

# The Blazing Star



A PUBLICATION OF THE NORTH AMERICAN NATIVE PLANT SOCIETY

## Native Plant to Know

# Black Walnut

*Juglans nigra*

by Don Scallen

Whenever I happen upon the large green fruit of black walnuts (*Juglans nigra*), I pick one up and inhale its rich odour. Some describe the smell as citrusy – perhaps, but the scent really has no analogue. A hint of citrus, yes, but other undefinable elements, too. Regardless, it transports me back to my childhood, when I picked up all sorts of fallen nuts. I loved these compact parcels of possibility and, truth be told, I still do. I marvel that they contain the genetic information to grow giants – giants in stature, but also giants of ecological function.

Black walnuts are majestic in maturity. They can attain prodigious dimensions on fertile soils. The largest black walnut, according to Wikipedia, grows in Oregon, far west of its natural range. With a diameter of 2.62 metres (eight feet, seven inches), a height of 34 metres (112 feet) and a spread of 44 metres (144 feet), it is a monumental organism – worth a look on the Wikipedia page.

The branching structure of walnuts is usually visible even when the trees are in full leaf, because the lovely, filigreed foliage often doesn't create a totally closed canopy as it might on a maple or oak. This highlights the sturdy limbs and creates a lovely open effect.

Black walnuts grow naturally over much of the eastern United States and the Midwest. In Canada walnuts grow throughout southwestern Ontario, including my community of Georgetown, north of Lake Ontario. Georgetown is at the northern periphery of the black walnut's native range. Despite this, black walnuts thrive here. They grow fast and compete robustly with other trees. They do very well in my suburban neighbourhood. In fact, if all of us in my neighbourhood decided to let nature take its course, my guess is that our properties would ultimately be dominated by black walnut and the invasive Norway maple (*Acer platanoides*).

In natural settings, black walnut trees flourish in riparian areas – low-lying habitat associated with streams and other wetlands. Kayakers on sections of Ontario's Grand River, which empties into Lake Erie, may encounter solid stands of black walnut, stretching for hundreds of metres. Walnuts thrive in these riparian areas because of rich soils deposited in spring floods but, intriguingly, the

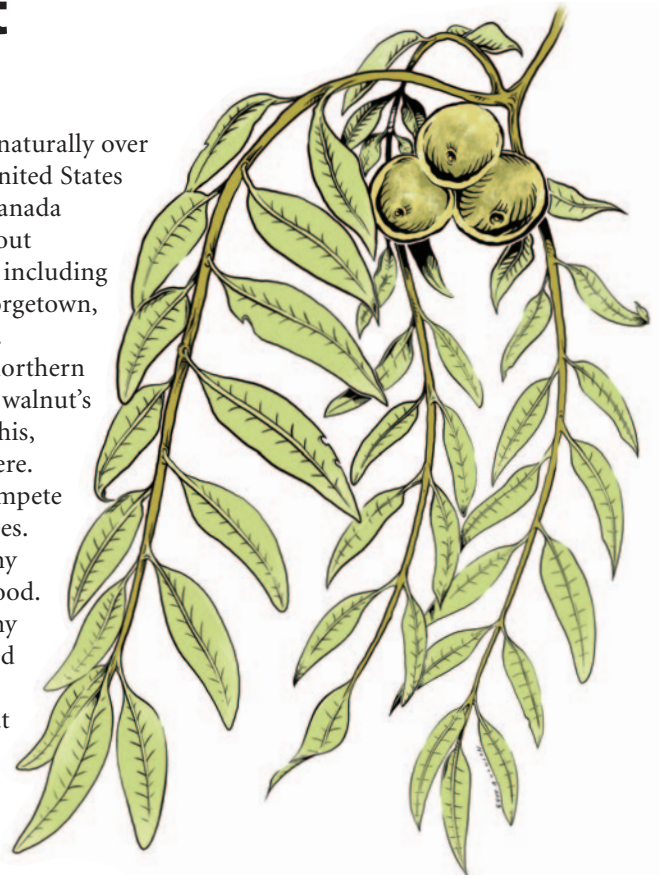


ILLUSTRATION BY NATHAN DONALDSON

dietary preferences of beavers may benefit walnuts as well. My admittedly unscientific observations suggest that black walnuts are largely shunned by these tree-chomping rodents. I have yet to find a black walnut harvested by beavers, even in areas of high beaver activity.

