Deven Benavides

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The Giant Garter Snake (Thamnophis Gigas) is a semi aquatic snake that can be found in California's Central and Sacramento Valleys.The Central Valley is located between the Coast Ranges on the west and the Sierra Nevada Mountains on the east and averages about 55 miles in width. The Central Valley of California, as described by E. H. Hammond (1970), encompasses about 13 percent (21 thousand square miles) of the state's total area. T.Gigas is currently listed as a vulnerable species and has suffered massive habitat loss in the past two centuries. It hibernates in large dens in large groups to avoid frost and cold weather. Little is known about the community relationships of T. gigas. Giant Garter Snakes commonly coexist with Valley Garter Snakes (T. sirtalis fitchi); all sites at which T. gigas was observed also were occupied by T. sirtalis fitchi in the southern Sacramento Valley (Hansen, 1986).The snakes diet consist mainly of small fish and insects. The snake has suffered massive habitat destruction since agriculture and urbanization became widespread in the central valley.

The USGS in conjunction with the U.S Fish and Wildlife service is awarding a 50 million dollar grant to reclaim roughly 2000 acres of wetland habitat in the mendota slew. Despite more than ninety-three percent of its historical marsh habitat being lost by the mid-1980s (Frayer and others, 1989; Garone, 2007; Huber and others, 2010) Habitat Loss has continued and restoration efforts have been marginal support for the struggling

species. Several organizations in the private sector have preserved wetland habitat, with government subsidies in some cases. One of these organizations is the Meyers water bank and wildlife preserve.

The term wetland habitat covers a large amount of different systems, which explains the numerous classes of wetland. Some Ocean systems are considered wetlands such as coral reefs and estuaries *(Cowardin, Carter, Golet and LaRoe) (1979)*. When we think of wetland, we generally think of riverine systems, which consist of riparian vegetation surrounding running water. but that is one of five classifications of wetlands. The wetland area where the project teams collected data was mostly open Scrub-Shrub Wetlands, which represent a successional stage leading to Forested Wetland. They occur only in the Estuarine and Palustrine Systems, but are one of the most widespread Classes in the U.S. (Shaw and Fredine 1956) Many biologists have suggested that all the wetlands occurring on the river floodplain should be a part of the Riverine System because they consider their presence to be the result of river flooding. However these are still classified separately. Palustrine systems are also called “marshes” or “bogs” these are systems where stagnant water lies still for at least the growing season of the year. But some of these systems are flooded year round. These Palustrine systems are generally where California as a whole has lost 91% of it’s wetland ecosystems since 1850, this is due to the use of open space as orchard or other agricultural purposes, especially in the central valley. in conjunction with widespread urbanization. Population has also grown, there are currently 405 times more people in california now than there was in 1850.

The rivers of the California Central Valley historically flooded in winter and spread over broad expanses of the Valley floor and Delta creating vast seasonal wetlands estimated to be about four million acres in the 1850's (Denn is, et al. 1984). Before widespread agricultural development in the late 1800's, most of the valley floor was made up of grassland. It is estimated there was approximately 1,618,000 Hectares of grassland in the Central Valley. To date, The Wetlands Reserve program has restored more than 26,700 Hectares of wetland habitat in the Central Valley. This is drastically less than was originally present pre-modernization. There were an estimated 4 million acres of wetland in 1850 on the valley floor, and in 1939 the habitat had been lowered to around 700,000 acres. The Giant Garter Snake as a species has lost 98 percent of its habitat as a species because of habitat loss directly related to Human activity and land usage.

The research group at CART visited the confluence the Fresno Slough and San Joaquin River meet. The teams established a transect to conduct prey/predator surveys, and marked gps points to create a high resolution map of the survey areas. The basis of all research was whether or not the wetland could support Giant Garter Snake specimens. Game cameras were set up to find out what nocturnal animals were making use of the survey area. There were obvious habitat changes from grassland, to scrub-shrub, and then to lacustrine wetland.

Works cited

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