

NMSU-ACES Fact Sheet

The Remarkable Yellowhorn Tree: A Botanical Marvel

Xanthoceras sorbifolium

BE BOLD. Shape the Future. New Mexico State University



Introduction (<https://academic.oup.com/gigascience/article-pdf/8/6/giz070/28864615/giz070.pdf>)

The **Yellowhorn tree** (*Xanthoceras sorbifolium*) is a captivating and lesser-known plant that deserves our attention. Native to northern China and Korea, this deciduous shrub or small tree offers not only ornamental beauty but also a host of edible delights. In this paper, we will explore the fascinating world of the Yellowhorn tree, from its appearance, medicinal properties, and drought tolerance, to its culinary and cosmetic industry potentials.

Appearance and Growth

1. Size and Foliage:

- Yellowhorn trees typically reach a height of **6 to 24 feet**.
- Their glossy dark green leaves resemble those of a sumac, with paler undersides.
- In spring, before leafing out, Yellowhorn burst into sprays of **white blossoms** adorned with greenish-yellow streaks and a blush of red at their base.

2. Fruit and Seeds:

- The resulting fruit is **round to pear-shaped**, resembling a tennis ball.
- These fruit capsules start green and gradually mature to a yellow-tan color.
- Inside, they are sectioned into 3-4 chambers, each containing up to **12 shiny, black seeds**.
- When ripe, the fruit splits into 3-4 sections, revealing a spongy white interior pulp and the round, purplish black seeds.
- Recent results indicate that xanthoceraside, a novel triterpenoid saponin extracted from Yellowhorn husks, has an antitumor effect and the potential to treat Alzheimer disease.

Culinary Delights

1. Edible Leaves and Flowers:

- All parts of the Yellowhorn tree are edible.
- The leaves and flowers can be incorporated into culinary creations.
- Imagine adding delicate Yellowhorn blossoms to salads or infusing them into teas.

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- Yellowhorn leaves contain 14-18% protein, making them an excellent leaf tea.
- 2. Nutty Seeds:**
- The real star of the show is the Yellowhorn's seeds.
 - These seeds taste remarkably like **macadamia nuts**, albeit with a slightly waxier texture due to the high oil content.
 - Imagine cracking open a Yellowhorn seed and savoring its rich, buttery, and nutty flavor.
- 3. Oil Content:**
- Yellowhorn tree fruit husks can contain **<40% oil**, and the seed alone is an impressive **40-72% oil**.
 - Currently, Yellowhorn trees are being cultivated for use as **cooking oil, cosmetics, tea, medicinal properties, and biofuel**.

Etymology and History

- 1. Name Origins:**
- The genus name, **Xanthoceras**, has intriguing roots.
 - Some sources suggest it comes from the Greek words for “yellow” and “horn,” referring to the yellowish horn-like glands between the petals.
 - Regardless, the name evokes the tree's unique beauty.
- 2. Cultivation and Spread:**
- Yellowhorn trees have been cultivated since the 1820s in Russia.
 - German botanist Bunge bestowed the official name in 1833.
 - **They traveled from China to France in 1866 and eventually reached North America sometime in the late 19th Century.**
 - Trees are cultivated for their high oil content, medicinal properties, and ability to survive drought conditions.
 - **Seed oil is high in Nervonic Acid (3.04%), used for cognitive brain function, Alzheimer's, and other neurological functions.**
 - **Today, China cultivates Yellowhorn for use as biofuel due to its high oil content, drought tolerance, and sustainability.**

Conclusion

The Yellowhorn tree, with its edible seeds and striking appearance, is a testament to nature's creativity. As we appreciate its beauty, let us also celebrate its medicinal and culinary contributions. Next time you encounter a Yellowhorn, remember that it's not just a rare specimen—it's a botanical marvel waiting to be explored!

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