



A Northern Arizona Homeowner's Guide To Identifying and Managing **YELLOW BLUESTEM GRASS**

Common name(s): Yellow bluestem, Turkestan beard grass, King Ranch bluestem

Scientific name: *Bothriochloa ischaemum*

Family: Grass family (Poaceae)

Reasons for concern: This aggressive, rapidly spreading, and persistent species can quickly take over fields and disturbed or unattended areas, easily outcompeting native species, reducing plant diversity and wildlife habitat. Although introduced into the U.S. for forage and erosion control, it is not favored by animals as forage, and it sheds chemicals that make the soil inhospitable for native plants. Yellow bluestem can form huge monocultures and, once established, is extremely difficult to eradicate, making it ready fuel for wildfires. This grass is present in northern Arizona and continues to spread rapidly.



Yellow bluestem grass. Image credit: Max Licher, swbiodiversity.org/seinet

Classification: Non-native. Recently added to Arizona's Noxious Weed list, making eradication a high priority.

Botanical description: Tall, clump-forming, yellow-green clump grass with a reddish-purple flower cluster held above the leaves and stem.

Leaves: Flat or folded, usually smooth. Yellow-green color, mostly at the base of the plant 1" to 10" long, with scattered hairs. Parallel veins.

Stem: Flowering stem up to 4 feet tall. Rounded leaf sheaths surround the base of stem. Slender. Green turning yellow when mature, with very prominent brown to purple nodes. Stems also spread densely underground.

Seed heads: Inflorescence is a silvery, reddish purple. Flower cluster branches are taller than the central stem. Bloom time is late June through July, with seeding time throughout fall. Seed head is shaped like a "turkey foot." Plants produce massive numbers of brown seeds.

Roots: Extremely dense.

Native to: Southern Europe, northern Africa, and Asia. Brought to the U.S. for forage and erosion control. It is classified as an “Old World Bluestem,” in contrast to the Bluestem grasses that are native to North America.

Where it grows: Thrives in many habitats: dry, stony places; fields, pastures, and grasslands; pinyon/juniper populations; and especially along roads.

Life cycle: Perennial

Reproduction: By seeds and underground stems.

Look-alike native plants: Yellow bluestem looks much like some native grasses in northern Arizona, such as Little bluestem (*Schizachyrium scoparium*) and Cane beard grass (*Bothriochloa barbinodis*). The best way to distinguish among them is to look closely at the flower clusters.



Yellow bluestem



Little bluestem



Cane beard grass

Flower of Yellow bluestem has the shape of a panicle, with small stalks that mature from the bottom upwards. The leaves and stems are reddish. Flower of Little Bluestem has the shape of a spike, rather than a panicle. Its flowers also mature from the bottom up, but appear as awns, or white hairs, attached directly to the supporting stalk. Cane beard grass has a more compact panicle that is white and fluffy.

Weedy characteristics: Very difficult to eradicate. Underground stems form a dense sod, which native plants cannot penetrate in order to compete. The plants also shed chemicals that inhibit the growth of native plants.

Control strategies: Never let them go to seed. For small populations, hand pull or dig and bag the plants, wearing gloves. Get all the roots and step down any loose soil. Monitor the site frequently for regrowth. For larger infestations, consult with a professional as repeated applications of herbicide may be necessary. Contact your local extension office for more information, for help with identification, or to report an infestation on public property or along roadsides.

Images:



Foliage. Image credit: Michele Villafranca, Fort Worth Nature Center & Refuge, Bugwood.org



Ligule, where the leaf blade attaches to the stem. Image credit: © Steve Matson, <https://calphotos.berkeley.edu/>



Yellow bluestem blooming. Image credit: Julie Leutzelschwab, USFS, swbiodiversity.org/seinet



Yellow bluestem flower. Image credit: (d) Dr. Amadej Tmkoczy, <https://calphotos.berkeley.edu>



Yellow bluestem seed head. Image credit: Max Licher, swbiodiversity.org/seinet



Turkey foot. Yellow bluestem seed. Image credit: Liz Makings, swbiodiversity.org/seinet



Yellow bluestem grass. Image credit: Bethany DeRango, swbiodiversity.org/seinet



Yellow bluestem grass with seed heads. credit: Julie Luetzelschwab, USFS, swbiodiversity.org/seinet



Yellow bluestem infestation. Image credit: Karan A. Rawlins, U. of Georgia, Bugwood.org

Additional references:

- Yellow Bluestem: An Encroaching Invasive Grass, a Webinar presented by Ashley Hall, Gila County Cooperative Extension
<https://youtu.be/kpyOvvB9UrM>
- Old World Bluestems, Missouri Department of Conservation
<https://mdc.mo.gov/sites/default/files/downloads/OldWorldBluestems.pdf>
- Native or invasive? A Guide to the Bluestem Grasses of Kansas, Kansas Department of Agriculture
https://agriculture.ks.gov/docs/default-source/pp-noxious-weed-control/native-or-invasive.pdf?sfvrsn=756c90c1_0
- Old World Bluestem, Illinois Wildflowers

<https://nazinvasiveplants.org>

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