

Hydrilla verticillata is a serious aquatic invasive plant in Florida. This weed is found throughout Florida in freshwaters mainly in the southern and central regions. It is also found in all of the gulf states including Georgia and from Maryland to California. Hydrilla is capable of out-competing native aquatic vegetation. It grows very rapidly asexually from rootstocks, subterranean turions, vegetative buds (turions), and vegetative nodes. Dense surface mats associated with hydrilla infestations cause problems because they hinder navigation and flood control, interfere with recreational activities, and reduce the biodiversity in aquatic ecosystems. According to the Florida Department of Environmental Protection, between 1980 and 2004, approximately \$158 million in government funds was spent managing hydrilla in Florida public waters with non-biological control methods. With the recent discovery of herbicide resistance in hydrilla, there is renewed interest in biological control. Scientists at the University of Florida are undertaking an international effort to search for hydrilla biological control agents. The native range of hydrilla includes large parts of Asia, northern Australia and a few lakes in east/central Africa. Historical evidence suggests that hydrilla arrived in Florida through the aquarium plant trade in the 1950s, and probably came from Sri Lanka. The University of Florida Research & Extension, in collaboration with the University of Miami, is conducting a study of the population genetics of hydrilla, which is believed will help to better determine the origin of Florida hydrilla. Identification of the native origin of Florida hydrilla will be useful for targeting surveys for biological control agents. The purpose of this presentation is to discuss the Extension Agent's role in this genetic survey. The presenter will also describe sampling methodology and the use of genetic sampling in the global search for viable hydrilla biological controls. Preliminary results will be shared.