

Ethnobotany. Lecture 9

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Outline

1 Non-grass grains, or pseudocereals



Presentations



Exam 1

- Exam will be taken in a form of “critical essay” on the “Introduction to Botany” textbook.
- Everybody will need to read the whole text and specifically your individual part of it.
- Inside your part, you are required to find ≥ 12 misprints, grammar, spelling or style problems and provide corrections for them (3 points per each). Also, you need to suggest ≥ 3 general improvements for the text (7 points per each) and ≥ 1 recommendation for figure(s) (5 points per each).
- In addition to your part of text, you will need to find in the “outside” text: ≥ 6 problems with corrections, suggest ≥ 2 improvements and ≥ 1 figure recommendation(s).
- Everything above should be provided with page/line references to the text (like “page 15, line 5 from top”). Textbook is now frozen until I receive all essays, but please *update* your version to the latest one.
- Exam is due February 9, 10 a.m. I will accept it *exclusively by email*.



Quinoa (*Chenopodium quinoa*)

- Belong to Amaranthaceae family (close to buckwheat family)
- Originated in Andean region, used from 2,000 BC and was plant of main importance (more than corn, secondary only to potato) in Inca civilization
- Adapted to high altitudes, easily cultivated above 4,000 meters
- Yield is ≈ 2 ton/hectare
- Contain balanced sets of useful amino acids and microelements; could be used as a sole food even for long journeys
- Unfortunately, seeds contain weakly toxic and bitter *saponin* which should be removed before cooking (usually by soaking in water)



Quinoa, *Chenopodium quinoa*



Quinoa grains



Other important pseudocereals

- South American qaniwa (*Chenopodium pallidicaule*) and North American (native for North Dakota!) pitseed goosefood (*Chenopodium berlandieri*) are both similar to quinoa
- Amaranth (*Amaranthus* spp. from *Amaranthaceae*): cultivated mostly in Europe and America, originated from Central America. Grains are highly diverse in microelements and rich of proteins
- Chia (*Salvia hispanica* from *Labiatae*): domesticated in Mexico, used by Aztecs. Grains are rich of diverse lipids and slime polysaccharides. Used also to make drinks. From 2008, recommended as “novel food” in European Union
- Whattleseed (*Acacia* spp. from *Leguminosae*): original grains of Australian Aborigines



Amaranth, *Amaranthus* sp.



Chia, *Salvia hispanica*



Whattleseed, *Acacia* spp.



Australian millstone



Summary

- **Pseudocereals** are non-grass grains, plants from families other than Gramineae but used for same purposes



For Further Reading



A. Shipunov.

Ethnobotany [Electronic resource].

2011—onwards.

Mode of access:

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



P. M. Zhukovskij.

Cultivated plants and their wild relatives [Electronic resource].

Commonwealth Agricultural Bureaux, 1962. Abridged translation from Russian.

Mode of access:

http://ashipunov.info/shipunov/school/biol_310/zhukovskij1962_cultivated_plants.djvu.

