

Maximilian Sunflower - Reflecting Autumn Sunshine

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Each year, as we near the end of the growing season, most plants have already produced fruits or seeds in fulfillment of that primal need to reproduce their species. Maximilian sunflower, *Helianthus maximiliani*, doesn't rush the process producing flowers and seed in the fall rather than during the summer. Maximilian sunflower is one of the "Big Four" of native perennial forbs in Texas that also includes Illinois bundleflower, bush sunflower and Engelmann daisy.

This sunflower forms a rounded mound of stems early in the growing season leading to a mass of blooms in the fall. The stems are erect and un-branched from fleshy rootstocks. Maximilian spreads by seeds and by rhizomes forming dense spreading colonies. Rhizomes dug during the winter months can be transplanted to help further spread seed producing plants across your property. Plant height varies upon where it grows, reaching only 3 feet on dry uplands but can stretch to 6 to 7 feet on deeper soils with extra moisture. The leaves alternate up the stem feeling rough to the touch and will be 2 inches to 8 inches in length while tapering at both ends. Another identification clue is that the leaves are keeled like a boat hull and curve downward in growth.

The bright yellow flowers are 1 ½ inches to 3 inches in diameter and originate from leaf axils. The flowers will appear in the upper third of the plant stems height. Blooms usually appear from September to early November although a few isolated flowers may show up as early as late July.

Maximilian sunflower is palatable to livestock, deer and antelope, and its forage value, especially early in the growing season, is rated as good for deer. Crude protein levels and usage is highest in the spring and early summer when levels are around 16 percent then dropping to 10 percent by mid-summer. Energy values are high for new leaves and stem tips. Seeds mature in October and November making food available later in the year than the earlier maturing common sunflower. Seeds are used by mourning and white-winged doves, quail and songbirds.

The fall flowers produce a source of nectar for many pollinators. This availability of nectar late in the growing season is a valuable asset especially to Monarch butterflies as they migrate to their wintering grounds in Mexico. Patches of Maximilian serve as feeding stations allowing the butterflies to fuel up to continue their southward trek. Maximilian makes an ideal background planting in native gardens. I was fortunate to be on the Lambshead Ranch in Throckmorton County the first week of October in 2016 and witnessed many Monarchs feeding on the only available flowering plants at that time, being Maximilian sunflower and dotted gayfeather. The winds were blowing from the south all day long at 20-25 MPH and the Monarchs were leisurely

flittering between Maximilian flowers drinking in the nectar and appearing to be content to wait until the following day when winds might be lower allowing them to continue their journey.

'Aztec' Maximilian sunflower was released from the Knox City, Texas USDA Plant Materials Center in 1978 as a composite of five county collections from different parts of Texas. It was released to provide a widely adapted perennial forb for wildlife and livestock browse. Seeding rate in a pure stand is 3 pounds per acre and seeds should be sown on a clean seedbed in early winter and covered with no more than 0.25 inches of topsoil. Early planting helps ensure adequate cold weather to help break dormancy and enhance germination in the spring. This native, perennial forb is adapted for all of Texas with the exception of the Trans Pecos. This sunflower is adapted to many soil types, from sands to clays, and does best in areas receiving 18 inches or more of annual rainfall.

It has been reported that pioneers planted Maximilian sunflowers near their homes to repel mosquitoes and the flower blossoms were steeped in hot bathwater to relieve arthritis pain. The vigorous rhizomes offer additional benefits in reducing erosion so plantings should also be done in draws and washes to slow erosion and the extra water benefits the growth of the plants.

Over the past 150 years, this perennial sunflower has largely been removed from its native area due to overgrazing by livestock. Commercially available seed is used in range planting mixes to re-introduce this desirable forb into its former range. Using a proper stocking rate of livestock along with controlling native and exotic deer numbers will help this forb reclaim its rightful place on the prairies of Texas. Only upon its return to glory will we be able to see the autumn sunshine reflected back toward the Texas sky.

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Photo captions:

1 Seedling Maximilian sunflower emerging following a prescribed burn.



2 Boat shaped leaves may be entire or slightly toothed.



3 Maximilian growth returns each spring from strong rhizomes under the soil surface



4 Stems spread from the many rhizomes producing a rounded mound appearance.



5 Massed plantings of Maximilian sunflower offer nectar rich areas for pollinators in the fall when other plants may not be usable.



6 Maximilian sunflower blooms shine in the autumn sunshine providing nectar for pollinators.



7 Monarch butterflies passing through Texas first week of October 2016 nectaring on Maximilian sunflower.

