



# Friends of Ironwood Forest

Fall 2011

Friends of Ironwood Forest is a local non-profit organization that works for the permanent protection of the biological, geological, archaeological, and historical resources and values for which the Ironwood Forest National Monument was established. The Friends provide critical volunteer labor for projects on the Monument, working with the Bureau of Land Management and many other partners, and to increase community awareness through education, public outreach, and advocacy.

## Cardinal and Pyrrhuloxia

by Young Cage Friends of Ironwood Forest Board of Directors



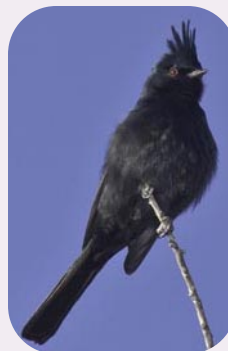
from left: **Pyrrhuloxia** and **cardinal**.  
below: **Phainopepla**. © Young Cage

Both newcomers and visitors to southern Arizona are often surprised to see Northern Cardinals (*Cardinalis cardinalis*) flying about in our desert. They seem out of place without the deep green forest foliage of the north and east United States. Yet they thrive here, and are always a beautiful sight to see as they move about the Mesquites, Ironwoods, and even Cacti. While they may not be the state bird, (an honor reserved for the Cactus Wren) they are likely still our most recognizable bird and even have a sports franchise named after them (the Arizona Cardinals).

The male Cardinal is bright red, has a black facemask, a distinctive crest, and a large orangish triangular bill. The female is mostly brown but with a similar bill. The heavy bills are no doubt useful for cracking and crushing the many seeds that they consume. They also eat insects and berries.

If you are observant you will likely see another type of bird that seems like a Northern Cardinal but somehow is different. It is gray or tan, with a strong wash of red especially on its chest. Its facemask is red rather than black. Its beak is a bit different as well, being more yellow, less triangular and more curved. This is the male Pyrrhuloxia (*Cardinalis sinuatus*). I find they are a bit less common here in

Tucson than the Cardinal, but still easily seen. I also find them every bit as pretty with colors that might be less brilliant than the Cardinal but very pleasing and complimentary. Female Pyrrhuloxias are brown, and not always easy to distinguish from the female Northern Cardinals. I use the bill shape and color to distinguish them. Their food preferences are similar to the Cardinals.



A third bird that can be confusing is the Phainopepla, a black bird (having white wing bars very visible in flight) with a crest. I have heard it called a "Black Cardinal". It is actually a flycatcher and not related to the Cardinals. It is frequently seen around clumps of mistletoe at the tops of trees where it dines on the mistletoe berries.

We are fortunate to have such jewels flitting about our desert, and it is especially fun if you can identify them and know a bit about their lives and life histories. A wonderful resource is a book by Lynn Kaufman, *Birds of the American Southwest*, that has information about most of our native birds and whose author lives in Tucson.

# Thank you for your donations!

*Through the generous support of everyone who donated over the last year, the Friends met the \$20,000 matching challenge from the Conservation Lands Foundation. The following individuals and organizations provided support from April 27 through September 30, 2011:*

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**A great group of Marana High School students participated in National Public Lands Day, September 24, 2011.** Photo courtesy Lin Hanson.



**Ragged Top and Silverbell Mountains.** Photo courtesy Bureau of Land Management.

## *Dear Valued Members, Dear Interested Friends (who will soon be members, we hope!), and Dear New Reader,*

IN OUR OWN BACKYARD... is a wonderful treasure. This treasure is home to the only remaining native herd of Big Horn sheep in the Tucson Basin. This treasure is also home to the fabulous, and endangered, Desert Tortoise. It is a wild and rich land that is home to over 800 species of plants and animals, some found only in this place. This diversity is rarely found anywhere else in the Sonoran Desert.

On this land you can see the majestic saguaro, elephant trees, birds and reptiles. You can find a treasure trove of petroglyphs; see what the oldest people in our basin saw over 3,000 years ago. There are numerous mountain ranges, hills and the iconic Ragged Top in this wild and wonderful place. And

IN OUR OWN BACKYARD... is one of the most magnificent stands of Ironwood trees in the Sonoran Desert. The Ironwood tree lives to be between 800 to 1,200 years old. Its branches provide a protected place for plants to grow and animals to shelter. Without this tree the Sonoran Desert would not have the diversity of plants and animals we know today.

IN OUR OWN BACKYARD... is the Ironwood Forest National Monument! And as the Friends of the Ironwood Forest, we exist to protect this rich treasure and to let others know how special this place is.

IN OUR OWN BACKYARD... is a treasure that is not as well known as it should be. We ask you, as friends,

to let others know about the Ironwood Forest National Monument and about the Friends of the Ironwood Forest. You make a difference. Your commitment to this special land, your desire to see it protected so our children, and their children, and their children's children will be able to enjoy it, is important and worthy! Please make a point to tell three friends about the Monument and about the Friends group that works to protect it. We would like to have you join us in preserving the Ironwood Forest National Monument that is... In Our Own Backyard.

