

## A THREAT TO TEXAS FORESTS

Invasive species are species that have been brought to the United States and either purposely or inadvertently released and have become a significant threat to native flora and fauna. These species establish themselves within small forest openings, forest road rights-of way and areas under and beside forest canopies. They are introduced into these areas through several common means including ornamental plantings, movement of contaminated farm machinery, livestock forage and inadvertent livestock escape. Non-native invasive species arrived into this country without their natural predators of insects, diseases and animals that serve to keep native plants in natural balance. Thus, they have rapidly spread across many regions of the country, including Texas.

### RISK ASSESSMENT FOR INVASIVE SPECIES

There are several ways to assess the risk of an invasive species.

1. The potential to negatively affect forest productivity.
2. The organism's ability to spread and colonize new habitats.
3. The landowner's ability to control the species.
4. The cost to control the species.

### TEXAS FORESTS INVASIVE SPECIES – BIG FOUR

**Chinese Tallow Tree** – This tree represents a significant invasive species problem in many areas of Texas. It invades and eventually dominates native plant habitats from river bottoms to upland forests, as well as disturbed sites and abandoned agricultural fields. It is very adaptable and can transform native habitats into a single species tallow forest in the absence of land management practices. It reduces light availability for other plant species and fallen tallow trees contain toxins that create unfavorable soil conditions for native plants. It reduces habitat for wildlife as well as forage areas for livestock. It spreads by root sprouts and seeds, with birds and water commonly discharging the seeds. Research is being conducted to find ways to effectively control tallow trees. Bulldozing is ineffective, causing prolific sprouting from roots. Fire successfully eliminates smaller trees, but large trees tend to resprout. Herbicides will provide temporary control, but repeated applications are necessary.



*Chinese Tallow*

**Japanese Climbing Fern** – Introduced as an ornamental into the southern U.S. from Japan in the 1930's. It is still being spread by unsuspecting gardeners and is being sold as recommended ornamentals on the Internet. This climbing fern has invaded forests in nine southern states and is commonly found in southeast Texas along highway rights-of-way, especially under and around bridges. The vines from the fern climb over native vegetation, forming tangled masses that top shrubs and trees, eventually shading out and killing them. It colonizes by rhizomes and spreads by wind-dispersed spores. Control of Japanese climbing fern is difficult because of the large rhizome root system and rapid germination from spores. Fire will eliminate aerial portions, but will not stop resprouting. Herbicides offer the best choice for eradication of established infestations.

**Cogongrass** – Although this invasive perennial grass has only been detected from a single site in Tyler County, the problems it has caused in other southern states are testimony to why Texas should be concerned. Following initial invasion, it forms dense, field-like monocultures that can reduce forest and pasture productivity, destroy wildlife habitat, impact rights-of-way and present an extreme fire hazard. It spreads through soil movement contaminated with pieces of rhizome or seed, often due to site disturbance in timber harvest, site preparation and road grading. Sometimes confused with Johnsongrass which also has a white midvein, the cogongrass midvein is off-centered. Control varies according to the age of the infestation as well as the density and depth of the rhizome mat. Tillage can eliminate newer patches of cogongrass if continued through the course of a growing season. Frequent mowing at low heights may help reduce cogongrass stands, followed by spot treatment of recurring infestations with appropriate herbicides.

**Privet** – Chinese and European privet were first introduced into the U.S from China and Europe for use as ornamental shrubs in the South in the mid-1800s. They have escaped into the native environment and are now disrupting native plant communities. They can be found in 78 counties in east and central Texas. The nonnative privets, particularly Chinese privet, are among the most notorious of these unwanted invaders. Chinese privet is very versatile, able to survive in a wide range of habitats, soil and light conditions. It can be found in disturbed areas, along road sides, fields and fencerows often forming dense thickets where it will shade out all herbaceous growth. Chinese privet thrives in wet damp conditions and is commonly found in low woodlands, bottomlands and streamsides. It grows from rhizomes as well as by seeds that are dispersed by birds and other animals. The leaves are high in phenolic compounds that defend the plant against insects, allowing the plant to spread. Control of nonnative privet is very difficult due to the extremely dense thickets up to 30 feet in height that are often formed. Recommended control for large infested areas are to use foliar or basal sprays with appropriate herbicides. For small areas and relatively small plants, hand removal is effective.

This forest management note is just an introduction to invasive species in Texas. For more information on these listed species and other common invasive plants and animals found in Texas, please use the references below.

[www.texasinvasives.org](http://www.texasinvasives.org); [www.wiki.bugwood.org/Archive:IPSF](http://www.wiki.bugwood.org/Archive:IPSF) (information on invasive plants in southern forests); [www.invasive.org/eastern/srs/](http://www.invasive.org/eastern/srs/) (this has information about invasive plants in southern forests PLUS control recommendations)