# Invasive Plants in Pennsylvania Shrub and Serisea Lespedezas

Lespedeza bicolor and Lespedeza cuneata



Tom Remaley, Great Smoky Mountains National Park, <u>www.nps.gov</u>

# **Background:**

These lespedeza species are native to Asia and were introduced in the southern United States. Widespread use of these species by state and federal agencies has facilitated its spread throughout the eastern U.S.

### Range:

Both species occur throughout much of the eastern U.S. from Minnesota to Texas east to New York and Florida. In Pennsylvania, non-native lespedezas are more common in southern counties, but may be found anywhere the species had been deliberately planted.



# **Description:**

Lespedezas are in the pea plant family and are warm season, perennial herbaceous or semi-woody shrubs. Both have alternate leaves, each with three oblong leaflets and awl-shaped spines. On Sericea lespedeza, also known as Chinese lespedeza, the leaflets may be covered with densely flattened hairs. Creamy white to pale yellow flowers can be found on Sericea and pink to purple flowers can be found on shrub lespedeza in early July. Both produce small, black seeds each in a pod.



USDA NRCS Plant Materials Program, Beltsville, MD

### Habitat:

Lespedezas are well-adapted to a variety of habitats, including poor, severely eroded soils. They readily invade disturbed and open environments. Lespedezas are intolerant of shade.

# **Biology and Spread:**

Lespedezas sprout from buds found at the base of last year's stem, which is also an adaptation to disturbance. They also spread through consumption by animals or agricultural haying.

Lespedeza seeds need mineral soil to germinate, thus limiting their establishment to disturbed soils. However, the seeds may remain viable in the soil for many years before suitable conditions for germination arise.

### **Ecological Threat:**

Non-native lespedezas are particularly a threat on open, disturbed ground where many rare species may occur. It is also planted in wildlife openings and can persist and spread for years. These species can grow dense, outcompeting native vegetation.



Carrie S. Miller, University of Tennessee Herbarium

#### How to Control this Species:

Mechanical and chemical methods are the most effective options for controlling non-native lespedezas. Hand pulling is impractical due to the species' extensive perennial root systems. Mowing plants in flower bud for two or three years may reduce vigor and control further spread. Plants should be cut as low to the ground as possible and impact to adjacent native plants should be minimized.

#### Look-A-Likes:

There are several species of lespedezas native to Pennsylvania, including one that is considered a species of concern. In addition, there are other non-native species of lespedezas and species in the *Kummerowia* genus that could prove aggressive. Root reserves increase up until the time when the species is in flower bud, so herbicide treatments should be completed in early to midsummer. Non-ionic surfactants improve the success of chemical treatments. Chemicals that have been shown to be effective on lespedezas include triclopyr and clopyralid. As always, use pesticides wisely. Read the label entirely and follow mixing and application instructions.



Dennis D. Horn, University of Tennessee Herbarium

#### **Native Alternatives:**

Native lespedezas have a high wildlife value and should be used in place of non-native species. Other alternatives to attract wildlife and butterflies could include butterflyweed (*Asclepias tuberose*), joe-pye weed (*Eupatorium dubium*) and Indian grass (*Sorghastrum nutans*).



Marcie O'Connor, Robert W. Freckman Herbarium, University of Wisconsin — Stevens Point

#### **References:**

*Plant Conservation Alliance's Alien Plant Working Group:* <u>http://www.nps.gov/plants/alien/fact/lecu1.htm</u>

University of Tennessee Herbarium, TENN Vascular Plants: <u>http://tenn.bio.utk.edu/vascular/database</u>

Lespedeza bicolor Plant Fact Sheet, NRCS: <u>http://plants.usda.gov/factsheet/pdf/fs\_lebi2.pdf</u>