

**Life History and Aquatic Weed Management.** John D. Madsen, USDA ARS Exotic and Invasive Weed Research Unit, Davis, CA

Under Integrated Pest Management, the goal is to achieve long-term control of the weed population. While this is a laudable goal, a valid question is to ask, what is the population that you should target? What is an individual? For aquatic weed management, the best way to address this issue is to better understand the life cycle and biology of the target plant species. Most aquatic weeds will follow one of three life history patterns: annual, herbaceous perennial, or evergreen perennial. For each of these life history patterns, there are identifiable propagules or stages that can be targeted for management. Management success can be evaluated by monitoring the population of the target propagule. The application of this concept will be reviewed using four species: Waterchestnut (*Trapa natans*), curlyleaf pondweed (*Potamogeton crispus*), flowering rush (*Butomus umbellatus*), and Eurasian watermilfoil (*Myriophyllum spicatum*).