

University of Central Asia

The University of Central Asia (UCA) was founded in 2000 as a private, not-for-profit, secular university through an International Treaty signed by the Presidents of Kazakhstan, Kyrgyzstan and Tajikistan, and His Late Highness Aga Khan IV; ratified by their respective parliaments and registered with the United Nations. UCA's mission is to promote the social and economic development of Central Asia, particularly its mountain communities, by generating world class research and offering an internationally recognised standard of higher education, to help transform lives and livelihoods across the region, including through the celebration and preservation of Central Asia's rich cultural heritage.

UCA Graduate School of Development

GSD is a School of Development Studies conducting multidisciplinary research and education on the mountainous regions of Central Asia, where communities, economies, and environments are experiencing the effects of rapid climate change. The school has three disciplinary 'hubs': social and economic sciences; environmental and climate sciences; and cultural studies. Together, they address the most significant obstacles to the sustainable development of Central Asia with a particular focus on the challenges presented by climate change.

Mountain Societies Research Institute

The Graduate School's Mountain Societies Research Institute (MSRI) applies scientific expertise to the study of earth surface and environmental processes and interactions that affect mountain societies. MSRI is present at UCA's Khorog campus in Tajikistan, Bishkek, and Dushanbe. MSRI staff also work with UCA's undergraduate Earth and Environmental Sciences Programme and are actively engaged in developing executive and postgraduate education.

The Swiss Cooperation Office, Tajikistan

Within its Cooperation Program for Central Asia (2022-2025), the Government of Switzerland focuses on supporting economic, social, and democratic development, promoting an integrated and regional approach in the complex field of transboundary water management, strengthening economic ties, and promoting good governance. For more info:

www.eda.admin.ch/tajikistan

Join us in protecting the Shaking Pear!

How You Can Help:

- Support conservation initiatives.
- Spread awareness about endangered species.
- Promote sustainable land-use practices.



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Conserving Plant Biodiversity for Future Generations

Shaking Pear



UNIVERSITY OF CENTRAL ASIA



Shaking Pear

(*Pyrus korshinskyi*)

Taxonomy:

- **Scientific Name:** *Pyrus korshinskyi*
- **Family:** Rosaceae
- **Common Name:** Shaking Pear
- **Synonyms:** None documented
- **Native range:** High altitude of Tajikistan

Description:

Pyrus korshinskyi, also called the Shaking Pear, is an exceedingly rare and endangered representative of the tree flora of Central Asia, notably found in Tajikistan. Its presence is critical for biodiversity and ecological integrity in the region.

Key Characteristics:

- **Size:** A medium tree (6-12 m tall) and deciduous, rounded canopy.
- **The leaves:** Are elliptic to ovate, with serrated margins, glossy green, turning yellow or red in autumn.
- **Flowers:** Clusters of 5-petaled white flowers that bloom in early spring.
- **The fruit:** Small to medium-sized, round pear-shaped fruit with tough/hard outer skin, green to yellowish when ripe, often sour and spicy.
- **Inhabiting:** An adaptation to the extreme conditions of the mountains and rocky soils.

Ecological role:

- **Pollination:** This is an insect-pollinated plant; bees and other pollinators are vital.
- **Seed Dispersal:** Birds and mammals eat the fruits and disperse the seeds.
- **Associations:** Often associated with wild walnut, Pistacia, and Juniperus species.

Conservation Status:

- **IUCN Red List:** Critically endangered because of over-harvesting, overgrazing, and use for rootstock by the local communities.
- **Conservation Actions:** Protection of habitats, community-based conservation, and germ-plasm collection for ex-situ conservation.

Distribution:

- **Geographic range:** Endemic to Central Asia, especially to the mountains of Tajikistan and nearby countries.
- **Altitude range:** from 1200-2000 m above sea level.
- **Habitat:** Sunny, rocky and sandy slopes, the edges of forests, and banks of rivers.

Threats:

- Habitat degradation and loss due to deforestation and agricultural expansion.
- Over-harvesting of fruits and wood.
- Climate change affecting its growth zones.
- Overgrazing and human encroachment.
- Lack of knowledge of its ecological and genetic value.
- Limited natural regeneration.

Research needs:

- Studies on the genetic variability of and the breeding program potential.
- Detailed population dynamics and distribution mapping.
- Research on its involvement in local agroecosystems and biodiversity conservation.



Uses:

- **Traditional:** Fresh and dried fruits are eaten and made into medicine for treating intestinal disorders.
- **Economic Potential:** May act as a rootstock for cultivated pears and a source of genetic material for drought and pest resistance.

Cultural Significance:

The tree is cherished by local people not only for the fruit but also for its sacred meaning to the local communities because they see it as a mark of resistance against harsh and extreme mountain conditions.

Morphology:

- Deep and extensive root that offers stability and drought tolerance.
- Wood is dense and durable.
- Small tools and fuelwood are sourced locally.

Reproductive Biology:

- Flowering Period - April-May.
- Fruiting Period - September-October.
- Propagation - Seed-based propagation is common; vegetative propagation through grafting is also practiced.

Ongoing Conservation Efforts:

- Protection within botanical gardens and conservation areas.
- Seed collection and propagation programs.
- Community-based conservation projects.

