

Biogeography. Lecture 28

Alexey Shipunov

Minot State University

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Outline

Biogeography of the World

Biogeography of Holarctic Eurasia



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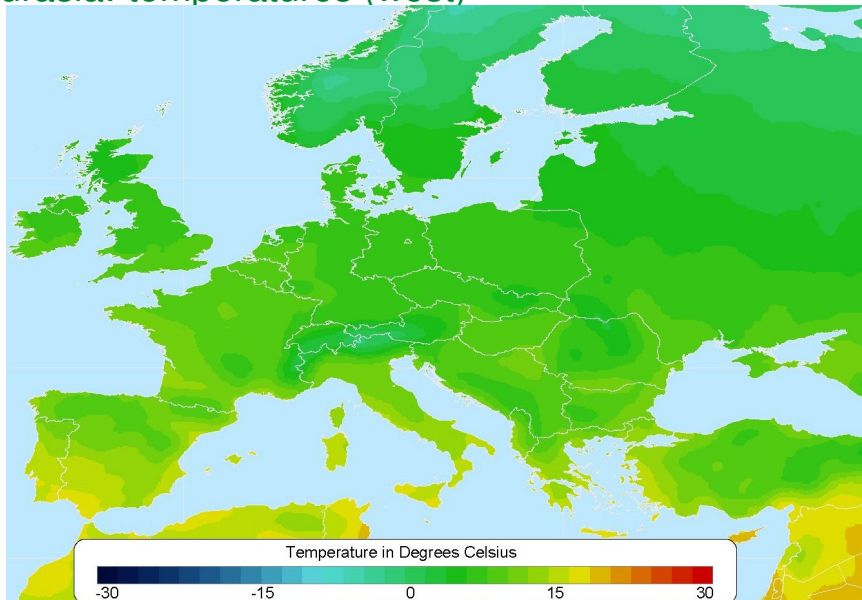




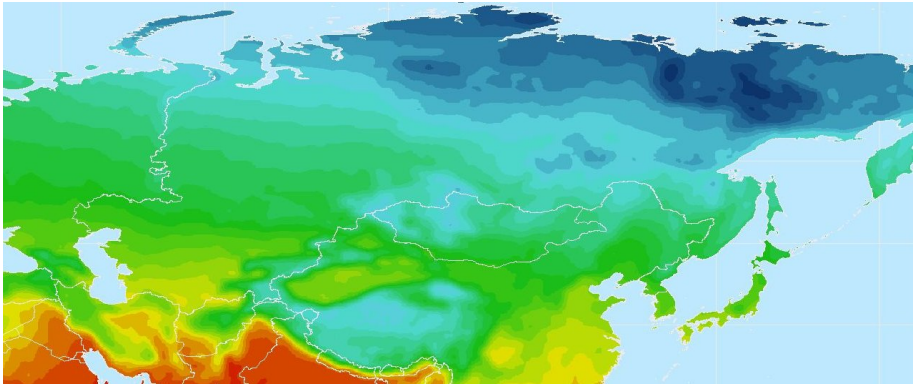
Note latitudinal mountain ranges



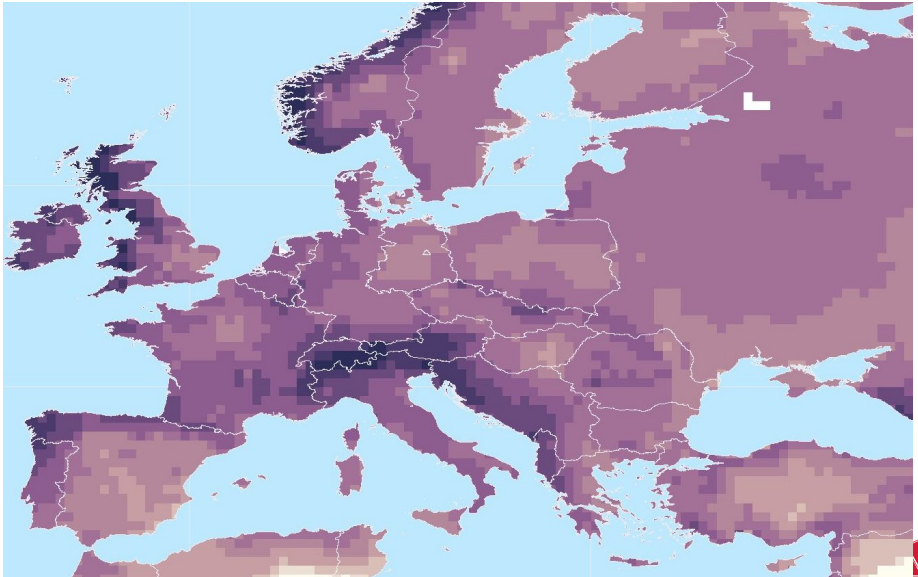
Eurasia: temperatures (west)



