Notes for Power Point: Water Chestnut Intro

Slide	Notes	Additional Notes
1		
2	Plant example from the Hudson River Native to Eurasia Introduced by botanists to Collins Lake in 1884 in Schenectady. They thought it was a beautiful plant that would do nicely in the New World. (They were all-too-correct.) Found in Mohawk River 1920s and spread Habitat is quiet waters	
3	Water chestnut has air bladders, so the main leaves float on the water's surface (see broad leaves iin photo) Reproduces by spiny nuts Forms thick mats which block light penetration to the river bottom (and thus inhibits other plants ability to grow beneath the surface water chestnut mat)	
4	Water chestnut forms thick, dense beds which are difficult or impossible to bring a boat or even kayak through. They also have roots that are very difficult to untangle! Fouls propellers of boats	
5	Aerial photos of the water chestnut invasion at Inbocht Bay through time.	
6	Compare and contrast the growth forms of the native water celery with the invasive water chestnut, which so often replaces it.	
7	Ask students to brainstorm: Why does the DO change so much? The green curve (upper) shows DO measurements within a native water celery bed, while the red curve (lower) shows DO within an invasive water chestnut bed. The relatively straight blue curve in the middle of the graph shows measurements taken from the river's main channel. From the previous lesson: While diurnal cycles have a predictably strong influence on dissolved oxygen levels within submerged native water celery (Vallisneria) beds, they do not have much influence on water chestnut beds, where very little light penetrates the water. The great majority of the oxygen produced by the floating leaves enters the atmosphere rather than being dissolved into the water. Instead, tides have a strong influence on the oxygen exchange in the water beneath the floating plant mats.	