

FIELD GUIDE TO THE IDENTIFICATION OF JAPANESE STILTGRASS

with comparisons to other
look-a-like species



RIVER TO RIVER
Cooperative Weed Management Area



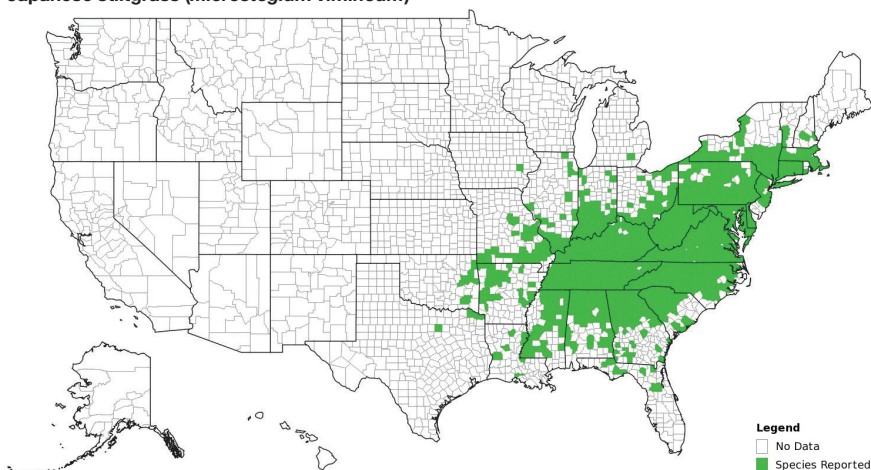
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Known distribution of Japanese stiltgrass in the United States

Japanese stiltgrass (*Microstegium vimineum*)



Report new infestations of stiltgrass to www.eddmaps.org

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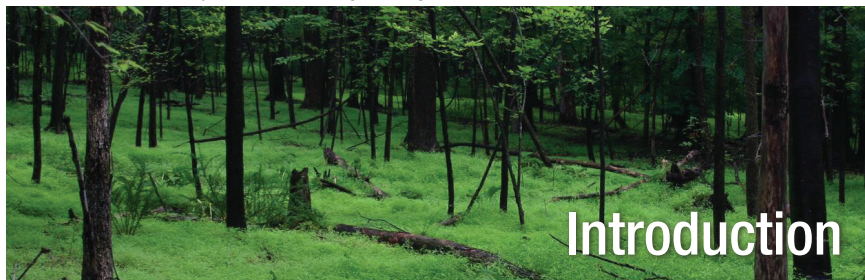
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Japanese stiltgrass (*Microstegium vimineum*), also called Nepalese browntop, is an aggressive invader of forest lands throughout the eastern United States. Infestations can impact the diversity of native species, reduce wildlife habitat, and disrupt important ecosystem functions. Stiltgrass is considered one of the most damaging invasive plant species in the United States. Infestations spread rapidly and the seed can remain viable in the soil for up to five years.

Correct identification is necessary before beginning any management activities. Fortunately, Japanese stiltgrass has a unique combination of characteristics that make field identification possible. This publication gives simple descriptions and clear pictures of these characteristics along with details on how to distinguish several common look-a-like species. For more information on Japanese stiltgrass ecology and management, visit www.rtrcwma.org/stiltgrass or www.invasive.org.

Identification

Stiltgrass is a weak rooted and sprawling annual grass that can grow to heights of 6 feet, though it is usually much shorter. Taller plants typically lie flat along the ground or propped up against other vegetation. Plants usually have multiple weak stems, with aerial rootlets near the base, giving rise to the common name 'stiltgrass'. The leaves are short with smooth edges and a noticeable silvery midrib on older leaves. The flowers and fruits are borne on thin spikes on the top of a delicate stem. Stiltgrass also has closed (cleistogamous) flowers that are self-fertilized. These occur on short branchlets in the lower axils. In the fall, the tops of the plant turn purple or brown in color, giving this plant one of its other common names, Nepalese browntop. In winter, the thatch is a distinct bright tan to orange color.



