

Ethnobotany. Lecture 15

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February 20, 2013



Outline

- 1 Fruit plants
 - Rosaceae fruits



Fruit plants

Rosaceae fruits



Rosaceae in general

- Medium-sized family ($\approx 3,000$ species) of small trees, shrubs and herbs from subtropical and temperate regions
- Flower contains numerous stamens (secondary multiplied), free pistils and hypanthium
- Fruit is mostly fleshy



Rosaceae groups

- Rosoideae—herbs or shrubs, leaves often compound, receptacle large, fruit aggregate
- Spiraeoideae—shrubs or trees, leaves simple, receptacle small, fruit often monomerous
- Maloideae—trees, leaves simple, receptacle and pistils fused



Rosaceae with multiple (aggregate) fruits

- Most primitive group
- Tangled genetic systems: apomixis, polyploidy and permanent odd pentaploidy ($2n = 35$ in *Rosa canina*)
- *Rosa* is ornamental and medicine plant with
- *Rubus* and *Fragaria* are also widely cultivated



Rubus

- Biennial semi-shrubs, sometimes herbs
- Multiple wild species, only two are widely cultivated: raspberry (*Rubus idaeus*) and blackberry, *Rubus caesius* forms and hybrids



Rubus idaeus from Koehler's "Medizinal Pflanzen"



Rubus features

- Two aboveground stem types: primocane and floricanes, plus underground rhizomes
- Fruits contain (among other) salicylic acid and different antioxidants



Blackberries on the different stages or ripening



Fragaria × *ananassa*, strawberry

- Octoploid ($2n = 56$) hybrid species of two other octoploid strawberries, *Fragaria virginiana* from North America and *F. chiloensis* from Chile.
- Garden hybrid, first occurrences are in France from ≈ 1740
- Herb with runner stems and accessory multiple nut fruit (the edible part is a receptacle)



Strawberry features

- Susceptible to multiple diseases, often cultivated in semi-artificial conditions as plasticulture
- Cultivated as annual or perennial
- Long-day cultivars flower early in May and capable to produce fruits in June



Plasticulture of strawberries



Summary

- Rosaceae is one of the most important temperate fruit families
- Most of Rosaceae cultivated fruits are result of long selection involved multiple hybridization



For Further Reading



A. Shipunov.

Ethnobotany [Electronic resource].

2011—onwards.

Mode of access:

http://ashipunov.info/shipunov/school/biol_310