We hope to see you on the Ironwood Monument soon! There are a lot of exciting things happening and we want you to be a part of it all!

*Thank you!*

*The Board of Directors of  
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# Do You Know Your Palo Verde?

by Royce Ballinger, PhD

Vice President, Friends of Ironwood  
Forest Board of Directors

Palo verde trees are among the most abundant and widespread native trees in the Ironwood Forest National Monument (IFNM). These are the trees with green branches and trunk that are covered with yellow flowers in the spring. Palo verde means “green stick” in Spanish. Like the saguaro cactus and ironwood tree, the distributional limits of palo verdes almost exactly outline the Sonoran Desert in Arizona. However, there are three species of palo verde trees. The common Arizona upland species is the Foothill or Yellow Palo Verde (FPL) (*Parkinsonia microphylla*) whereas the Blue Palo Verde (BPV) (*P. florida*) is typically found along rivers, washes, and flood plains of the lower desert. A third species, the Mexican Palo Verde (MPV) (*P. aculeata*) occurs naturally in extreme southern Arizona and southward into Mexico although it has been planted as an ornamental elsewhere, including in many parts of the world. There is a total of some 10 species of palo verde trees that range south through Central and South America to western Peru, Paraguay, and Argentina.

Palo verdes are especially suited to survive in a dry desert environment. Their tiny leaves (actually leaflets on a central rachis or pinna of a pinnately compound leaf) have a reduced surface area that lessens transpirational water loss. The leaves are also drought deciduous, that is they fall off during very dry periods. Even some branches can be drought deciduous. Perhaps to compensate for the small leaf area, the trunks and branches are photosynthetically active, thus their green color.

Palo verde trees have soft wood of little use except as firewood. They grow fast but rarely exceed 100 years old (BPV) or slightly older in the FPL. They



**Hybridized palo verde, known as the Desert Museum variety, in full bloom.** Photo © Young Cage.

occur from sea level to 4,000 feet. These trees are an important resource for desert animals for food, shelter, and shade. They serve as a nurse plant for plant seedlings and provide pollen for bees, flies, and beetles. These trees, in the Fabaceae family, are a legume whose beans were an important food for native peoples. The beans are produced from the conspicuous yellow flowers that appear from February through May, but the exact time of flowering and other characteristics differ between the species as detailed below. Flowering generally starts earlier in the south.

The blue palo verde may begin to flower as early as February and continue through May, with a peak in late April depending on moisture conditions. These tend to be larger trees to 30-40 feet tall with a central large trunk. The bright yellow flowers (18-25 mm wide) have 5 petals including a larger one called the banner that is yellow with scattered red flecks at its base. The banner turns reddish orange with age. There is a spine at the branch nodes, but these may be absent or deciduous. The ends of the branches tend to curve upward and do not have a spine. The pinnae (1-2) have a short petiole (a base that connects to the branch) and 3-8 leaflets per pinna. The leaves and branches are bluish green, thus the name BPV. The bean pods are flat, 3-7 cm long and not constricted between the seeds. The beans are said to taste like “green peas” when eaten

while green. BPV are most abundant along major washes and riverine floodplains.

The Foothill Palo Verde has a flowering cycle that is typically two weeks behind the BPV, usually March-May with a peak in early May. FPV are smaller trees or shrubs (to 20-25 feet tall) with many branches emerging from near the base of the trunk. The limbs are yellowish green. The pale yellow flowers are small (12-18 mm wide) with the banner petal being white and fading to light yellow to orange with time. Leaves lack a petiole thus attach directly to the branch. There are 2-3 pinnae (1-5 cm long) with 4-5 pairs of leaflets. Pods are 3-10 cm long with constrictions between the seeds. There is a prominent spine at the ends of branches. FPV are abundant on slopes, ridges, canyons and bajadas.

