

The flower has petals, a pistil, and many stamens.



An example of a group of prickly pear plants protecting several species of plants.



# The Life & Times Of PRICKLY PEAR

By Paul D Ohlenbusch

One of the most common plants in Texas is prickly pear. It also goes by Texas prickly pear (*Opuntia engelmannii* var *lindheimeri*), border pricklypear (*Opuntia atrispina*) and Cow's Tongue Pricklypear *Opuntia lindheimeri* var. *linguiformis*. Texas prickly pear is found throughout Texas except at high altitudes. Border prickly pear is found from Uvalde to Great Bend Park. Cow's tongue is primarily in South Texas. In addition, there are spineless species used for landscaping. They have cousins such as cholla (*Opuntia imbricata*) and tasajillo (*Opuntia leopocaulis*), also know as pencil cactus. They all have one thing in common, THORNS! But their beautiful flowers are something to see.

Prickly pear can be found throughout Texas on dry gravelly, rocky, shallow soils to deep, heavy clays. It thrives on overgrazed and dry sites and can survive in tall grass sites. It doesn't like wet feet very much so it won't be found in wet areas. Once it has roots in the soil, it can stay there almost forever! Nature designed prickly pear to be a survivor!

By the way, the 1995 legislature made prickly pear the state plant. Also, Sanderson in Terrell County, Texas is known as the Cactus Capital of Texas and holds the *Prickly Pear Pachanga* each October. The big party is "a local celebration of fall, the beginning of hunting seasons, and of our most bountiful asset, the prickly pear cactus."

## THE PLANT AND ITS PARTS

Prickly pear has flat, fleshy pads (nopalitos) that look like large leaves that can grow up to five feet high. The pads are actually modified branches or stems that serve several functions. They store water, provide photosynthesis for food, and provide a location for flower production. The pads will grow from four to 16 inches long, nine inches wide, and three-quarters of an inch thick and may be elliptical to oblong in shape, bright green to blue-gray in color, and have a smooth skin. Spines are actually modified leafs growing from tubercles and can be up to 4.5 inches long. It is classified as a small to medium shrub which means it is a woody plant.

The flowers are beautiful. They range from yellow to orange to red. The flower is on what most folks call a "pear" but it is really a "tuna." The petals surround one pistil and many yellow stamens. After pollination, the seeds develop in the tuna in a pulpy material. Once mature, the tuna fall to the ground and begin to decompose. The tunas are also eaten by wildlife such as deer, coyote, racoon, and fox.

The flowers attract many insects that function as pollinators such as bees, ants, wasps, beetles, birds, butterflies, and moths. Growing up, we would remove the pistil from the