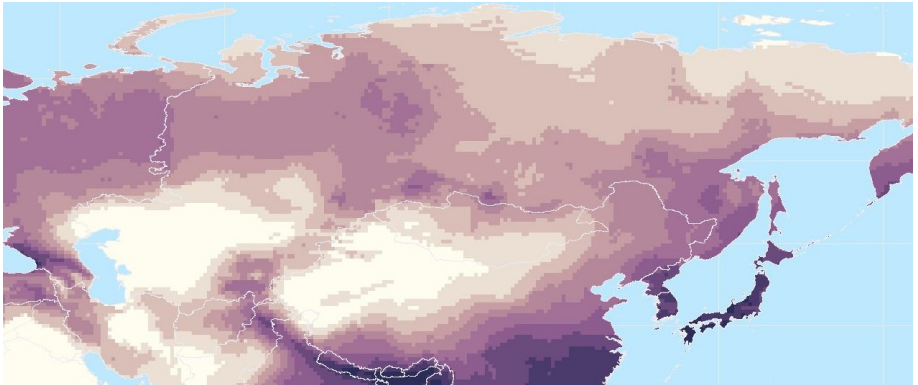
Eurasia: temperatures (east)



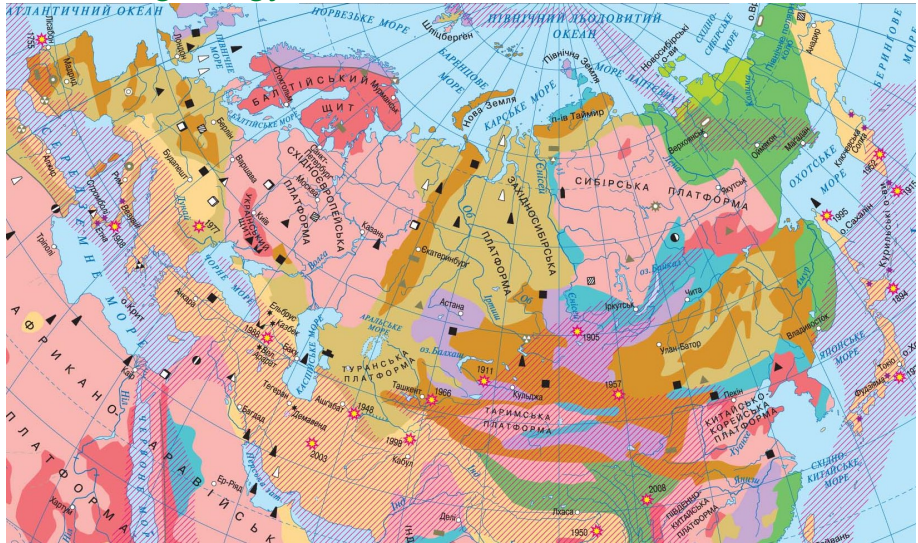
Eurasia: precipitation (west)




Eurasia: precipitation (east)

