

## Ethnobotany. Lecture 22

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# Outline

- 1 Nuts and gourd plants
  - Nuts
  - Gourd plants

# Currants and gooseberries

- Belong to Saxifragaceae family; multiple species of genus *Ribes* are cultivated
- All are shrubs, gooseberries (*Ribes uva-crispa*) have spines whereas currants (mostly *R. rubrum* and *R. nigrum*) not
- Rich of pectins and vitamin C



# Black currant



# Blueberry and cranberry

- Belong to heath family, Ericaceae and genus *Vaccinium*
- *Vaccinium macrocarpon* is American cranberry; *V.corymbosum* is the most cultivated species of blueberries
- Have high food and medicinal value, provide vitamins, antioxidants (carotenoids) and organic acids; *V. vitis-idaea* (lingonberry) is probably most valuable

# Blueberry



# Cranberry



# Cranberry harvesting



# Lingonberry



# Nuts in general

- Contain proteins and oil in seed endosperm and/or cotyledons
- The main way of dispersal is the weak memory of collecting animals

# Walnut, *Juglans regia*

- Belongs to walnut family, Juglandaceae, only one species is cultivated
- Asian origin
- Huge deciduous tree, nuts are rich of tannins and group B vitamins

# Walnut



# Pecan

- *Carya illinoensis*, one species of hickory
- American origin
- Similar to walnut, but has less proteins and more sugars

# Pecan



# Hazelnut, *Corylus avellana* and other species

- Shrub of birch family, Betulaceae; several species are cultivated
- Nut is (among other common compounds) rich of carotenes

# Hazel female flower



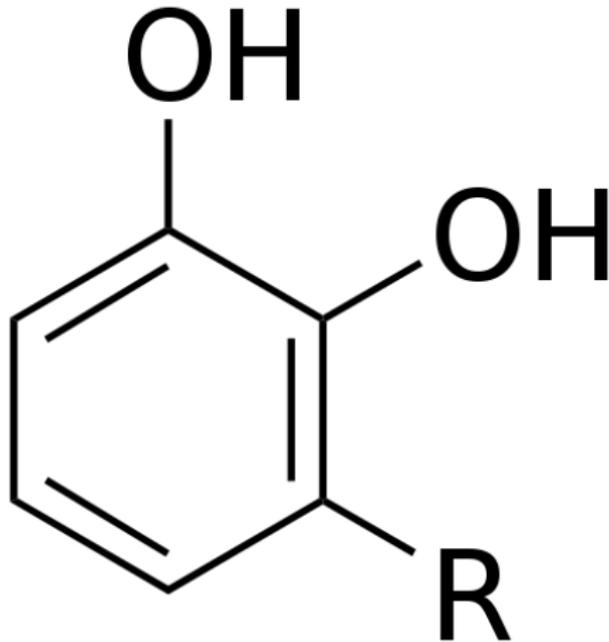
# Pistachio, *Pistacia vera*

- Deciduous trees of Central Asian origin
- Nuts promote the lowering of cholesterol level
- Green parts of tree contain poisonous urushiol, like all Anacardiaceae family (including poison ivy)

# Pistachio



# Urushiol



# Brazil nut, *Bertholletia excelsa*

- Large tropical tree of Lecythidaceae family
- Among others, it is the richest dietary source of selenium

# Brazil nut flowers



# Brazil nut fruit



# Macadamia, *Macadamia integrifolia*

- Member of Proteaceae family; Australian plant
- Rich of fats and microelements; toxic to dogs

# Macadamia



# Chestnut, *Castanea sativa*

- Member of oak family, Fagaceae
- Old European culture, traditional to France, England and Germany
- Rich of tannins and therefore usually fried

# Chestnut



# Gourds, Cucurbitaceae family

- $\approx$  900 species, mostly tropical and subtropical plants
- Prefer dry regions, important component of different deserts
- Hairy herbs or vines with tendrils (modified shoots)
- Leaves alternate, without stipules, sometimes palmately dissected, with actinodromous venation
- Flowers unisexual, in raceme-like inflorescences
- Petals fused, form a tube
- Stamens usually fused
- Pistil with 3 carpels, ovary inferior (flower epigynous)
- Fruit is a berry

# Pumpkins and squashes, *Cucurbita* spp.

- Central American origin
- Plants of multiple uses; it is normal to harvest the underripped

