



## **Controlling Invasive Plant Species Rarely Talked About in Grazinglands**

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We have spent a lot of time over the last 15 plus years talking about managing invasive species such as tropical soda apple (TSA), smutgrass, and cogongrass. The introduction of aminopyralid, a component of GrazonNext HL™, Duracor™, Milestone™, and now several generic products, was a game changer for managing TSA. We also have management plans available for smutgrass and cogongrass, but there definitely is no silver bullet for these widespread species. Over the past several years several other species have continued to spread and cause problems on private and public lands. These include climbing fern (Old World and Japanese), coral ardisia, lantana, and Chinese tallow. Like TSA, smutgrass, and cogongrass, there are options for managing these species and those are summarized for grazinglands below.

### **Old World and Japanese climbing fern**

Both species have been in Florida for quite some time with Japanese climbing fern (Figure 1) introductions in the 1930s and old world climbing fern (Figure 2) in the 1950s. Japanese climbing fern can be found throughout the state, while old world climbing fern is continuing to move northward. While both species are typically thought of as “natural area” invasive species, it is quite common to find both species in grazinglands in Florida. Both species occur in sunny or shaded locations and are usually found in wet areas including the edges of wetlands, drainage canals, hammocks, cypress domes, and sometimes upland woodlands. Both plants consist of fronds up to 90 ft long that spread along the ground, over shrubs (wax myrtle, saltbush, etc.), and often climb up trees (Figure 3) and other structures. Prescribed fires can often lead to tree death where climbing fern infestations have enveloped the trees. Therefore, it is best to manage climbing fern infestations as quickly as possible.

Management of both climbing fern species can be challenging due to their locations, and especially when climbing fern has invaded a particular site for several years. In most cases, glyphosate (2% v/v) is an effective treatment for both species. In dense infestations where the fern has climbed into the tree canopy, the fronds are typically “poodle cut” (Figure 4) by cutting the fronds 3 to 4 feet up the tree trunk and treating below the cut. Where water is present during application, an aquatic labeled glyphosate product should be used.

### **Coral ardisia**

This species is typically found in hammocks (Figure 5) as it is quite shade tolerant and is found throughout the state. Shrubs reach 6 ft in height, have waxy leaves and are typically recognized by persistent red berries in the fall and winter months. Since it typically grows in hammocks and other highly shaded areas, it typically does not impact forage production. However, it appears to be toxic to cattle as several producers have lost cattle after they have consumed this plant in several locations throughout the state.

Due to its location, management of coral ardisia can be time consuming. Triclopyr ester at 2% v/v has been shown to be effective in controlling established stands. Retreatment will be necessary as seedlings in the understory of the larger plants will not be controlled by the initial application. Additionally, it is extremely difficult to obtain thorough coverage in dense stands due to the morphology of the plant.

### **Lantana**

Another toxic plant that is often encountered in grazinglands is lantana (Figure 6). As citrus groves continue to be pushed, many are being utilized for grazing livestock. Unfortunately, a lot of citrus groves tend to have some level of lantana infestation within the old tree rows or around the borders. Unlike coral ardisia, intoxication from lantana is typically from chronic ingestion.

Due to the deep taproot of lantana, control is difficult and repeat applications are typically needed for control of individual plants. Additionally, it is rare that a broadcast application is necessary as overall density within a typical pasture (or old grove) is typically low. Consequently, spot applications of herbicides containing the active ingredient fluroxypyr are most effective. Our data suggests that 2 applications (6 to 12 months apart) of Pasturegard at 1% v/v, or Vista/Flagstaff at 0.5% v/v provide effective control of established plants.

### **Chinese tallow**

Also known as popcorn tree, Chinese tallow (Figure 7) has been in the state since the early 1900s. The growth rate of this tree is very fast and is capable of reaching heights of 20 to 30 ft within 3 to 5 years. Mature trees produce an average of 100,000 fruits that split open to reveal white seeds that resemble popcorn. It is common to find Chinese tallow in almost any environment from wet to dry and near saline and fresh water sources.

Since Chinese tallow growth rates are typically very fast, trees are typically too large for a foliar application by the time most would recognize the tree. Consequently, the most effective management technique would be a cut-stump treatment. Once the trees have been cut down, treat the cambium layer just inside the bark with 10% Milestone, 50% Garlon 3A or Renovate (triclopyr amine), or 20-30% Remedy Ultra (triclopyr ester). If trees are identified before hard bark has been formed, a basal bark application of 20% Remedy Ultra can be utilized. Resprouts from the root system are common and will require retreatment with foliar applications of triclopyr ester. If plants are growing in or near water, Garlon 3A or Renovate should be utilized.

Like most invasive plant species, a single application of an herbicide, or a single management approach rarely results in complete control. Since most of these species have been

invading public and private properties for decades, eradication is unlikely, but we can do our part by reducing plant populations and reducing spread into areas that have not already been infested. If treating in areas where cattle are not grazed, there are additional options that may be available for each of these species. Please feel free to reach out to us or your local county extension office for further information or assistance.

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### **Upcoming Event**

January 9, 11:00 to 11:45 a.m. EST – Ona Highlight webinar with guest presenter Dr. Stephen Enloe - ‘Climbing Fern & Brazilian Pepper Management.’ Dr. Enloe is a Weed Science and Invasive Plant Extension Specialist at the UF Center for Aquatic and Invasive Plants. Visit the calendar on our website below for the link to register or call (863) 735-1001 to attend in person at the Center.

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UF/IFAS Range Cattle REC - 3401 Experiment Station Rd., Ona - <http://rcrec-ona.ifas.ufl.edu/>



Figure 1. Japanese climbing fern growing at the Range Cattle Research and Education Center. Photograph by B. Sellers.



Figure 2. Old world climbing fern. Photo credit: Center for Aquatic and Invasive Plants.



Figure 3. Old world climbing fern and Japanese climbing fern typically climb plants and trees. Photograph by B. Sellers.



Figure 4. Climbing fern that has grown into the tree canopy is typically “poodle cut” and herbicide is applied below the cut. In this picture, the climbing fern was poodle cut and treated with 3% glyphosate. Photograph by B. Sellers.



Figure 5. Coral ardisia growing in an oak hammock. Photograph by B. Sellers.



Figure 6. Lantana growing in a pasture that was once a citrus grove. Photograph by B. Sellers.





Figure 7. Chinese tallow with fruit split open resembling popcorn. Photograph credit: Charles T. Bryson, USDA-ARS, Bugwood.org.