



## **TOCALOTE** *Centaurea melitensis*

Also called Malta Star-Thistle This plant produces spiny yellow-flowered heads. Although Tocalote seedlings look similar to young Indian Blankets wildflowers, Tocalote's are more lobed. Best if identified when young as chopping at this stage is easy. Take care if chopping when plant has seed heads as it has a special trick. Tocalote's normally have a few hidden seed heads at the very base of the plant, make sure to get these and below the lowest leaves. Many seed heads will be on top of openly branched stems. Seed heads stick to animals and clothing be sure to clean and remove before continuing to uninfested areas. Fungi and insects are currently being tested for introduction into the United States as a biological control of tocalote. Caution recommended to any 'quick fix' of introducing alien fungi and insects. History is full of examples which demonstrate the "cure" can be worse than the illness. **Non-native.**

Height up to 3 feet

Cool-Season Annual

**ROUND LEAF TIP**



**TOCALOTE**  
*Centaurea melitensis*  
Europe / North Africa



**INDIAN BLANKET**  
*Gaillardia pulchella*  
Texas Native



**CUTLEAF DAISY**  
*Engelmannia peristenia*  
Texas Native

# CAN YOU IDENTIFY COMMON ALIENS?

Let's work together to prevent their spread

While learning about native plants, one quickly finds the need to learn more about alien species. Upon looking, you see them every day. Aliens can encroach on native plantings, prairies, roadsides, and disturbed places. Sometimes this leads people to believe the plants they pass by daily are naturally native.

## INTRODUCED, ADAPTED, ALIENS

Become aware of the terms "introduced", "indigenized", "adapted" or "improved" varieties of plants, flowers and grasses. These words are often used to describe alien plants that may be suited, persist, or thrive in our environment. These plants may have no local or natural predators in their new homes. They may not serve much, if any, beneficial purpose in the ecological food web. This point is important, especially on the lower trophic levels where the insects reside. All songbirds feed their young

insects. But insects are highly selective about their host plants and have no use for most alien plants. The aliens may have potential to spread out of control. Mandated by Legislative House Bill 338, the Texas Dept of Agriculture was assigned as the state's authority to classify plant species as noxious or invasive. According to US Federal Executive Order 13112 of Feb. 03, 1999, "***Invasive species means an alien species whose introduction does or is likely to cause economic or environmental harm or harm to human health.***"

Perennial warm season grasses are widely used in livestock forage production. The majority of native grasslands around and east of the 98<sup>th</sup>- to the 100<sup>th</sup> meridian (east of 135) has been converted to alien introductions of improved pastures of alien grasses. These aliens generate billions of dollars of economic "benefit" for farmers & ranchers, mostly in the food production of beef and dairy cattle. Coastal bermuda (an African

grass) and its many varieties, johnsongrass, kleingrass, bahiagrass, buffelgrass and oldworld bluestems are some of the most wide spread. Bermuda forage grasses are estimated to cover 8.7 million acres in Texas, not including all the lawns, city parks & ball fields, school & corporate campuses and all the roadsides. Production potential is valued by Tx A&M Univ. at \$120 per acre, or a total \$10.44 billion statewide. Native bluestems are valued at \$10 per acre covering 10.8 million acres for \$108 million; or 10 times less than alien bermudagrass. Many costs such as impacts to wildlife and pollution from runoff are being externalized in these values. Bermudagrass and many other alien pastures have limited value to Texas wildlife. 3 grandmas ago, *native Bluestems were the keystone prairie grasses.* Prairies provided incredibly rich ecosystem services that helped make Texas a great place. But with today's economic value, it's not likely that bermudagrass will make any official weed list. Anyone who has ever tried to keep bermudagrass out of the garden or a native planting knows how tenaciously aggressive it really is. Aliens present challenges when conducting native prairie restoration work. And aliens continue to be introduced into the environment. Alien plant issues are significant and complex; and probably the people can solve them best.

## POWER BY LEARNING

Plant identification is not something only reserved for botanists and PhDs. Many common plants are easily identified with a little practice. Resources are available to help you, some here in this catalog. One thing is for sure; native plants used to know exactly how to live right here... with no extra care. Together, we can build models to help others learn how to put natives back on the land. Over time, we may see value in returning to more sustainable ways of balancing the roots of our economy. We can change how we value native grasses.

In Texas, our property rights are sacred. But with land ownership comes serious and grounded responsibility. We are voting with every dollar we spend. We know food must be produced with careful stewardship of the land, mostly from domesticated plants and animals. Raising awareness about plants and their long-term impacts on the land can become a force for positive change. We can make needed changes, even in our own yards.

But we can go further. For example, local cities and schools manage public outdoor spaces. The spaces add up as Texas is experiencing the fastest land fragmentation and urban development in the nation. With comprehensive land stewardship practices, we can actively participate to improve the management of public lands.