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# Horseshoe Bay Nature Park, Texas

by Sarah Yant

Peer into any citrine flower of the prickly pear cactus (*Opuntia engelmannii* var. *lindheimeri*) at Horseshoe Bay Nature Park in Central Texas and you'll likely find a cluster of Kern's scarab beetles nestling deep in the pollen. The perpetually gold-encrusted beetles were among the world's first pollinators, abundant even during Mesozoic times, as they sought out ancient, cup-shaped flowers like cacti. This is just one example of the many native plant-animal interactions that have flourished since the development of Horseshoe Bay Nature Park.

The preserve is a testament to one community's vision to safeguard their share of the Texas Hill Country. The city of Horseshoe Bay is located on the rolling upland prairie of the Edwards Plateau, a geologically and biologically unique place under threat from population growth and climate change. Born from a need for public green space and a desire to connect residents with their native ecology, Horseshoe Bay Nature Park was

founded on volunteer efforts and in-kind donations.

The conservation project arose in defiance of the original zoning plans for high-density development. The owners of the property donated the use of the 11 acres (4.5 hectares),

working with the park's nonprofit, HSB Park, Inc., and local nature lovers to turn the tract into a community green space that preserves a precious piece of a vanishing ecosystem. In just two short years, the undeveloped site

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*Kern's scarab beetles feeding on a prickly pear cactus*

PHOTOGRAPH BY KATHERINE DANIELS



*An aerial photo of Horseshoe Bay Nature Park captures the walking trail winding through mixed tallgrass prairie, wooded areas and granite outcroppings.*

PHOTOGRAPH BY BORJAV SUALS



moved from dream to reality, opening its gates to the public in late 2021. My firm, Twistleaf Land Design, was honoured to lead the design development and construction of the park's first phase.

During the conceptual design phase, ecological planners identified degraded soil conditions and evidence of erosion in two key areas of the park that showed large swathes of invasive grasses such as King Ranch bluestem (*Bothriochloa ischaemum* var. *songarica*) and johnsongrass (*Sorghum halepense*).

To solve the problem, we constructed a series of berms and swales along the contours of the land to manage erosion and build up soil quality. The depression of a swale captures and filters rainfall into the soil, thereby recharging groundwater, reducing pollution and enriching the soil with nutrients and organic matter. Avoiding the use of pesticides, we manually removed invasive plant species and seeded heavily with dozens of native grasses and forbs where the non-natives threatened to return.

In order to provide a smooth and level trail surface and protect existing natural drainage swales, we installed multiple pipe culverts and riprap. Biodegradable erosion control mats were used to stabilize soil during reestablishment of vegetation at trail edges and seeded areas.

During construction of the nature park, we took great care with the placement of stockpiled materials and the movement of heavy equipment to minimize impact on native vegetation and wildlife habitat. For example, when we built the half-mile walking trail, named the Live Oak Loop, we rerouted it in one area to protect a colony of lace cactus (*Echinocereus reichenbachii*), a threatened species.

Thanks to our efforts, with lots of help from nature, the park offers a stunning tapestry of wildflowers, including iconic Texas bluebonnets (*Lupinus texensis*), which adorn the landscape with their vibrant blue and

purple hues each spring. The bright fuchsia blooms of the Texas thistle (*Cirsium texanum*) sparkle during spring and early summer. As pioneer species, native thistles flourish in disturbed areas, feeding pollinators, songbirds and mammals. The larvae of painted lady caterpillars feed off the nectar, along with many bees and other flying insects. Goldfinches and other birds love the seeds and line their nests with the silky fluff.

