THE MILE-A-MINUTE *(Mikania micrantha)*

The mile-a-minute, *Mikania micrantha* Kunth, a vine in the Compositae (Asteraceae) was recently detected in the Redlands area of Miami-Dade County, FL. A dozen or so colonies have been found so far by Keith Bradley of the Institute for Regional Conservation, and Keith expects that more colonies will be found. Most of the populations are small, but a large one, 100 feet square, has been seen as well. In most cases, the plants were growing rampantly. This plant had not previously been reported to be established in the continental United States, although it is native in Puerto Rico. 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. Mr. Bradley kindly supplied DPI with locality data for several populations, and inspectors Steve Beidler and Melba Otero collected material and sent it to me for study. Several herbarium specimens were made.

Two or three species of *Mikania* are native to Florida. *Mikania scandens* (including *M. batatifolia*) is common throughout the state. *Mikania cordifolia* is more common in the southern part of the state. The genus itself contains more than 400 species, and many are confusingly similar. It turns out that *M. scandens* and *M. micrantha* are very closely related and difficult to tell apart. Dr. Walter Holmes of Baylor University, an authority on the genus, initially maintained that the South Florida plant is the native *M. scandens*, but he later changed his mind. Yesterday (Dec. 10) Dr. Harold Robinson, an expert on the Compositae at the Smithsonian Institution, also determined the plant to be the native *M. scandens*. Nevertheless, in the last few days, Rodney Young, a botanist with the USDA made the determination that the plant is *M. micrantha*. I examined specimens of *M. micrantha* in the UF herbarium, including some annotated by Dr. Holmes, and I would concur that the South Florida plants belong to this species.

If experts on the Compositae cannot distinguish these species, I am certain that our inspectors will also have difficulty. I have found some technical characters of the phyllaries that work for me in the laboratory, but the following field characters should also be useful. *Mikania micrantha* will be growing in disturbed areas, will exhibit rampant growth, and has pale green or yellow-green leaves and white flowers. On the other hand, *M. scandens* will be growing mostly in moist, natural areas, will exhibit restrained growth, and has medium green leaves and pinkish flowers. The second native species, *M. cordifolia*, should not present identification problems due to its hairy leaves and large flower heads.

Mikania micrantha is native to Mexico, Central and South America, and the West Indies, but is seldom a weed in those areas. It has become widely naturalized in the Old World, and is problematical in tropical Asia and the Pacific islands, but it appears to be absent from tropical Africa and is not yet a problem in Australia. The plant is a perennial, and it spreads widely by means of wind-blown seeds. As it grows, it roots at the nodes, and even small detached pieces with only a single node can take root and start a new colony. The plant is an important weed of newly planted plantation crops, such as tea, oil palms, coconuts, cacao, and coffee in tropical Asia, but it can be problematical in mature

plantings as well. It grows rampantly, covering the plants with a dense mat of foliage, shading them and even causing breakage. It acts the same in disturbed forest. Photos on the Internet show growth reminiscent of the Old-World climbing fern, *Lygodium microphyllum.*

Because it roots at the nodes, manual removal of *Mikania micrantha* is difficult and time-consuming, but it can be quite effective if used in conjunction with a herbicide. Paraquat, 2,4-D, and gyphosate are commonly used against it in plantation crops in tropical Asia. Several biological agents also appear to be very effective. A strain of the rust *Puccinia spegazzinii* is highly pathogenic and specific to *M. micrantha* in Brazil. It attacks the leaves, petioles and stems, leading to ring-barking and death. Among arthropods, the best control was attained using the thrips species, *Liothrips mikaniae*, which is host specific. "Other species that merit further studies include the eriophiid mite *Acalitus* sp., the seed-feeding weevil *Apion luteirostre*, the flower midge *Neolasioptera* sp., the inflorescence-inhabiting lace bugs *Teleonemia* spp., the cassids *Omoplata* spp., and the weevil *Pseudoderelomus bardiiformis* (taken from the CABI datasheet)."

Mikania micrantha has been found at 10,000 feet in the Bolivian Andes, so it has some cold-tolerance. But I suspect that it would only be a problem in the warmest parts of the United States.

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