

# Biogeography

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## Lecture 19

# Outline

## Biogeography of the World

- Distribution: the basic concept

- Floristic kingdoms and faunistic provinces

- Holarctic region I: Nearctic North America

# Please rate, 1 to 5

1. March 6 Zoo and Stainback Hwy roadside (W)
2. March 7 Hawaii Tropical Botanical Garden (W)
3. March 7 Onomea Bay Trail (W)
4. March 8 Akaka Falls State Park (W)
5. March 8 Punaluu Black Sand Beach (V)
6. March 9 Saddle Road: Kaumana Trail and Pu'u O'o trail (V)
7. March 9 Puu Waawa Cinder Cone State Park (L)
8. March 9 Kaloko-Honokohau National Historic Park (L)
9. March 10 Muliwai Trail in Waipio Valley (W)
10. March 10 Hakalau Beach park (W)
11. March 11 Hawaii Volcanoes National Park (V)
12. March 12 Kona Kamakahonu Beach snorkeling (L)
13. March 13 Maunakea (V)
14. March 13 Kaumana Caves (W)
15. March 14 Rainbow Falls (W)
16. March 14 Hilo shopping (W)

By Wednesday,  
please bring photographs  
split by folders  
(plus one comment file per folder)  
on USB flash drive

# Biogeography of the World

## Distribution: the basic concept

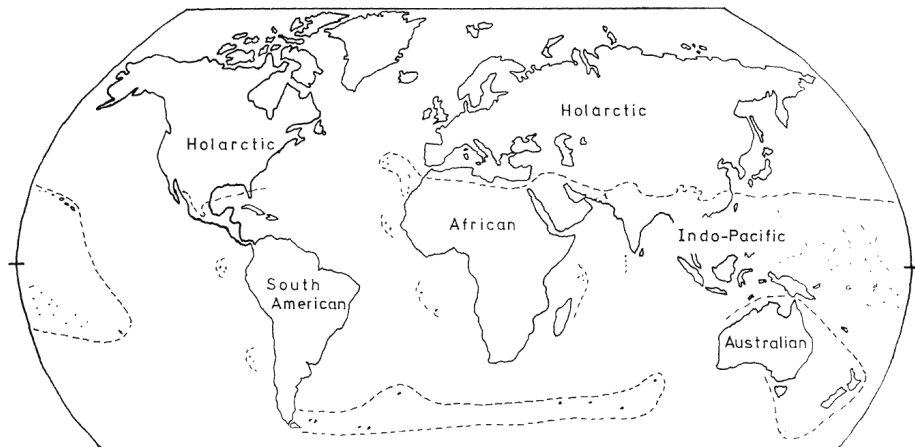
# Species distribution

- ▶ Range  
Restricted with climate, history and natural barriers
- ▶ Disjunction  
Examples: East Asia/East Coast; Pacific (West Washington/North Idaho)
- ▶ Endemics  
Every species is endemic to some region. What is important, is the size of region. There also species endemic only to Earth: cosmopolitan species like bracken fern (*Pteridium*).

# Biogeography of the World

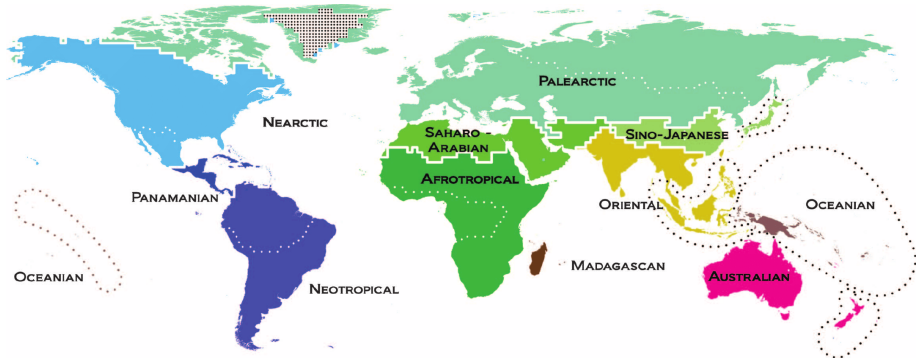
## Floristic kingdoms and faunistic provinces

# Contemporary look on plant biogeography: five kingdoms (Cox, 2001)





# Contemporary look on animal biogeography: 10 provinces (Holt et al., 2013)



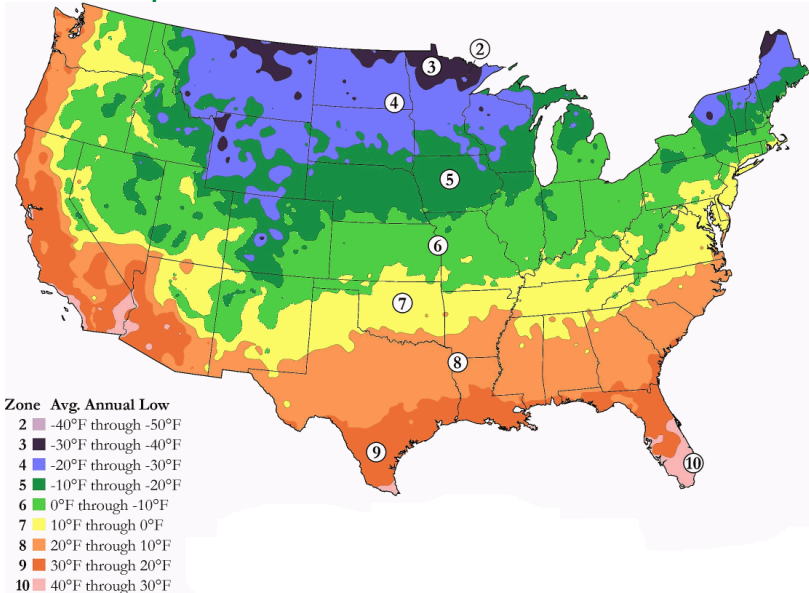
# Our approach: 5 regions

- ▶ Holarctic (I and II)
- ▶ Neotropical
- ▶ African and Madagascan
- ▶ Indo-Pacific
- ▶ Australian

# Biogeography of the World

## Holarctic region I: Nearctic North America

# Climate/temperatures: hardiness zones



# Climate/precipitation



# Ecoregions



# For Further Reading



A. Shipunov.

*Biogeography* [Electronic resource].

2014—onwards.

Mode of access: [http://ashipunov.info/shipunov/school/biol\\_330](http://ashipunov.info/shipunov/school/biol_330)



A. Shipunov.

*Introduction to Biogeography and Tropical Biology* [Electronic resource].

2017—onwards.

Mode of access: [http://ashipunov.info/shipunov/school/biol\\_330/intr\\_biogeogr\\_trop\\_biol/intr\\_biogeogr\\_trop\\_biol.pdf](http://ashipunov.info/shipunov/school/biol_330/intr_biogeogr_trop_biol/intr_biogeogr_trop_biol.pdf)