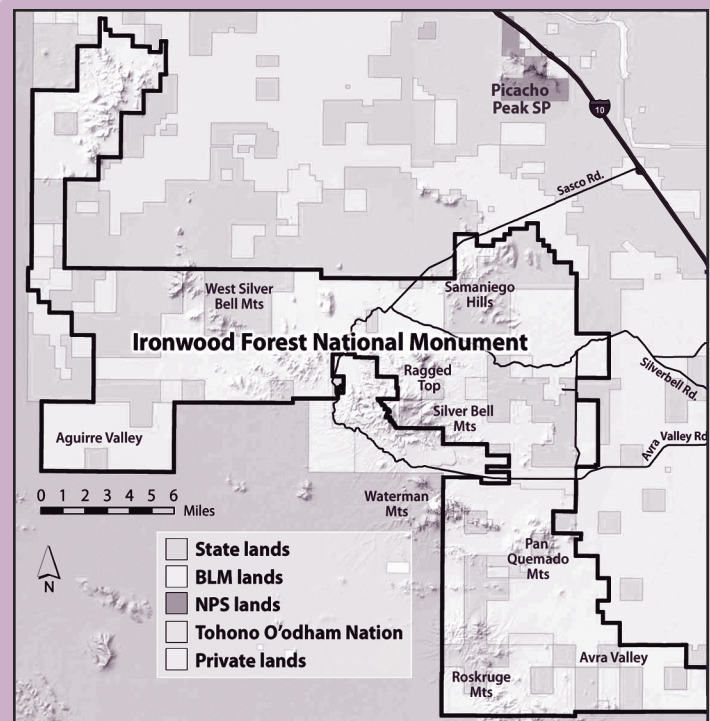
The Mexican palo verde is a green-barked tree with a well-developed trunk that reaches 40-45 feet tall. Flowers are large (27-34 mm wide) and showy. Flowering peaks in April but continues sporadically through the summer and fall. The petals are bright yellow and the banner petal is bright yellow with red basal spots but turns orange to red with age. The primary leaves occur in 1-3 pairs with very long pinnae (to 30 cm) with 10-40 pairs of tiny leaflets. Both the leaflets and pinnae are drought deciduous. There are prominent spines at the nodes but these are frequently deciduous. Small spines also occur at the tip of the leaf. The bean pods are long (5-10 cm) and constricted between the seeds. MPV occurs naturally along riverine habitats in southern Arizona and is a weedy species occurring in disturbed areas farther south and east.

MPV has been propagated extensively and hybridizes with other palo verde species. One of the most common horticultural tree varieties in the Tucson area is a “tri-hybrid” species developed by Mark Dimmitt (1987). These hybrid plants known as the “Desert Museum” variety have characteristics of all three species, BPV, FPV, and MPV. They are fast growing, have showy flowers, flowering often lasts through the summer, and they lack spines.

A note about names. *Parkinsonia* is currently recognized as the proper generic name as a result of systematic studies by Hawkins (1996). This genus was first described by Linnaeus in 1753. FPV and BPV have been included in the genus *Cercidium* since it was described by the Irish botanist Thomas Coulter from a BPV specimen collected in Hermosilla in 1830. Many popular books and accounts continue to use *Cercidium*, but this will gradually change. Both the BPV and FPV are the official state trees of Arizona.

#### References

- Benson, L. and R.A. Darrow. 1981. Trees and shrubs of the southwestern deserts. 3<sup>rd</sup> edition. Univ. Arizona Press, Tucson, 416 pages.
- Dimmitt, M.A. 1987. The hybrid palo verde “Desert Museum”: a new, superior tree for desert landscapes. *Desert Plants* 8:99-103.
- Felger, R.S., M.B. Johnson, and M.F. Wilson, 2001. The trees of Sonora, Mexico. Oxford Univ. Press, 391 pages.
- Hawkins, J.A. 1996. Systematics of *Parkinsonia* L. and *Cercidium* Tul. (Leguminosae: Caesal.), Ph.D. thesis, University of Oxford.
- Turner, R.M., J.E. Bowers, and T.L. Burgess. 2005. Sonoran Desert plants: an ecological atlas. Univ. Arizona Press, 504 pages.





# The Nichol Turk's Head: A Conservation Success Story

by **Bill Thornton**

Reprinted from *Cactus and Succulent Journal*, Vol. 83 No. 3, 2011

A previous article described fledgling efforts to save critical habitat of the endangered Nichol Turk's Head cactus (*Echinocactus horizonthalonius* var. *nicholii*) from invasive buffelgrass (*Pennisetum ciliare*) in the Ironwood Forest National Monument (Thornton 2007).

Infestations of buffelgrass and other invasive weeds often begin in disturbed areas where the original desert vegetation has been removed. If left unchecked the weed can spread into the surrounding area with devastating consequences. In the Sonoran Desert, one of the world's richest and most biologically diverse, ecosystems can be converted to a sterile monoculture in a sickeningly short time (Emming 2006).

At Ironwood Forest National Monument the abandoned Harlow Jones airstrip provided ideal conditions for buffelgrass to gain a foothold. When eradication efforts began in 2006 the airstrip was a veritable sea of buffelgrass that was slowly creeping into critical habitat of the Nichol Turk's Head. The short term strategy was to contain the spread of buffelgrass by nibbling around the edges while plans developed to clear the whole site. Early control efforts received a major boost with the formation of "Friends of Ironwood Forest" in 2007. A new corps of enthusiastic and energetic volunteers joined forces with the Sonoran Desert Weed Whackers and others to continue work at the airstrip and seek out and attack buffelgrass wherever it was to be found in the monument. Now, nearly four years later, I'm pleased to report that a major threat to this rare and beautiful plant has been successfully controlled.