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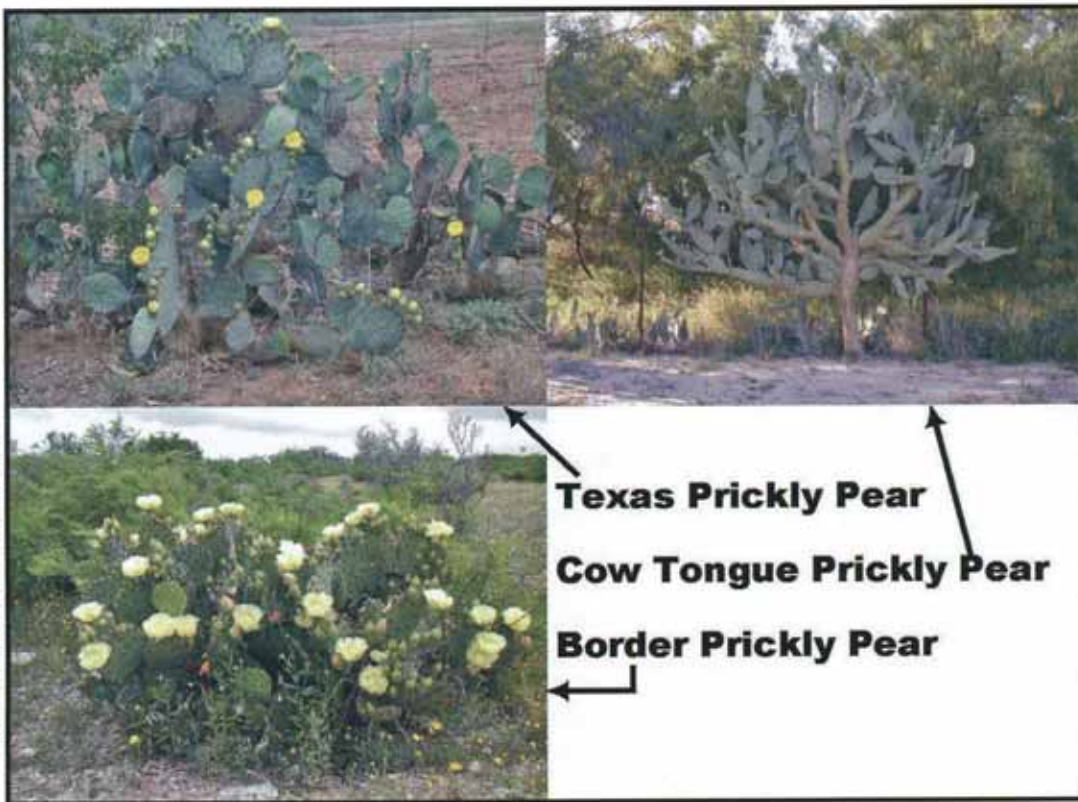
The tunas (fruit, pear) of the prickly pear makes jelly, wine, juice, and more.



If you want to control prickly pear, you need to kill or remove and destroy everything above the roots!



TEXAS AGRILIFE EXTENSION PHOTO



**Texas Prickly Pear**

**Cow Tongue Prickly Pear**

**Border Prickly Pear**

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flower, break off a spine, insert it in the bottom of the pistil, and use it as a dart. It was fun unless you were the target!

Prickly pear can grow from seed or from any part of part of the plant. It produces seed every year and the seeds can stay viable in the soil for a long time. If you knock a pad off and it lands on the ground, in time it will start a new plant. Chop it up and it will do the same thing. Cut it off at the ground and some new pads will grow. It's TOUGH!

**WHAT IS THE PRICKLY PEAR GOOD FOR?**

Most landowners consider prickly pear a problem. However, prickly pear has been used for centuries.

Historically, most portions of the plants have been used as medicine. Prickly pear have been considered anti-diabetic, anti-inflammatory, analgesic, galactogogue, hypoglycemic, antiviral and anti-oxidant. Preparations have been reported to regulate weight, blood sugar, increase fiber intake and facilitate childbirth. World wide, it is used in the treatment of asthma, fatigue, liver injury following alcohol abuse, corns, diarrhea, dysentery, dyspnea, gastritis, colitis and other gastrointestinal disorders, gonorrhea and syphilis, hypercholesterolemia, measles, nosebleed, obesity, snakebite, sore throat, vaginitis, and inflammation of the eyes, and other disorders. Heated poultices have been used to treat rheumatic disorders, erythema, chronic skin conditions, and applied to breasts to promote milk flow. Most of these are not verified by research.

**FOOD USES**

Prickly pear is cultivated and wild-harvested as tunas, nopalitos, and used as forage for livestock in many countries. Tunas and nopalitos are sold in grocery and speciality stores in many areas or at farmer's markets. The tunas are most known for making jelly although wine can be made from them. Nopalitos are used as a soluble fiber source and eaten raw or cooked in salads. As a youngster, I remember having chicken fried nopalitos made by some of the families on the ranch.

**FORAGE**

A common method of using prickly pear for livestock was to burn the spines off and feed it to or let animals graze the pads. This helped some agricultural businesses survive the 50's drought.

The main problem was that some cows would eat the prickly pear without burning and get pear mouth. The spines would embed in the mouth and cause swelling and infection.

