

Pest Alert

Florida Department of Agriculture and Consumer Services,
Division of Plant Industry

***Chrysopogon aciculatus* – golden false beardgrass, lovegrass, Mackie’s pest, a noxious weed new to the continental United States**

Patti J. Anderson, Patti.Anderson@FreshFromFlorida.com, Botanist, Florida Department of Agriculture and Consumer Services, Division of Plant Industry

INTRODUCTION: The perennial grass, *Chrysopogon aciculatus* (Retz.) Trin. (Gramineae/Poaceae), a federally listed noxious weed, was recently detected in Miami-Dade County by Keith Bradley, a Senior Research Associate of the Institute for Regional Conservation. This grass was found near the Homestead Air Reserve Base and was subsequently mowed and treated with herbicide. Initial surveys of the nearby environs have located no additional outbreaks. The habitat where this grass is usually found is in sunny, dry, exposed areas such as roadsides, lawns and pastures. It is native to tropical Asia, Australia and parts of the Pacific region, but has been widely introduced in other tropical areas of Asia and the Pacific. This plant has not previously been reported to be established in the continental United States, although it is found in Hawaii. It is a serious agricultural and environmental weed, particularly in the Old World tropics, and is included on the Noxious Weed Lists of the USDA and several states, including Florida.

IDENTIFICATION: This perennial grass grows by stolons that spread quickly over the soil or become buried shallowly in the soil. Leafy, sterile, short shoots may grow from the stolons as well as fertile stems 15-25 cm tall with leaf sheaths that can have pale stripes of green and white or darker and lighter green or with hints of purple. The leaf blades are 2-8 cm long, 3-5 mm wide, with scabrous margins (rough edges).

The inflorescence is a panicle, 3-6 cm long, with a red-purple color. The branches of the panicle are whorled and held stiffly upward. The spikelet clusters are 6-8 mm long, and break from the pedicel (flower stalk) along a diagonal ridge covered with golden brown hairs that becomes a needle-like, bearded barb about 3-7 mm long. The seed or grain is about 2 mm long. The barb remains attached to the seed to aid in its spread in fur or on clothing.

SIMILAR SPECIES IN FLORIDA: This grass might be similar to a number of other grasses, depending on the life stage and frequency of mowing where it is found. In flower, this species could appear to be a miniature Johnson grass (*Sorghum halepense* (L.)Pers.), but if the area has been recently mowed, the grass might resemble St. Augustine grass (*Stenotaphrum secundatum* (Walter)Kuntze). One species in this genus, *Chrysopogon pauciflorus* (Chapm.)Benth. ex Vasey, is native to Florida, but can be distinguished by its open panicle inflorescence and flowers with very long awns.

DISTRIBUTION: The grass is usually found in sunny, dry, exposed areas such as roadsides, lawns and pastures. It is native to tropical India and China, and perhaps parts of the Pacific region, but has been widely introduced in other tropical areas of Asia, Australia and the Pacific. This grass has been used as a ground cover or turf grass, in spite of the potential hazard when it is allowed to produce seeds.

ECONOMIC IMPORTANCE: *Chrysopogon aciculatus* has been found as a weed in tea fields, rubber plantations and in other agricultural crops in Asia and the Pacific region. It has the potential to spread quickly as the creeping stolons grow over open areas. The grass can tolerate grazing, mowing, and trampling by animals. This grass can be difficult to eradicate, and therefore costly, if it becomes established. In addition, its barbed seeds can penetrate the flesh of cattle or other farm animals and pets, to cause festering sores leading to veterinary expenses (Barkworth et al. 2007).

DETECTION AND MITIGATION STRATEGIES: This grass is difficult to identify unless flowers are present. When in flower, the grass can be recognized by the combination of short, leafy shoots and a taller sheath with an inflorescence of whorled branches with purple flowers. Control of weedy perennial grasses usually requires the application of herbicides. For information about herbicides, contact your local county extension office or see the University of Florida/IFAS Publication ENH884 <http://edis.ifas.ufl.edu/ep141>.



ADDITIONAL INFORMATION: This species has also known by a number of Latin names, including the following:

Andropogon acicularis Willd.
Andropogon aciculatus Retz.
Andropogon javanicus Steud.
Andropogon subulatus J.Presl
Centrophorum chinense Trin.
Chrysopogon subulatus (J.Presl) Trin. ex Steud.
Chrysopogon trivialis (Lour.) Arn. & Nees
Holcus aciculatus (Retz.) R.Br.
Rhaphis aciculata (Retz.) Honda
Rhaphis javanica Nees
Rhaphis trivialis Lour.
Sorghum aciculatum (Retz.) Kuntze

REFERENCES:

Barkworth, M.E., L.K. Anderton, K.M. Capels, S. Long and M.B. Piep (editors). 2007. *Manual of Grasses for North America*. Utah State University Press, Logan, Utah. 627 p.

http://herbarium.usu.edu/treatments/Chrysopogon.htm#Chrysopogon_aciculatus

http://itp.lucidcentral.org/id/fnw/key/FNW_Grasses/Media/Html/fact_sheets/Chrysopogon_aciculatis.htm

<http://www.fao.org/ag/AGP/AGPC/doc/Gbase/DATA/Pf000203.HTM>

http://www.hear.org/pier/species/chrysopogon_aciculatus.htm

<http://www.kew.org/data/grasses-db/>

<http://www.theplantlist.org/>

All accessed on 8 November 2012



Figure 1. *Chrysopogon aciculatus*, showing its growth habit.
Photography credit: Forest and Kim Starr, Hawaiian Ecosystems at Risk project (HEAR).



Figure 2. *Chrysopogon aciculatus*, partial inflorescence with gloved hand for scale.
Photography credit: Forest and Kim Starr, Hawaiian Ecosystems at Risk project (HEAR).



Figure 3. *Chrysopogon aciculatus*, inflorescence with background of grass leaves.
Photography credit: Sarah Martin, Institute for Regional Conservation (IRC).



Figure 4. *Chrysopogon aciculatus* spikelet (mm scale).
 Photography credit: Patti J. Anderson, DPI.



Figure 5. *Chrysopogon pauciflorus* herbarium specimen of native grass species.
 Photography credit: Institute for Systematic Botany, Atlas of Florida Vascular Plants.