When management plans were completed hand removal was supplemented with carefully controlled applications of herbicide (glyphosate) to the mass of buffelgrass that blanketed the airstrip. Re-vegetation began after the last buffelgrass was cleared in 2010. The sprayed buffelgrass was ploughed under with a chisel hoe, and boulders positioned to keep vehicles

out, but the job isn't finished. The area will be closely monitored and buffelgrass seedlings will be removed before they can mature and set seed. It will take another three to four years before the area can be declared buffelgrass free. During that time the re-seeded desert vegetation will establish itself and an ugly destructive scar on the landscape will begin to heal. A few natives are already starting to appear in the recently-cleared earth.

As conservationists we savor our successes, but remain cognizant of the many challenges that remain. Buffelgrass is a serious but by no means the only threat to the Nichols Turks Head and overall ecosystem. Portions of Ironwood Forest National Monument continue to be heavily impacted by drug and people smuggling traffic, illegal off road vehicle use, and wildcat trash dumping. Professional resource managers are spread thin but the Friends of Ironwood Forest, Bighorn Sheep Society, and Arizona Native Plant Society have stepped up to supplement their efforts. In addition to removing buffelgrass, the "Friends" have collected tons of trash, and worked to control erosion and erase closed roads. The Bighorn Sheep Society has erected barriers to illegal and destructive off-road vehicle traffic. The Arizona Native Plant Society assisted re-vegetation efforts by collecting and planting seeds.

The Ironwood Forest National Monument began with lines on a map and a vision for the future. Cooperation and a lot of hard work by citizen volunteers and the Bureau of Land Management have helped make that vision a reality. Hopefully, the Turk's Head here will now be able to grow to a ripe old age.

## Literature Cited

Emming, J. 2006. CSJ, Vol 78, No 1  
Thornton, W. 2007 CSJ Vol 79, No 1 Jan-Feb 2007



**Endangered Nichol Turk's Head cactus.** Photo courtesy Bureau of Land Management.

## Friends of Ironwood Forest *Volunteer of the Year: Gary Borax*

Gary Borax is a great bear of a man who, like his avatar in the animal kingdom, most likely is to be found padding about on foot in the wilderness. He eschews the road less traveled for the road untraveled. He is a trailbreaker, literally and figuratively.

On this day, Gary is sitting quietly in his Heritage Highlands home. In an alcove in that home, resting behind a handsome pounded-hardwood frame that Gary fashioned himself, is a map of hiking trails in Gary's beloved Tortolitas. The map, like the frame, was fashioned by Gary, as were some of the trails on the map.

He is a retiree—if you call retirement caring for 70 homes of snowbirds in Heritage Highlands; repainting metal fences throughout the community over the winter; maintaining the natural open-space along the boulevard on which he lives; and hiking two or three days a week.

Transplants from the Chicago area, Gary, who was in data processing with Alberto Culver, and his wife Carol, with Delta Airlines for many years, chose this area after an extensive search of various retirement options. The primary draw—those beautiful mountains.

It is not enough for Gary, however, to sit back and look. His passion is hiking—he is a founder of the Dove Mountain Hikers—and he brings to that passion a particular turn of mind, which manifests itself in restoration and improvement.

And he also brings some special interests and talents. Using GPS coordinates and a sophisticated mapping program, Gary has created various



**Thank you Gary Borax, Friends of Ironwood Forest first ever Volunteer of the Year!** Photo courtesy Lin Hanson.

topographical maps for hikers in area mountain ranges. The maps reveal the GPS coordinates at key turns on the trails and, as well, designate the sites of “crested” saguaros, a relatively rare mutation of the signature plant of the Sonoran desert that has caught Gary's fancy.

He will be quick to tell you, however, that he is not a “nature person.” Behind a warm, self-deprecating smile, he says: “If you identified a plant species out on my patio for me, I wouldn't be able to tell you what it is five minutes later.”

Nonetheless, Gary knows buffelgrass when he sees it. Eradication of that dangerously invasive species, introduced into the Sonoran desert to feed cattle, has been the object of much of his efforts on Ironwood Forest National Monument. Those efforts, along with work to restore a site damaged by creation of a private landing strip on public land and the promotion of greater exposure to the Monument among local residents, has earned for Gary the designation of Volunteer of the Year from the Friends of Ironwood Forest National Monument.

Thank you, Gary, for both walking the walk and talking the talk. See you on the trail.



# Friends of Ironwood Forest

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*Thank you to everyone who participated in the  
buffelgrass pull on National Public Lands Day!*



**Future advocates for America's public lands from Marana High.** Photo courtesy Lin Hanson.

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