Sometimes it seems the only plan going is to make the place One Big City! Balance is needed to protect and share our space with the trees, creeks and rivers, the four legged and the winged ones.

## THINGS WE CAN DO

- Become native to your place
- Get a hoe, do battle with the aliens
- Use native plants, grasses and wildflowers on your corner of planet
- Support ranchers & farmers producing food with good land stewardship
- Let your landscape do the talking, share the story with neighbors
- Participate in decisions that affect the management of public spaces
- Remember you vote with every \$

## REFERENCES

**Invasive species legislation:** search "[HB338 TX](#)"; "[Texas Agriculture Noxious and Invasive Plants](#)"  
**origin of alien-species:** [plants.usda.gov](#)  
**negative impacts:** [texasinvasives.org](#)  
**land fragmentation in Texas:** [txaglandtrust.org](#)

EXPLORE THE FULL PALLET OF NATIVES... | 800-728-4043 | [www.seedsource.com](#)  
NATIVE AMERICAN SEED OFFERINGS ARE GROWN, HARVESTED & 100% NATIVE TO OUR LOCAL ECOREGIONS





Dear friend Virginia handed down her trusty Tomahawk hoe to a young neighbor when she turned 93 in 2017. Far as we know, the durable tool is still in-use and ready for work this season. Long may she run.

Make sure you are 100% correct on identification before removal. Don't let unwanted plants go to seed. Repeated efforts may be needed to completely eliminate. Organic control for perennials means killing the plant roots. Annuals may be reduced by keeping them from producing seeds (babies) until killing frost or chopping just below the root crown. Pick up and properly dispose alien seedheads. Soil can be full of dormant weed seeds, especially if the land was ever a farm field. Be aware, digging soil or disturbing the surface can bring up more weed seeds. New native plantings will eventually populate top layers of the soil with their seeds.

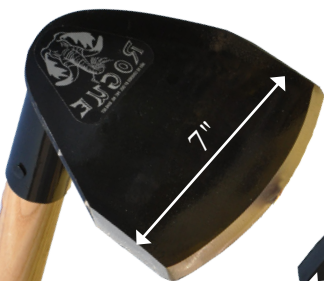
Understanding the reproductive cycles and vegetative growth habits of targeted aliens will guide maintenance decisions. Hand tools are most effective on annual plants. Young seedling perennials are easy to chop before roots establish. Perennials cut above ground will come back. Most perennial plants sprout back from the rhizomes, stolons, tubers, and buds at or below the surface. Make sure you get root system of these plants. Be aware, in the "Blank Slate" phase of control, there is an associated risk of erosion by leaving bare ground for extended periods of time.

# TOOLS TO CONTROL ALIENS

*Start with heavy duty tools made in the USA - 100% organic control*

Hand forged thick steel from agricultural plow shares, these long-lasting tools are superior to any available in big box stores. Great for taking out pesky weeds such as cheat grass, bastard cabbage, bur clover, KR Bluestem and other aliens. Undesirable plants don't stand a chance. Perfect for gardeners fed up with cheap garden hoes that fall to pieces. After a decade of using these for organic weed control on restoration projects and our seed farm, we now offer these products to help you restore the earth. Use the sharp corner to take care of smaller weeds or the long flat side to dislodge root systems of larger perennials. Both men and women enjoy the effectiveness of these high quality tools. Careful, these will be sharp and ready for use when they show up! Keep 'em sharp with a good flat file. Take care of your tools and they'll take care of you.

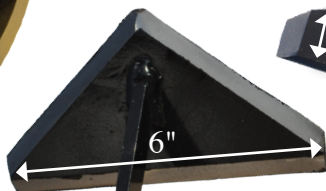
*Most effective tool I've ever used!*  
- Znobia



"TOMAHAWK"

**Item#7076 - \$49**

Substantial weight at the end of the hoe makes short work of uprooting even the most established aliens. General all purpose hoe should last a lifetime with proper care. I keep mine handy on the porch. 4 lbs. 60" ash handle



"ARROW"

**Item#7077 - \$49**

For close quarters combat in defense against alien invaders. The tool for early detection. Slices tender young seedlings in their most vulnerable and easiest stage to control. 2.4 lbs. 60" ash handle



"TRAIL BUILDER"

**Item#7078 - \$59**

Head is sharp as an axe on three sides with a pick on opposite side for grubbing roots and rocks. 4.4 lbs. 60" ash handle



"FIRE RAKE"

**Item#7079 - \$83**

Robust cut and rake tool for grubbing under knots of small cedar and mesquites up to 1" diameter. Prescribed burn applications such as raking coals and building fire breaks. 5.4 lbs. 54" ash handle