# Pumpkinhead, Sawhorse and Tip (Ozma)



# Watermelon, *Citrullus lanatus*

- African origin
- The source of water, multiple medicine uses (e.g., for kidney diseases)

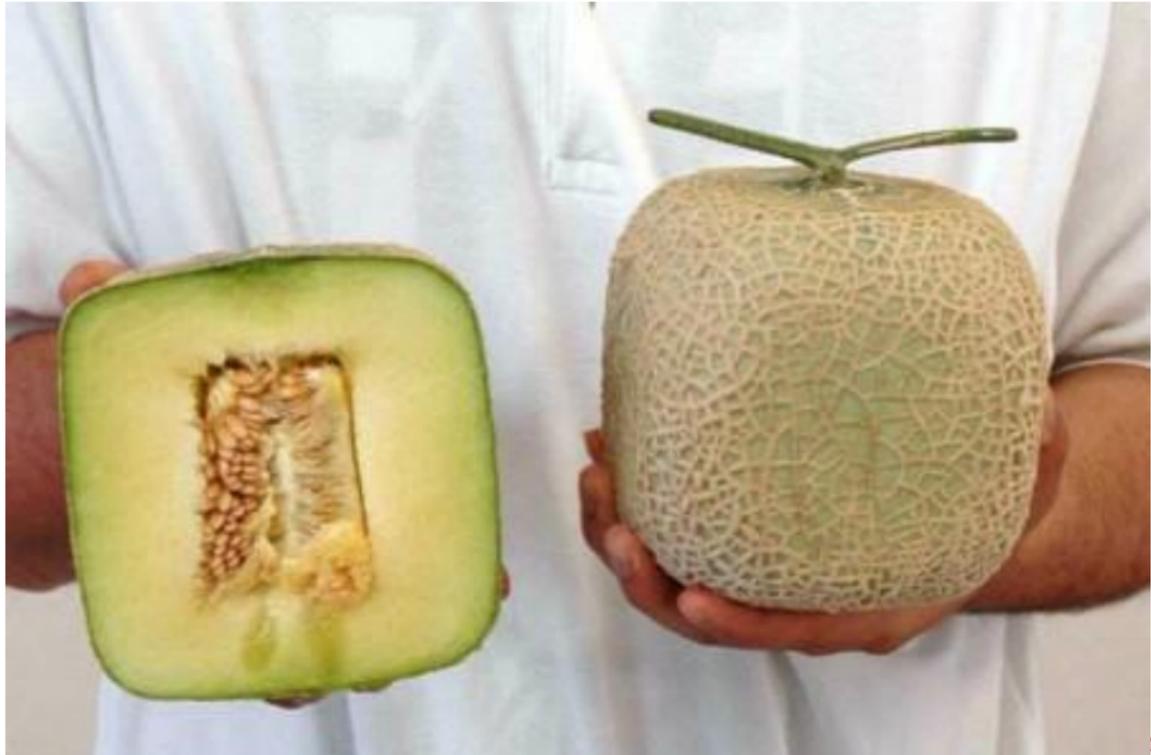
# Watermelon flower



# Melon, *Cucumis melo*

- Central Asian origin
- Rich of sugars (some cultivars up to 20%), used as sugar source in Central Asia

# Japanese square melon



# Cucumber, *Cucumis sativus*

- Annual herbaceous vine from India forests, wild relatives not found
- May grow as water culture, widely cultivated in greenhouses, some cultivars have one week for fruit development

# Indian Dosakai round cucumber



# Chayote, *Sechium edule*

- One of relatively “new” cultures from Mexico
- High yield culture, one plant may give up to 40 kg of fruits

# Chayote



# Summary

- Nuts are plants accumulating oils and proteins in their seeds, they mostly dispersed by “bad memory” animals
- Gourd plants are intermediates between fruits and vegetables

# For Further Reading



A. Shipunov.

*Ethnobotany* [Electronic resource]. 2011—onwards.

Mode of access:

[http://ashipunov.info/shipunov/school/biol\\_310](http://ashipunov.info/shipunov/school/biol_310)



P. M. Zhukovskij.

*Cultivated plants and their wild relatives* [Electronic resource].

Commonwealth Agricultural Bureaux, 1962.

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zhukovskij1962\\_cultivated\\_plants.pdf](http://ashipunov.info/shipunov/school/biol_310/zhukovskij1962_cultivated_plants.pdf)

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