

# Biogeography. Lecture 2

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# Outline

Biogeography  
Introduction

Basics of physical geography  
Main categories



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# Ecuador-2018

<http://goo.gl/GkBseN>



# Biogeography

## Introduction



## Why do polar bears not eat penguins?

(Yes, they do not intersect but they are not so far from each other as many think. So why they did not meet?)

[http://msubiology.info/shipunov/ph/20151223\\_chile/  
20151224\\_patagonia/mov/](http://msubiology.info/shipunov/ph/20151223_chile/20151224_patagonia/mov/)

[http://msubiology.info/shipunov/ph/20160626\\_sa/20160711\\_  
cape\\_town/20160713\\_stone\\_point/mov/](http://msubiology.info/shipunov/ph/20160626_sa/20160711_cape_town/20160713_stone_point/mov/)



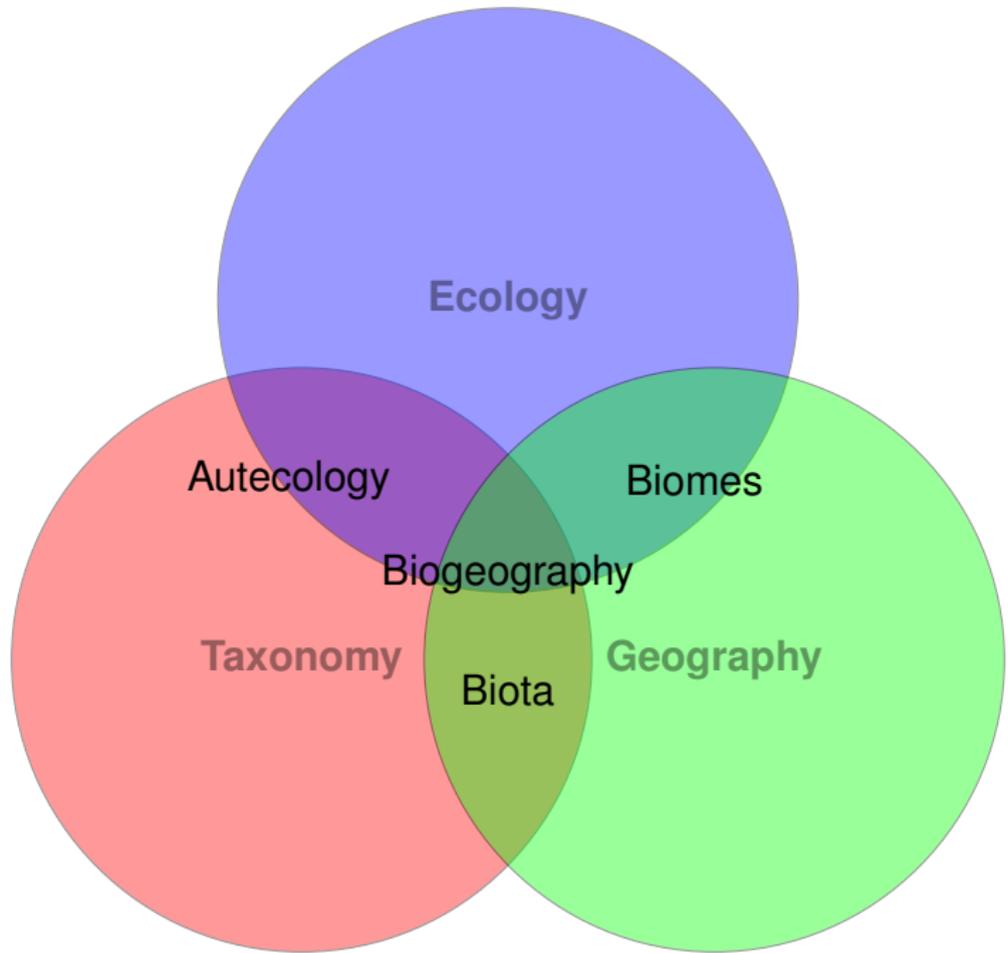
# What is biogeography?

Intersection between:

- ▶ Geography in wide sense (including climatology, landscape science, and even historical geology)
- ▶ Ecology (both of organisms and communities)
- ▶ Taxonomy (including phylogeny)

Contemporary biogeography always always takes into account the historical aspect.





# My contributions to biogeography

- ▶ Island biogeography: small uprising islands of White Sea (Russian Arctic)
- ▶ Species biogeography: color polymorphism in Caucasian primroses
- ▶ Regional biogeography: flora of North Dakota



# Around biogeography

- ▶ Geography + ecology + taxonomy = biogeography
- ▶ Geography + ecology = geographic ecology, Earth biomes
- ▶ Geography + taxonomy = floristics and faunistics
- ▶ Ecology + taxonomy = autecology, ecology of species



# Basics of physical geography

## Main categories



# Physical geography

- ▶ Geodesy, cartography and spatial science
- ▶ Climatology
- ▶ Palaeogeography
- ▶ Geomorphology
- ▶ Glaciology
- ▶ Hydrology and limnology
- ▶ Oceanography



## Main parts of Earth: horizontal

- ▶ Continents and islands: Greenland criterion, Panama isthmus, isthmus of Suez, Europe-Asia border (Sea of Marmara – Black Sea – North Caucasus – Caspian Sea – River Ural – Ural mountains); Madagascar, Indonesian archipelago
- ▶ Oceans and seas: Arctic ocean criterion, different approaches, Tethys traces (Mediterranean, Marmara, Black, Caspian and Aral seas)
- ▶ Lakes and rivers: Great Lakes, Great African lakes, Baikal, Lake Eyre, Lake Chad
- ▶ Mountains and depressions: Himalayan ridge, Andes and Cordilleras, European ridges, Puerto Rico depression, Mariana trench
- ▶ Straits and currents: Gibraltar, Torres and Magellan straits; Gulf stream, Labrador and North Pacific current, equatorial currents, Antarctic circumpolar current



# Summary

- ▶ Biogeography is an intersection between geography, ecology and taxonomy
- ▶ For biogeography, the most important geographical sciences are geodesy, climatology and palaeogeography.



# 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)

