

Biogeography. Lecture 29

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April 25, 2018



Outline

Biogeography of the World

Biogeography of Indo-Pacific region



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Biogeography of Indo-Pacific region



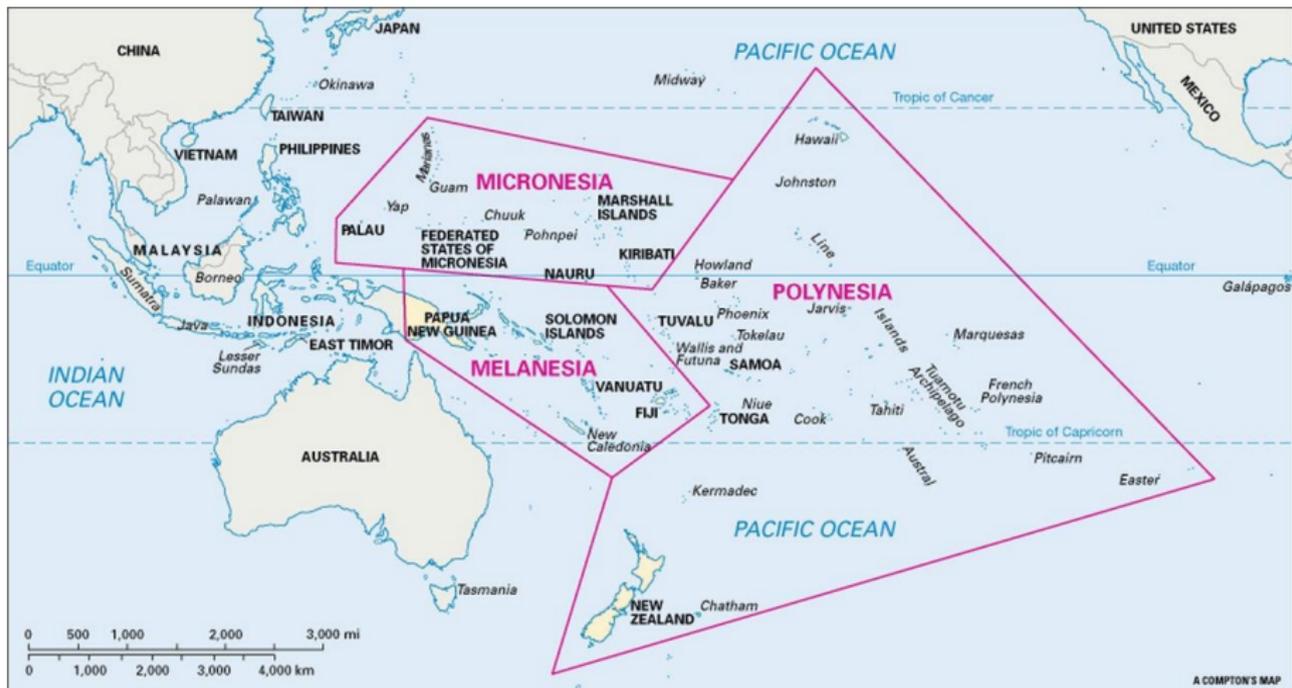
Western Indo-Pacific



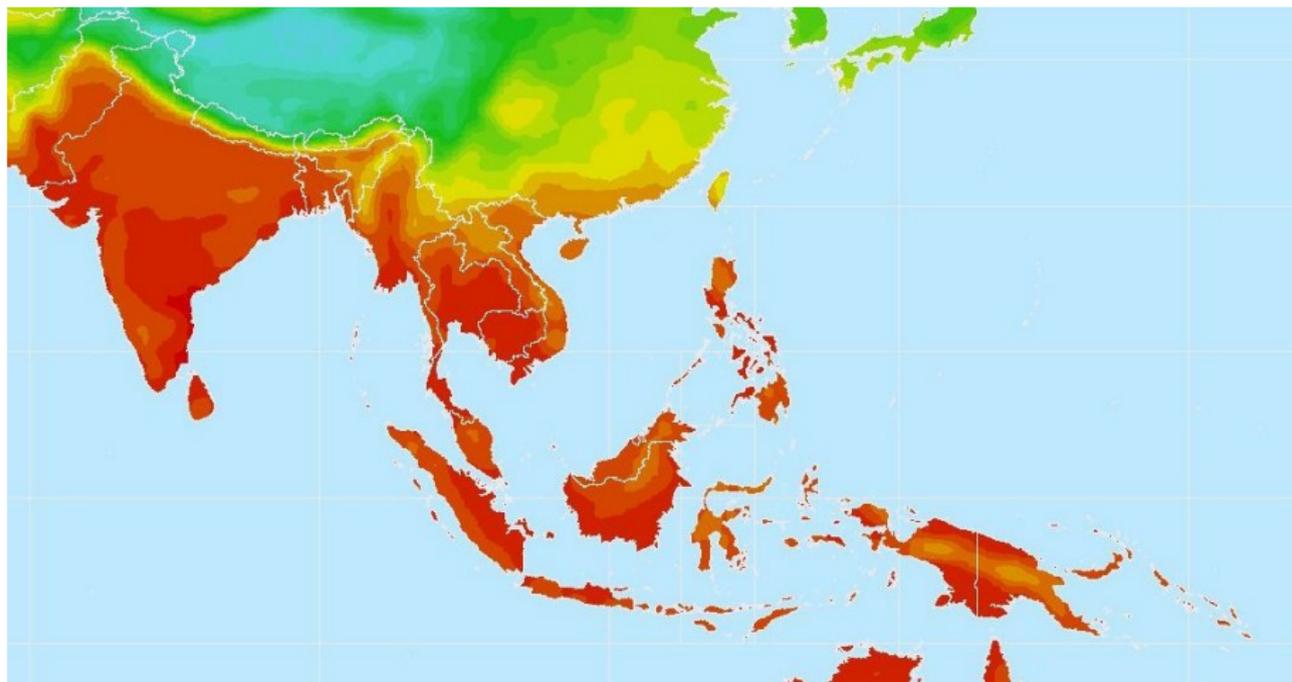
Eastern Indo-Pacific



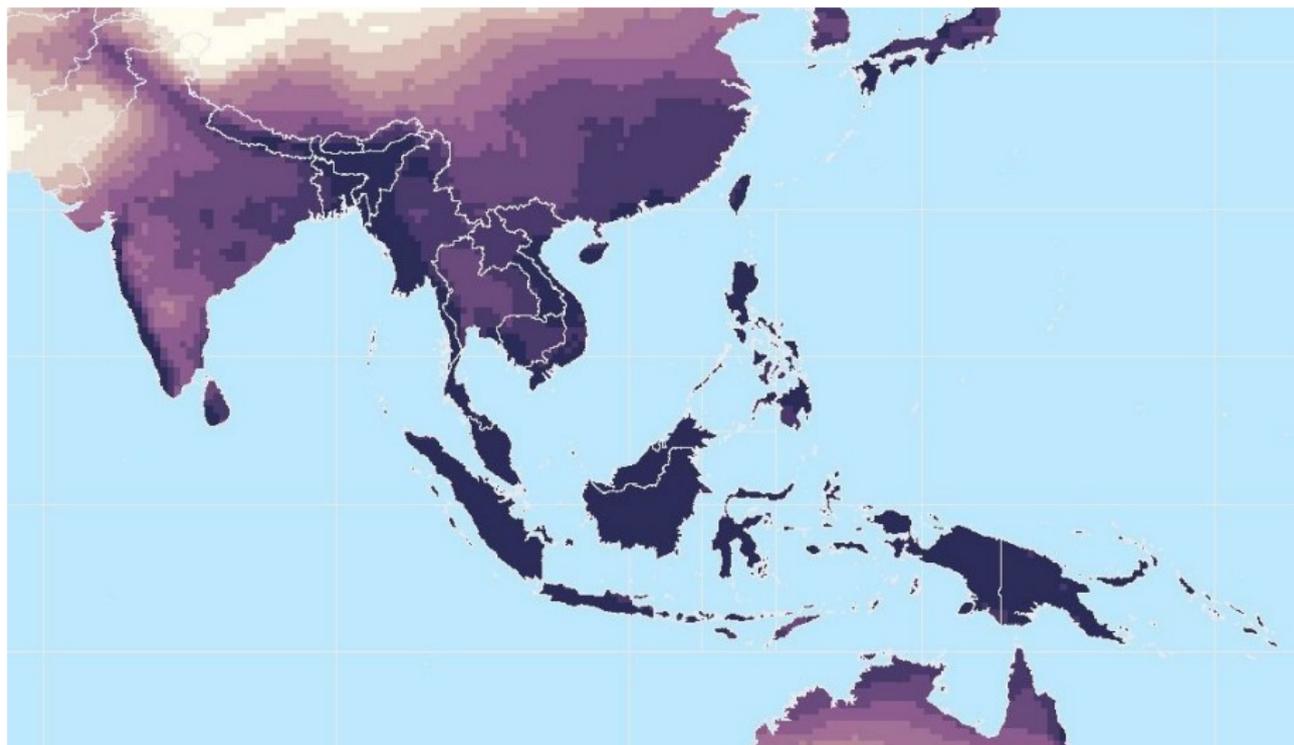
Oceania cultures



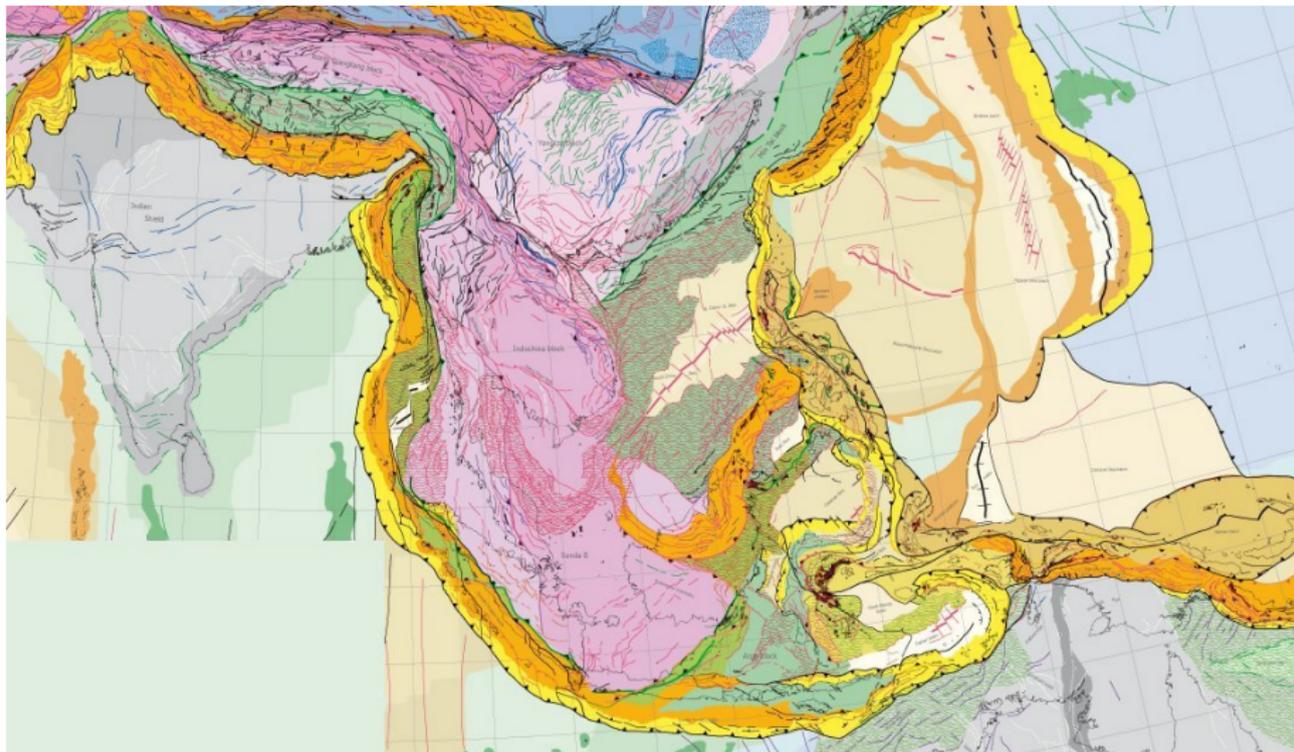
Indo-Pacific: temperatures



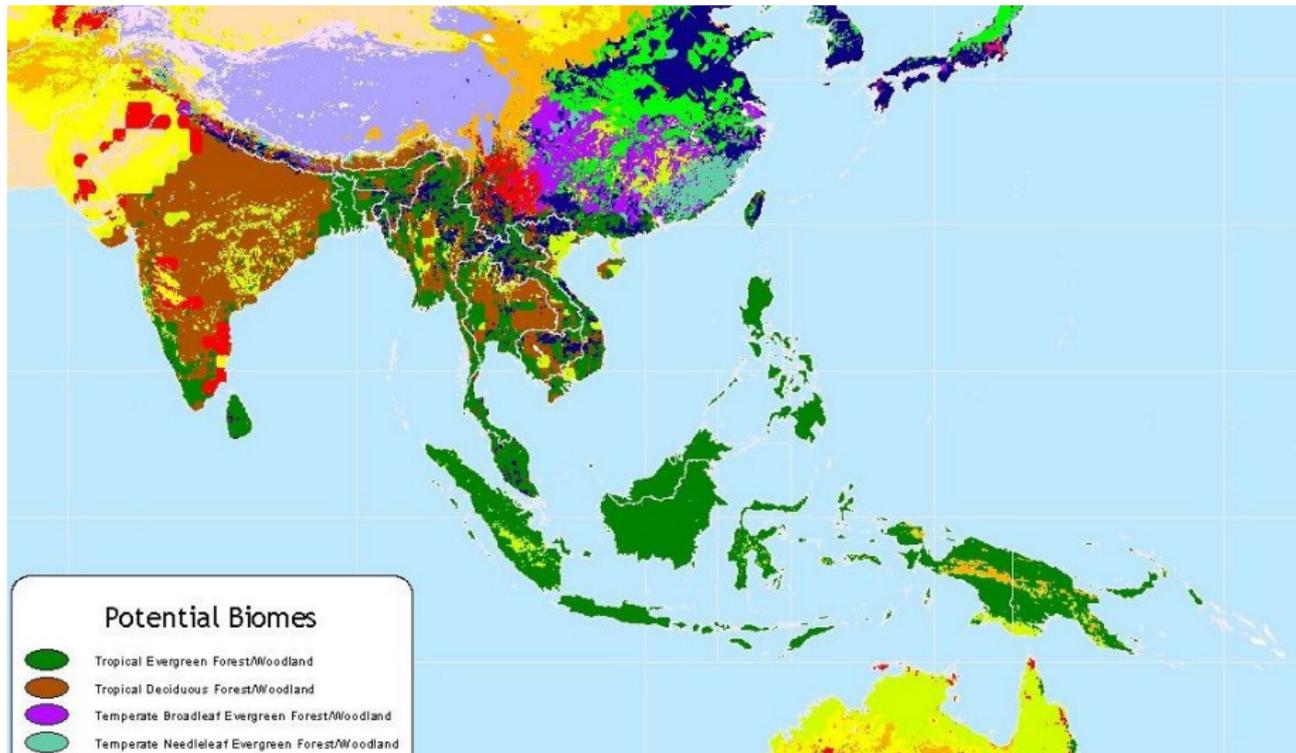
Indo-Pacific: precipitation



Indo-Pacific geology: the “giant puzzle”



Indo-Pacific: potential biomes



Indo-Pacific: 8 biogeographical regions

1. North India
2. Deccan Plateau and South India
3. Sundaland: Indochina
4. Sundaland: Malay archipelago
5. Wallacea
6. New Guinea and Melanesia