Much of the parkland is mixed-grass prairie and features eight notable ecological zones. One example is the Boulder Draw, defined by numerous granite outcroppings with colonies of xeric woolly lipfern (*Cheilanthes tomentosa*). The Dry Creek Woodland funnels rainwater into a nearby pond and hosts lush plant life such as Virginia wild rye (*Elymus virginicus*) and grass-leaved rush (*Juncus marginatus*). The three Texas live oak (*Quercus fusiformis*) mottes (a regional term for small groves) provide shade and sanctuary for wildlife and house their own special understorey plant communities, which include woody shrubs such as agarita (*Mahonia trifoliolata*) and evergreen sumac (*Rhus virens*).

A central tenet of sustainable land design is embracing native plants that thrive in their



PHOTOGRAPH BY BRITTANY DAWN SHORT

Wavyleaf twinevine twined around a little bluestem



PHOTOGRAPH BY BRITTANY DAWN SHORT

Texas bluebonnets framed by winecups (*Callirhoe involucrata*)



PHOTOGRAPH BY BORJA VISUALS



Pearl milkweed vine

natural habitat, even when faced with extreme temperatures, droughts and floods made more severe by climate change. While beautiful, these plants aren't just for show; they sequester carbon, improve water quality and play a crucial role in supporting wildlife by providing food, habitat and nesting material.

Drought hit the area in 2022, the year after the park's opening. This left many of the seeds we'd spread unable to germinate. The delay caused concern in the region; everyone was eager to see the park lush and green. Thankfully, patience and sufficient rainfall in 2023 brought outstanding wildflower blooms and growth. This resulted in an influx of visitors – and donations!

From milkweeds such as the wavyleaf twinevine (*Funastrum crispum*) to prairie grasses such as little bluestem (*Schizachyrium scoparium*), wildflowers like the

striking white prickly poppy (*Argemone albiflora*) to succulents like the stately Buckley's yucca (*Yucca constricta*), this nature preserve illustrates the diversity and resilience of the native flora of the Edwards Plateau.

For demonstrating its dedication to conserving and restoring indigenous Texas Hill Country habitat, the park was recognized with the prestigious **Texan by Nature Certification**. By rescuing this delicate ecosystem from development, Horseshoe Bay has placed the environment at the heart of its local life and culture. It sets an example for other communities to champion grassroots land stewardship projects.

*Sarah Yant is the founder of Twistleaf Land Design, [twistleaf.com](http://twistleaf.com). Visit [hsbpark.org](http://hsbpark.org) for more about Horseshoe Bay Nature Park.*

PHOTOGRAPH BY KATHERINE DANIELS



Male orchard oriole perched on mesquite



Woolly lipfern

PHOTOGRAPH BY BORJA VISUALS





PHOTOGRAPH BY UNITED EARTH PHOTOGRAPHY

## Black-bellied Whistling Duck

Brilliantly marked and with a true whistle to their call, black-bellied whistling ducks charm visitors to Horseshoe Bay Nature Park. These delightful, pink-billed waterfowl gather in large numbers at a neighbouring pond, overlooked by the park's Bluestem Bird Blind. They typically nest in hollow trees, on the ground or in thickets of mesquite (*Prosopis glandulosa*), hackberry (*Celtis* spp.), willow (*Salix* spp.), live oak or other trees. Once a rare species found in North America only in the Rio Grande Valley of South Texas, black-bellied whistling-ducks have been rapidly expanding their range since the 1980s and have now been spotted as far north as Maine!

## NANPS Seed Exchange

Join the friendly folks who collect native plant seeds – tree, vine, shrub, forb, grass – and contribute to the restoration of native plant communities. Send your seeds separated by species and identified with the source/parentage to NANPS Seed Exchange, Box 69070, St. Clair P.O., Toronto, Ontario, M4T 3A1. To learn how to collect seeds efficiently and ethically, visit [nanps.org/seed-collecting](http://nanps.org/seed-collecting).

Seed packets are available for a small fee. Donors are first in line to order seeds. A list of last year's species can be found at [nanps.org/nanps-seed-exchange](http://nanps.org/nanps-seed-exchange).



Joe Pye weed seedhead (*Eutrochium fistulosum*)

PHOTOGRAPH BY ROLF STRUTHERS