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We report leaf feeding, disease occurrence, and associated indigenous herbivore/fungal pathogen communities on the introduced wetland species *Ludwigia hexapetala* at Guntersville Reservoir, AL. Plant populations were sampled on three dates from May to September 2014. A complex of indigenous herbivore and fungal taxa, mostly known from other *Ludwigia* spp., resulted in peak feeding and disease occurrence on 88% and 92% of sampled leaves, respectively. Herbivore damage declined over the growing season from 78 to 21% of sampled leaves, and disease symptom occurrence increased from 0 to 80%. Total leaf damage (percent leaf area) from both herbivory and disease was determined by software image analyses of floating and aerial leaves and reached 14% total reduction in photosynthetic tissues by September 2014. Aerial leaves were more commonly affected by disease symptoms, whereas floating leaves had a greater incidence of herbivore damage. Fourteen insect herbivore and seven fungal taxa were associated with *L. hexapetala* at Guntersville Reservoir. Despite the diverse assemblage of herbivores and fungi associated with *L. hexapetala*, damage was relatively low and the weed continues to persist as a nuisance species at this and other sites in southeastern United States. However, these results along with past surveys and literature review demonstrate the ability of common Ludwigia arthropod herbivores in the United States to host shift between *Ludwigia* spp. This begs the question as to how difficult it will be to locate potential biocontrol agents of *L. hexapetala* outside the United States that will be sufficiently host specific to present little to no risk to native *Ludwigia* spp.