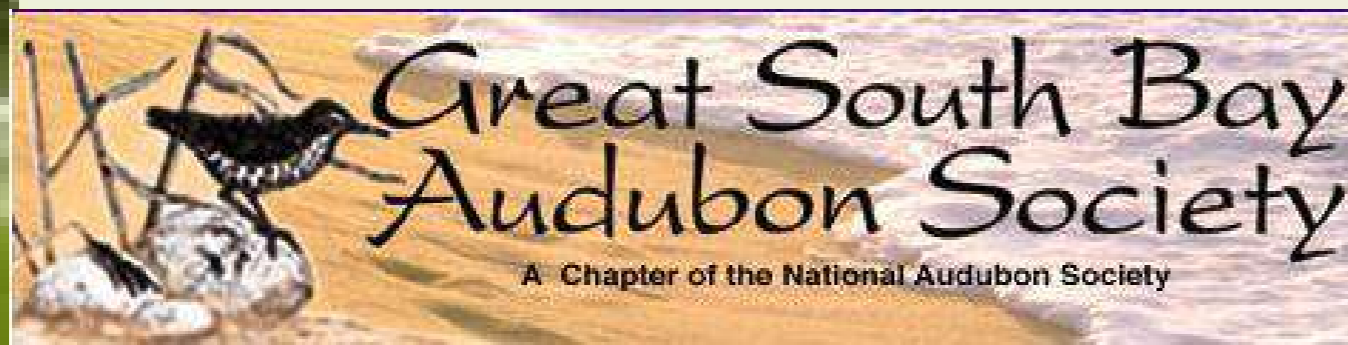
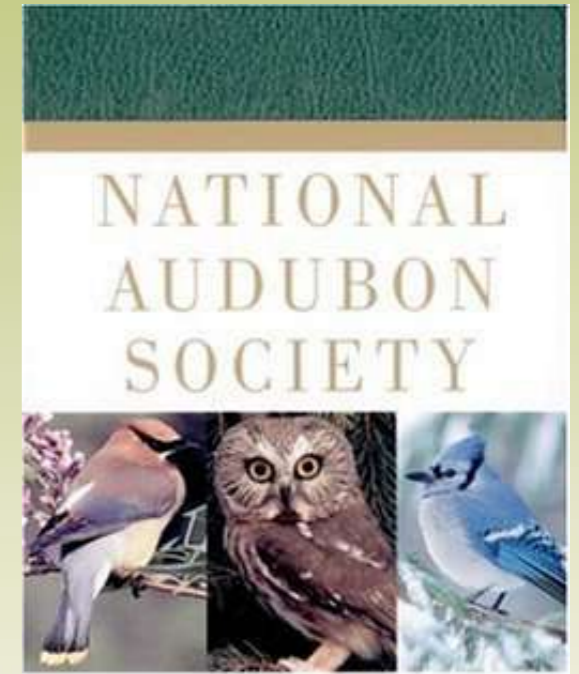
Roosevelt



- T. Roosevelt also tripled the size of the forest reserves and transferred administration from Department of the Interior (USDOl) to Department of Agriculture (USDA).
- 1905, Congress created the US Forest Service to manage and protect forest reserves. Roosevelt appointed Gifford Pinchot as its first chief.
- 1907, Roosevelt reserved 16 million acres of land.
- Congress was trying to ban Executive orders for forest reservation. Roosevelt did this defiantly the day before Congress' ban became law!