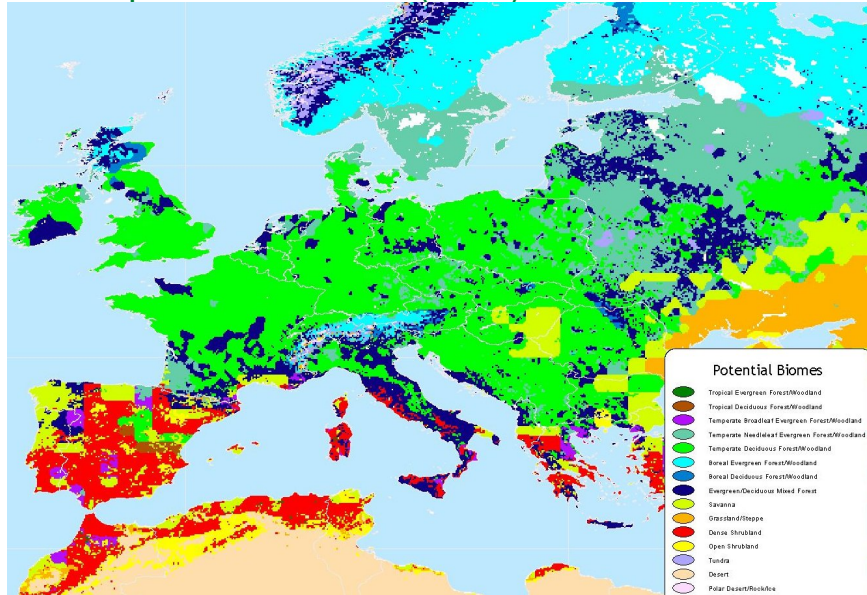


Eurasia: geology

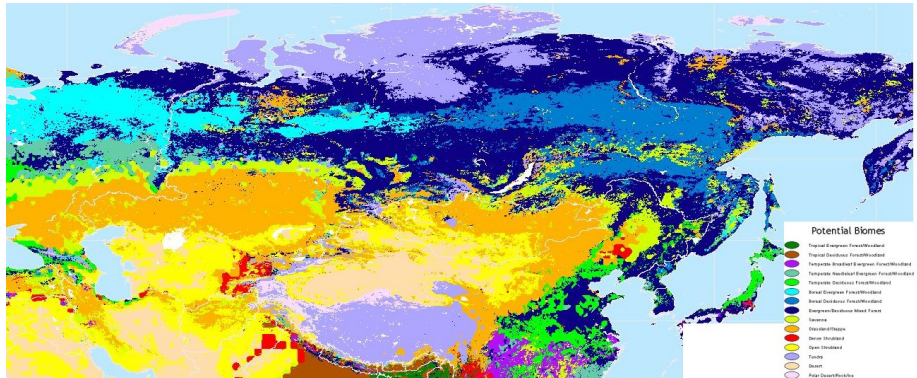


Several continental platforms and mountains on the places of collision 

Eurasia: potential biomes (west)



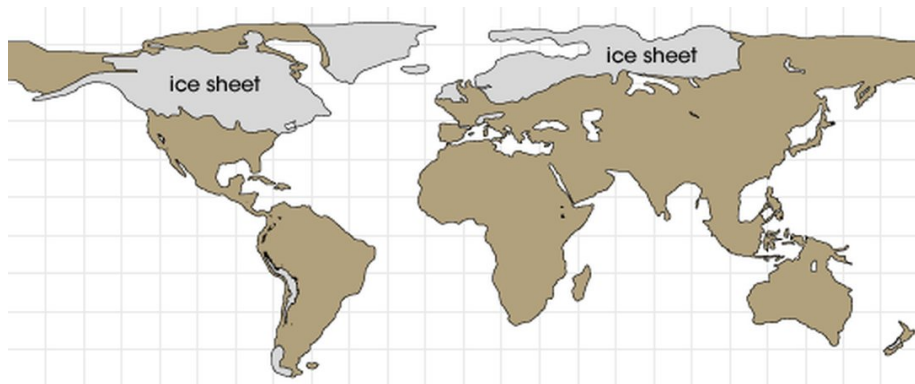
Eurasia: potential biomes (east)



Huge “belts”



Glaciation in North America vs. Eurasia



Note the Beringian land bridge between Eurasia and North America, and compare the relative size of glaciated regions



Eurasia: biogeographical regions



Holarctic Eurasia: 10 biogeographical regions

1. European mixed forests
2. Alps, Pyrenees, Balkans and Caucasus
3. Mediterranean region
4. Steppes: from Hungary to China
5. Taiga: from Scandinavia to Kamchatka
6. Tundra
7. East Asian mixed forests: Manchuria, Korea and Japan
8. Arabian deserts
9. Central Asian cold deserts and Tibet
10. China plain



Eurasian regions: similar to North America, but not the same

1. European mixed forests: like East Coast but less diverse
2. Alps, Pyrenees, Balkans and Caucasus: like Appalachians but more diverse and more alpine (and similar also with Rockies)
3. Mediterranean region: similar to California, and also to Cape region of Africa, has rich and distinct “ethereal oil” flora
4. Steppes: very similar to North American grasslands (same genera are dominating) but more uniform, more “grassy”, less Aster family and shrubs
5. Taiga: from Scandinavia to Kamchatka: very similar to Canadian taiga but less diverse, from other point, this is a place of active hybridisation and speciation
6. Tundra: simply the same with Canadian tundra
7. East Asian mixed forests: even more similar to the East Coast, the second part of East America / East Asia disjunction
8. Arabian deserts: similar to Chihuahua desert but no cactuses
9. Central Asian cold deserts and Tibet: the most similar region is Great Basin, but dominated plant groups are different, instead of Aster family the amaranth family (Amaranthaceae) makes most of species
Landscapes could be strikingly similar: compare Coyote Buttes, UT and Zhangye National Geopark, Sunan!
10. China plain: somewhat similar to southern states (Louisiana, Alabama) but covered with loess soils (like Iowa).



Summary for Holarctic Eurasia

- ▶ Eurasia is extremely heterogeneous continent split in two main biogeographical parts (Holarctic and Indo-Pacific) bordering in Himalayas and North Indochina.
- ▶ Biogeographically, Holarctic Eurasia is almost non-distinct from North America. Same groups, same ecosystems.
- ▶ More continental and rich of latitudinal barriers, less glaciated



For Further Reading



Eurasia.

<http://en.wikipedia.org/wiki/Eurasia>



A. Shipunov.

Biogeography [Electronic resource].

2014—onwards.

Mode of access:

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://msubiology.info/shipunov/ph/>

