

Riparian Notes

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Gaining Ground Through Good Land Stewardship

In the March issue of *Riparian Notes*, entitled “Losing Ground”, the detrimental effects of excessive riparian and creek-bank erosion were described. Although the loss of riparian ground through erosion is a serious concern, the good news is that creeks and riparian areas are naturally able to adjust to these disturbances and heal themselves. This healing does not necessarily restore them back to their original condition, but it often allows adequate recovery to restore the basic functions of creeks and riparian areas.

It was pointed out that down-cutting of a channel often triggers the subsequent widening of that channel. In these situations, channel widening may be alarming and the landowner or manager may be determined to stop the erosion through some kind of bank stabilization project. In many cases, this widening of a down-cut channel must be allowed to take place unhindered since it is a natural and necessary adjustment. Overly deep channels and overly steep banks cannot be maintained in most cases. No matter how good the vegetation is, the stress is just too great to hold these high banks in place. Furthermore, these deeply incised creeks cannot function properly since there is no longer frequent access to a floodplain to dissipate energy. A healthy creek must have quick and easy access to its floodplain at an elevation low enough to be flooded on a frequent basis (every year or two).

As these high and steep creek banks fail, and large chunks of land fall into the channel, that material can be used by the creek to build a new floodplain down at the new lower elevation. This natural creation of a new floodplain at the proper elevation can occur **ONLY** if there is adequate riparian vegetation to stabilize and hold that new material in place. Colonizer species such as spikerush, knotgrass and water hyssop can quickly and efficiently put new roots down into freshly deposited soil. Stabilizer species such as switchgrass and Emory sedge can then reinforce these newly forming banks so they can withstand the next flood event. Eventually, woody plants such as willow and button bush will establish to provide even greater strength and stability to the new banks and new floodplain. In a healthy creek system, these and other riparian species will naturally establish if given the opportunity.

On most creek and river systems in Texas, grazing is the most important factor that influences riparian vegetation. Heavy grazing and/or prolonged grazing damages riparian vegetation and render it ineffective at building and holding new banks. Grazing management in riparian settings should strive to provide short grazing periods followed by long rest periods to maintain or enhance desired plant communities. In fact, only two to four weeks of grazing each year may be appropriate to maintain good riparian vegetation. Separate riparian pastures combined with an observant and diligent manager will permit this kind of specialized grazing.

Proper riparian vegetation has the ability to hold these new banks in place with the extensive matrix of strong reinforcing roots. The top-growth serves to retard water velocity and dissipate energy so that new sediment and debris will be trapped and stabilized with each high flow. Without the right vegetation, these benefits will not occur.

An ongoing program of land stewardship grounded by a strong land ethic will enable landowners to carry out the kinds of management needed to restore creeks, rivers, floodplains and riparian areas.