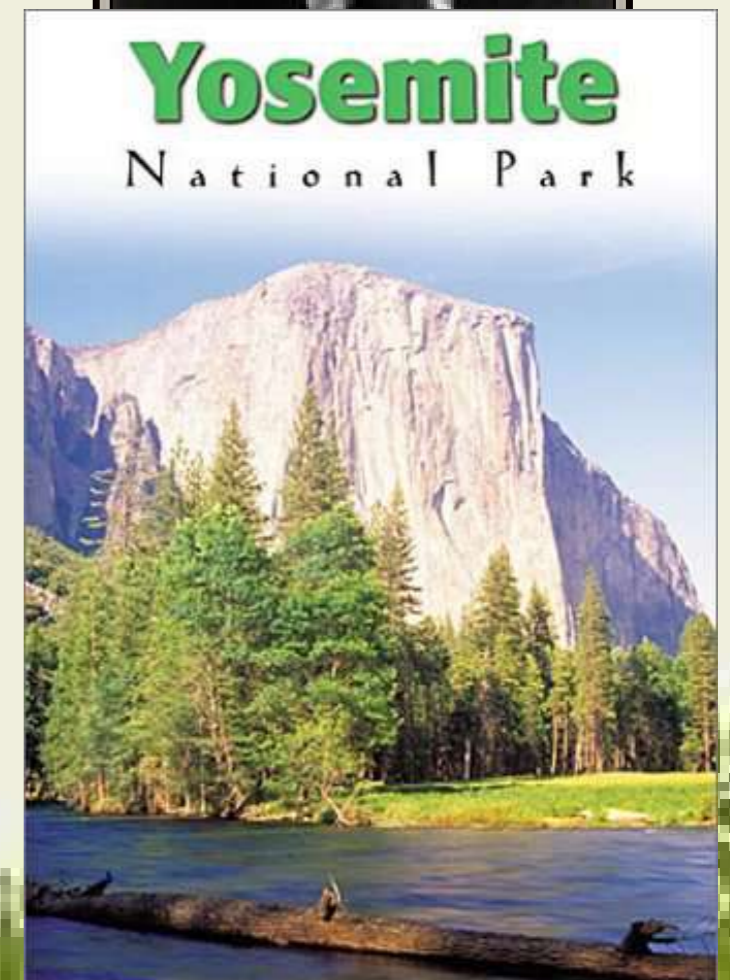
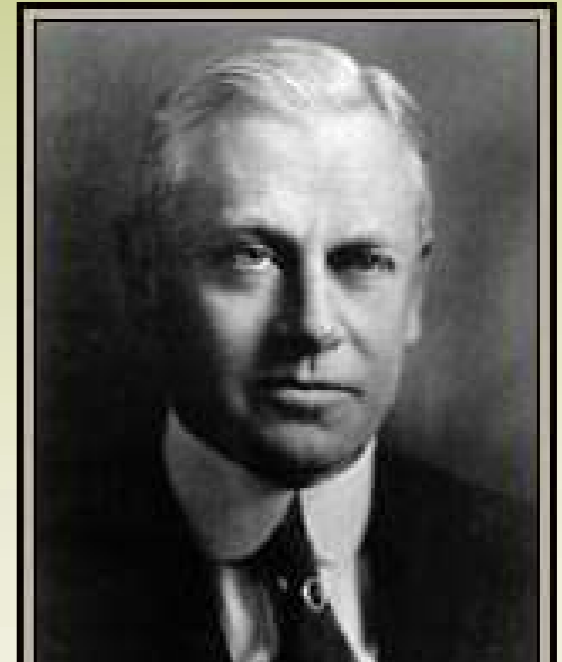
Pinchot

- (1905) Pinchot pioneered scientific management of forest resources on public lands, using the principles of *sustainable yield* and *multiple use*.
- This same year, the Audubon Society was founded to preserve the nation's bird species.



US National Park Service

- 1912, Congress created the US National Park Service.
- 1916, Congress passed the National park System Organic Act – declared that the parks were to be maintained in a manner that leaves them unimpaired for future generations and established the National Park Service (DOI).
- Stephen Mather was the first Director of NPS. He began establishing grand hotels and other tourist facilities in parks with spectacular scenery to encourage tourism by allowing private concessionaires to operate facilities within the parks.



Fishbowl Discussion

- Class will be divided into two groups and use a fishbowl format.
- One half of the class is in the 'center' facing each other and discussing the video/text, while the remainder is on the 'outside' observing and listening.
- Members of the outer circle will use an evaluation form to track their partners participation.
- A reserved empty 'hotseat' is for those in the outer circle who really want to jump in to make a contribution and then leave.
- At the end of the conversation, the outer circle can share their observations. The groups then switch to allow the outside group a chance to discuss.
- **After the Fishbowl Discussion you will complete a self evaluation form. Both the partner and self evaluation forms are part of your reaction paper grade.**

Outer Fishbowl

- Listen quietly while students in the Inner Fishbowl are talking.
- Keep your eyes on both the teacher and the student who is talking.
- Take written notes on what you hear or observe.
- Be prepared to share your observations with the class

Fishbowl Discussion Rules

Inner Fishbowl

- Listen while others are talking.
- Do not speak when someone else is talking.
- Raise your hand when you have an idea to share.
- Answer questions in complete sentences.

Eco-column Labs

•Test your:

- Aquatic chamber
 - See Chart on packet for initial tests
 - Make sure you have a hypothesis written
- Decomposition chamber
 - See Chart on packet for initial tests
 - Make sure you have a hypothesis written
- Terrestrial chamber
 - See Chart on packet for initial tests
 - Make sure you have a hypothesis written



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Friday, 11/15

APES Learning Goal:

➤ Out Sick

Daily Question:

Out Sick

Activities/Assignments:

1. Out sick watch Planet Earth

Have out:

Homework: