Sericea Lespedeza, Chinese Bushclover

Ruins Fields & Pastures, Invades Natural Sites, Persistent

All the wand-like plants that have taken over this field and destroyed wildlife habitat are invasive sericea lespedeza.

The Culprit

Sericea lespedeza (*Lespedeza cuneata)* is a warm-season Asian pea-family perennial was first used in the U.S. in 1896 at the North Carolina Agricultural Experiment Station as a forage crop. By the 1920s and 1930s it was widely used to reclaim mining sites and for erosion control, and it is still used for those purposes.

Wildlife managers once promoted its use for bobwhite quail habitat, assuming that the plant's seeds would be an excellent food source and that the plant would provide cover. Ironically, quail do eat the seeds if there isn't better quality food available, but because they cannot completely digest the seeds, sericea lespedeza provides poor nutrition for the birds. Although sericea effectively controls erosion and quickly blankets strip mine sites, it does so by outcompeting desirable species that would support wildlife. If left uncontrolled, sericea can rapidly turn a site into a monotypic stand, decreasing biodiversity and food availability for wildlife.

Like all pea-family members, sericea fixes soil nitrogen, which increases soil fertility. This is undesirable in a natural setting because increased soil nitrogen discourages the native plants adapted to poor soil that would normally grow there, negatively altering habitat.

Known Hangouts

Sericea refuses has escaped its planting sites and now poses a serious problem in parks, young forests, farmland, fields and prairies throughout the Eastern Seaboard and well into the Midwest. At least two states have declared sericea a noxious weed and banned its sale. In Virginia, however, it is still planted by commercial developers.

Sericea is common in Virginia's Piedmont and Coastal Plains along roadsides, in vacant lots, pastures, hayfields, native meadows, pine savannas and plantations, and even in moderately shaded locations under trees or in open areas of forest.

Modus Operandi

Researchers claim a single, large, branched sericea plant can produce as many as 1,500 seeds. Seeds survive in the soil for many years, so heavy infestations create a long-lasting seed bank. Established plants possess 3- to 4-foot-deep, woody, taproots, making them quite drought tolerant and able to quickly regrow if top growth is grazed or mowed. Individual plants live for many years and can form colonies through an extensive root system.

Sericea contains a high concentration of tannic acid, which causes wild and domestic animals to avoid eating it, unless no other food is available. Animals then forage more intensely on native plants, which depletes the desirables and allows invasives to increase. Tannic acid leaches from sericea into surrounding soil, creating a toxic environment that prevents or slows the growth other plants, giving it yet one more advantage.

All Lespedeza species have three-parted compound leaves like these of L. cuneata. *Leaflets of the invasive are wedge-shaped (widest at the tip) and oval in the natives.*

Positive Identification

Sericea is a warm-season perennial that dies to the ground each winter and resprouts from its below-ground crown in late spring. First-year plants may appear only as a single, feathery wand, but with each successive year, additional

upright, branched stems appear, which can reach 3 to 5 feet tall. If stems are partially cut back, they form a tuft of branches at their tips. The fine-textured compound leaves are made up of three, wedge-shaped, oblong leaflets. Leaflets are dull green to silvery green on top with silvery undersides created by flat, silky hairs. Small white flowers with two violet veins at the base of the upper petal, are solitary or clustered in twos or threes in the leaf axils close to the stems. Blooming begins in mid- to late July and proceeds into October. Tiny tan or greenish seeds are borne in small brown pods, which split open after frost.

Mistaken Identity

Several native lespedezas are easily confused with sericea lespedeza, especially when not in bloom or not side by side for comparison. The easiest way to tell the species apart is by the shape of the leaflets; the invasive has long leaflets widest near the tip; the other species are oval and widest across the middle. *Lespedeza capitata (roundhead lespedeza)* and *L. hirta* (hairy lespedeza) have creamy or yellowish flowers similar to *L. cuneata*, but they are in denser clusters and lack violet streaks in the top petal. The stem hairs of these two natives are spreading rather than being flattened to the stem as in *L. cuneata*. The native *L. virginica* (slender bush-clover) has showy tight clusters of mid-summer, lavender-pink flowers.

Flowers of the invasive sericea lespedeza (left) are white; those of native slender lespedeza (right) are pink.

The upright stems of a branched sericea are easy to spot in a field. Behind it are smaller sericea plants, possibly one year old plants.

Control

Look for sericea lespedeza in fields, pastures, meadows and clearings and in untended areas in sun or part shade. Young single plants may be nestled between tall plants, so in areas of known infestations, it pays to walk through a field using a stick or spray wand to separate tall plants to look for small sericea beneath them.

Manual & Mechanical: Because of its deep taproot, sericea is almost impossible to hand pull unless the soil is moist and friable and the plants are young. Mowing is problematic because sericea rebounds quickly in a mowed field because it is no longer shaded by other plants and mowing sets back desirable plants. For mowing to be effective, mow when spring growth is about 12 inches tall. At this stage, sericea's root system is most vulnerable, so it rebounds weakly. Mow again when sericea begins to flower or spot spray new foliar growth. To prevent individual plants' seed dispersal, cut off and bag pod-laden stems in autumn before frost; make several passes through any given location to find all plants; this controls spread but does not eradicate the problem. Goats grazed for three consecutive years can control sericea, but damage desirable plants as well.

Foliar Spray: The shape of sericea's stems demands a special spraying technique. Spot spray individual plants by setting the spray nozzle to a narrow stream and spraying downward above each stem from top to bottom to avoid hitting nearby desirable plants. In fields and meadows, use a broadleaf herbicide (triclopyr works best) to avoid injuring grasses. Herbicides are effective throughout the growing season, but best used before flowering. Where large swathes of infestation occur, use a broadcast spray.

Spray straight down on the stems to avoid nearby plants. Dark blue-green dye indicates the spray pattern and shows that nearby plants are not harmed.

Fire: Sericea seeds are viable for many years; fire seems to break seed dormancy. A prescribed late-spring burn may force germination and exhaust the seed bank. Mow the resulting sericea growth as described above, or apply herbicide.

For currently approved herbicide recommendations, check the Virginia Department of Forestry chart *Non-Native Invasive Plant Species Control Treatments*, which you can download from the Blue Ridge PRISM website.

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Follow all herbicide label directions.