Development and Evaluation of an Environmental DNA (eDNA) Protocol to Monitor Wild Delta Smelt

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Environmental DNA (eDNA) sampling is a suite of techniques where a sample from the environment, such as water or soil is taken for the purpose of inferring the presence of a taxon or taxa of interest. It is an effective sampling method when organisms are hard to detect or visually identify. There are several additional advantages including the limited disturbance to an organism to detect it with eDNA. I will describe the various eDNA methods being utilized today (for example biodiversity sampling and detection of invasive species), the ways that eDNA is complementary to traditional surveys, review the ways that eDNA has been applied to date, and discuss the caveats.