PREFERRED HABITAT

- Floodplain forests and stream banks
- Forest edges
- Road and trail edges
- Damp fields, ditches and lawns
- Other shady areas prone to flooding

Key Identification Features of Japanese Stiltgrass



James H. Miller, USDA Forest Service



Bruce Ackley, The Ohio State University

LEAVES

- 2-4 inches long and around ½ inch wide
- Both ends pointed
- Silvery, off-center midrib often present
- Smooth edges
- Well-spaced along the stem (not from stem base)

ROOTS

- Thin, weak root system
- Pulls out of the ground easily
- Rootlets ('stilt' roots) descend from nodes along lower sections of the stem





Bruce Ackley, The Ohio State University



STEM

- Often has multiple stems, branching near the base
- Thin, somewhat fleshy when actively growing, but become wiry as plant dies back
- Smooth, may have some hair just below leaves on leaf sheath
- Longer stems tend to sprawl and root at nodes



FLOWERS/SEEDS

- Born on delicate stalks
- Also has closed (cleistogamous) flowers occurring in short branchlets lower on the stem
- May have 1, 2 or 3 spikes
- Flowers late summer through early fall



cleistogamous flower





Rebekah D. Wallace, University of Georgia



*James H. Miller & Ted Bodner,
Southern Weed Science Society*

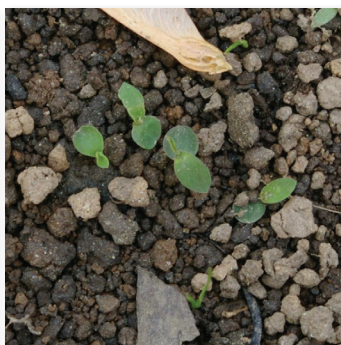


WHOLE PLANT

- Seedlings germinate in late spring, or after disturbance throughout the year
- Often in dense infestations
- Up to heights of 6 feet, though usually 0.5 to 3 ft
- Taller specimens usually sprawl along the ground or are propped up against or over other vegetation
- Purple-brown color in fall (or drought) as plants die back
- Winter thatch is bright tan to orange in color (thatch is not as prevalent in southern parts of the range)

Growth Stages

SEEDLING



MATURE



BROWN-UP



WINTER THATCH



Look-a-like Comparisons



Whitegrass (*Leersia virginica*)

- Perennial with well-developed root system
- Leaves longer and thinner than stiltgrass, lacking obvious midrib stripe
- Flower/seed head much more open and spreading than stiltgrass
- Moist woods, often with stiltgrass



Nimblewill (*Muhlenbergia schreberi*)

- Leaves 0.75 to 3 inches, very narrow (1/4 inch or less) and sharp-pointed, held at sharp angles from stem
- Plants often mat-forming
- Flower spike fine and up to 6 inches long
- Often rooting at the nodes
- Moist woods, lawns, gardens



Basketgrass (*Oplismenus hirtellus*)

- Leaves generally wider than stiltgrass, with a rounded base and more elongated sharply pointed tip
- Leaves appear wavy or ribbed and do not have silvery midrib
- Low lying, branching and rooting from lower stems
- Flower spikelets have long, sticky awns
- Moist woods, often with stiltgrass

Ohio State Weed Lab Archive, The Ohio State University



Deer tongue/panic grass (*Dichanthelium* spp.)

- Spreading flower/seed head, seeds knobby
- Leaf-base often clasping around stem
- Hard to pull
- Moist to dry sites



Smartweed/lady's thumb (*Polygonum spp.*)

- Venation in leaves not parallel
- Flowers are white to pink in color and not grass-like
- Stem fleshy with distinct membrane at leaf nodes
- Usually occurs in disturbed, damp sites

Rebekah D. Wallace, University of Georgia



Steve Dewey, Utah State University



Crabgrass (*Digitaria spp.*)

- Flower/seed head with 2-9 finger-like spikes
- Stem appears somewhat flattened
- Leaves typically longer than stiltgrass, only pointed at the tip
- Hard to pull
- Usually occurs in open, disturbed environments

JAPANESE STILTGRASS

Microstegium vimineum

Leaves well spaced
along stem

Delicate flower
stalks with 1-3
spikes

Silvery, off-center
midrib

Multiple,
sprawling
stems

'Stilt' roots

Thin, weak root
system