As an example, a dairy farm near us sent a truck to the ranch every day. The crew would load the prickly pear plus dig the roots. At the dairy, the pear would be hammer milled with a protein supplement and molasses to feed the cows. While the milk had a flavor and was sold as Grade B, they survived the drought and went back to Grade A milk production.



## PROTECTING OTHER SPECIES

Prickly pear protect desirable native plants since animals can't reach the plants. These "protected" plants can be a seed source if management is changed to improve the surrounding vegetation. In addition, prickly pear can provide shelter and protection for small mammals and some birds, such as quail, that are mainly on the ground. Prickly pear seed are used by many wildlife species. Deer, coyotes, and others will eat the tunas. Some wildlife will eat the pads.

## CONTROLLING PRICKLY PEAR


Controlling prickly pear is a long term program. In addition to the ability of the pads or pieces to root and produce a new plant, there is a large seed reserve in the soil. Also, no single control method provides a high degree of control over time. Some methods that should not be used are those that will break up the plant or chop the pads on the ground. These include mowing, disking, chaining, and rilling.

Herbicides have been used as the main control method. The cost isn't cheap and timing is important. Robert Fears wrote a good article on herbicide control in the Nov/Dec 2006 issue of *Tracks*. For current herbicide recommendations, see your local Texas Agrilife Extension office, USDA-NRCS, or ag supply store.

Prescribed fire is an alternative. If fuel is adequate, it can desiccate the pads effectively top killing the plant. Regrowth from the root then occurs, but the amount of prickly pear is reduced. Using prescribed fire every few years can maintain a reduced level of prickly pear.

Top removal of the plants is also an alternative in low population areas. Using a grubbing hoe or shovel, remove the main root of prickly pear 2 to 4 inches below the soil surface. All the plant parts must be removed from the area and destroyed or buried.

The most effective control is obtained using two or more of the above. A combination of alternating prescribed fire and herbicides has provided good control. Adding top removal can enhance control.

If you would like to read more information on prickly pear, see my web site ([www.grassbydesign.com/TDA](http://www.grassbydesign.com/TDA)). There are at least 20 information sites available including recipes. 

Until next time.

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## MANAGEMENT NOTES

### FOR NOVEMBER THROUGH FEBRUARY

As we enter the winter season, there is a need to do more than just manage. It's time to review the year, both resource and financially, as we look toward 2011. Looking back to see what we have accomplished or failed to do should be the basis of finalizing the 2011 management plan. It means the 5-year plan will need to be up dated also. Here are some points to use.

Water should always be your highest priority. Continue monitoring your water resources this fall for availability and quality. Develop options if sources appear to be less than optimal. Continue evaluating water needs for winter.

Review rainfall records for the past 12 months, the forecast for the next 3-6 months, and determine the current soil moisture availability. Even if current soil moisture is good, projected plant growth may be below average if the 2010 growing season included drought conditions. If drought conditions occurred, plan for below average growth in 2011.

Evaluate the status of grazing and browse use to date. The amount of use on highly desirable species is critical. If use was heavy, reduce use this fall if possible and plan to reduce 2011 stocking rates to allow the preferred species to recover and improve.

Routinely check and repair or replace all improvements such as fences, water sources, and equipment.

Update current financial data and compare them to the 2010 grazing and economic management budgets. Finalize plans for 2011 and update the 5-year management and economic plans based on current and projected weather plus current and projected economic conditions.

Finalize the evaluation of any broadleaf and woody plant controls applied in 2010. Begin planing for 2011 broadleaf and woody plant control.

Finalize the evaluation of any prescribed burns completed in 2010 against the objectives. Begin completing burn plans for 2011.

Finalize the evaluation of 2010 seeded areas that need improvement. Finalize plans for the long term management for these areas.

If you haven't started a land resource record, start now. If you use photographs, establish points that you can return to and photograph at least once each every year.

Manage for today and the future based on what has been documented in 2010, what is happening now with the future in mind. Management is not easy! If you haven't developed a business management plan, please get started!