

Proceedings of the Iowa Academy of Science

Volume 94 | Number

Article 5

1987

Pennisetum petiolare, a pseudopetiolate African Grass Adventive in Iowa

Richard W. Pohl
Iowa State University

Copyright ©1987 Iowa Academy of Science, Inc.

Follow this and additional works at: <https://scholarworks.uni.edu/pias>

Recommended Citation

Pohl, Richard W. (1987) "Pennisetum petiolare, a pseudopetiolate African Grass Adventive in Iowa," *Proceedings of the Iowa Academy of Science*, 94(1), 20-21.

Available at: <https://scholarworks.uni.edu/pias/vol94/iss1/5>

This Research is brought to you for free and open access by the Iowa Academy of Science at UNI ScholarWorks. It has been accepted for inclusion in Proceedings of the Iowa Academy of Science by an authorized editor of UNI ScholarWorks. For more information, please contact scholarworks@uni.edu.

Pennisetum petiolare, a pseudopetiolate African Grass Adventive in Iowa¹

RICHARD W. POHL

Department of Botany, Iowa State University, Ames, IA 50011

Pennisetum petiolare, a grass native to the Sudan and Ethiopia and never previously reported from North America, occurred in a lawn in Ames, Iowa. The source of the seed was contaminated Niger thistle (*Guizotia abyssinica*) seed used in a bird feeder directly above the location of the plant. The occurrence of at least 15 other seeds or fruits as contaminants in the sample indicates that Niger thistle seed may serve as a medium for the introduction of weed seed into the United States.

INDEX DESCRIPTORS: *Pennisetum petiolare*, Gramineae, pseudopetiole, weed seed contaminant

The genus *Pennisetum* is widespread in warm climates of both eastern and western hemispheres. A small group of species previously placed in the genus *Beckeropsis* are now included in *Pennisetum* by Clayton and Renvoize (1982). *Pennisetum petiolare* is in this group, which was differentiated on the bases of the axillary panicles and the single involucre bristle beneath each spikelet. *Pennisetum* is a genus of Panicoid grasses close to *Setaria*, *Ixophorus*, and *Setariopsis*. None of the *Beckeropsis* group has ever been reported in the wild from North America, although *P. unisetum* (Nees) Benth. was cultivated in the United States Department of Agriculture Plant Introduction Garden at Glenn Dale, MD. in 1960 (T.R. Soderstrom, pers. commun.).

In October 1984, I found a seedling of *Pennisetum petiolare* (Hochst.) Chiov. growing in my home lawn, immediately below the spot where a bird feeder had been hung during the previous winter. The plant was readily recognizable by its cordate-based pseudopetiolate leaf blades (Fig. 1). I transferred it to the Iowa State University Botany Greenhouse, where it began to flower in early November, 1984. Although the species is nominally annual, the plant was still alive in April 1986 and was at that time blooming.

The Iowa State University Seed Laboratory separated the balance of

my supply of thistle seed, ca. 750 ml, and retrieved a number of contaminant seeds and fruits. I hand-separated these and obtained 16 different kinds. These include a mericarp of a species of Boraginaceae; a species of *Bidens* (Compositae); a spikelet of an *Andropogon*; 5 spikelets of *P. petiolare*; spikelet parts of *Bromus*; a broken spikelet of *Eleusine sp.*; a spikelet part of *Eragrostis sp.*; several spikelets of fertile florets of *Panicum sp.*; fascicles of another species of *Pennisetum*; a single legume seed; numerous small pods of a 2-seeded legume; spiny mericarps of a Malvaceae (possibly *Sida*); seeds of a species of *Plantago* with grooved seeds that gelatinize; achenes of *Polygonum* numerous flat, shiny tan seeds; seeds or fruits, each bearing two basal barbs; and an unidentifiable residue.

While it is very unlikely that a tropical grass such as *Pennisetum petiolare* could become established in the northern United States, it does appear that Niger Thistle seed may be contaminated with other weeds which could be dangerous in the country, and that it may be well to require killing of the seed before permitting import.

ACKNOWLEDGEMENTS

Fig. 1 was drawn by Maria Somoza.

REFERENCES

CLAYTON, W.D., and S.A. RENVOIZE. 1982. Flora of Tropical East Africa, Gramineae, pt. 3:451-898. Balkema. Rotterdam.

¹Journal Paper J-12258 of the Iowa Agriculture and Home Economics Experiment Station, Ames. Proj. 1833.

AN AFRICAN GRASS



Fig. 1. *Pennisetum petiolare*. A. Habit, showing pseudopetiolate leaf blades. B. Two views of a spikelet, with sterile bristle. C. Decumbent plant base. Based on Pohl 14576 (ISC).