7. Coral Pacific Islands
8. Volcanic Pacific Islands



Indo-Pacific regions: key features

- 1. North India:** Asian lions (*Panthera leo persica*) and tigers (*Panthera tigris*)
 - 2. Deccan Plateau and South India:** the most “African” fauna outside of Africa, e.g., Asian elephant (*Elephas maximus*) (smaller ears and less skinny), Indian rhinoceros (*Rhinoceros unicornis*) and multiple species of antelopes like gazelles (*Gazella gazella*); also, many “true” Asian elements like king cobra (*Ophiophagus hannah*), the largest venomous snake.
 - 3. Indochina:** domestication center of many animals like cattle (e.g., wild gaur *Bos gaurus*) and chicken, Red Junglefowl (*Gallus gallus*). Terrestrial leeches (Haemadipsidae).
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- 4. Malay archipelago:** one of the most species-rich regions of the World. Unique animals: orangutans (*Pongo pygmaeus* and *Pongo abelii*), gibbons (family Hylobatidae), flying lemurs (order Dermoptera), flying lizards (*Draco volans*) and even flying frogs (*Rhacophorus*)! Hornbills (family Bucerotidae, substitute of South American toucans) and scaly anteaters (order Pholidota) are common with African biota. Lots of epiphytes (e.g., orchids) but no bromeliads. Pitcher vine *Nepenthes* (some in symbiosis with tree shrews, order Scandentia) is also specific to the region. Famous island Krakatoa exploded in 1883 is located here, between Java and Sumatra.
 - 5. Wallacea:** border between Sundaland and Sahul; islands which have never been connected with Asia (some of them like Sulawesi are disputable) and therefore “stepstones to Australia”. Most famous is Komodo, the island of Komodo dragon (*Varanus komodoensis*), the largest terrestrial reptile (up to 3.1 m)
 - 6. New Guinea and Melanesia:** have multiple Australian elements like echidna (*Zaglossus*) but also placental mammals (like Muridae, mice) and endemic groups (like birds of paradise, family Paradisaeidae).
 - 7. Coral Pacific Islands:** very poor soils and consequently poor biota
 - 8. Volcanic Pacific Islands like Hawaii:** recently radiated flora and ornithofauna (like Hawaiian honeycreepers, Drepanididae) and relatively poor terrestrial fauna.



For Further Reading

 **Sundaland.**
<http://en.wikipedia.org/wiki/Sundaland>

 **Oceania.**
<http://en.wikipedia.org/wiki/Oceania>

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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/20170706_s_e_asia

 http://msubiology.info/shipunov/ph/20070305_oahu_kahana

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