Nature

Saving the Jumping Frog

This article is about the recent draining of the 30 acres of polishing wetlands at Ellis Creek, to suppress the Bullfrog (Rana catesbeiana) population and keep it from predating upon the much smaller California Red-legged Frog (Rana draytonii) – for short, the "CRLF".

Biologists agree the CRLF is the amphibian Mark Twain immortalized in the Celebrated Jumping Frog of Calaveras County. Times have been tough for this frog (which measures from 1.5 – 5") since the 1800s and California's native frog has lost 90% of its historic population. It is now an endangered species.

You will not see a photo of the CRLF on this page as I have not personally seen it on the 260 acres of the Ellis Creek Water Recycling Facility. Prior to the purchase of the property by Petaluma, it was observed by biologists, especially around the creek, however. In 2002, the United States Fish and Wildlife Service (USFWS) established the "Red Legged Frog Recovery Plan". Among other things it requires the city to annually drain the polishing wetlands to control the non-native Bullfrog population. Draining the ponds breaks the bullfrog reproductive cycle. Failure to implement the annual draining would be a violation under the Endangered Species Act and subject Petaluma to federal enforcement actions.

It is difficult to entirely rid the ponds of Bullfrog as adults can bury themselves in the mud for months to await water's return; however, egg masses and tadpoles are vulnerable. During the draining project, which started in November and ended in early January, over 50 tadpoles were removed. Countless others were gobbled down by egrets when the water level dropped to a couple of inches. Managing the Bullfrog population should discourage the species from moving to Ellis Creek and competing with and attacking the CRLF population there.

During the draining process, the city also removed invasive weed such as Aquatic Primrose (Ludwigia peploisdes), Prickly Oxtongue (Helminthotheca echioides) and managed the Cattail population by cutting them back significantly. Figure 1. shows work on "Pond A".

Now, I am not a biologist but primarily a "birder", and this project did impact the birdlife in the ponds. They are stocked with Mosquito Fish (Gambusia affinis) which devour mosquito larvae but also serve as food for birds and waterfowl. I am not certain the fish population is back yet to what it was. Pied-billed Grebe, egrets and many of the diving migratory ducks enjoy eating these small fish. Certain species, such as the Common Moorhen, also seem to have given up on the ponds since the project started, although they nested there last spring. Hopefully they will return as they no longer nest at Shollenberger Park.

With every challenge there is an opportunity. Normally we do not see shorebirds in the ponds since they lack muddy shoulders. When drained they resulted in acres of mud with countless aquatic invertebrates and other sources of protein. Some of the results were truly startling. Normally you are lucky if you see one or two Wilson's Snipe along the muddy shores of local ponds and streams. Upwards of 200 showed up when Pond B was drained! The snipe is another celebrated bird. How many of us, as children, were fooled into going on a snipe hunt? Well, you couldn't hunt them at Pond B but birders from all around were astounded. Figure 2 shows five Wilson's Snipe. How did the word get around to the snipe population within 24 hours?

The ponds were drained sequentially to lessen the impact on the wildlife. The snipe, however, only found conditions propitious on drained Pond B and they all left when it was refilled and Pond C drained. That pond seemed to offer the most tadpole food for egrets, and great conditions for thousands of smaller shorebird. Figure 3. shows just a sample of them.

In early January the project ended and the polishing ponds were all refilled. Birdlife was not back to normal yet, but new opportunities had arisen as rain was starting to fill the ephemeral pond next to the entrance to the facility and shorebirds and dabbling migratory ducks were now feasting there.

The annual draining of the ponds is costly to the city and some animal rights people were concerned about killing Bullfrog. California annually imports over two million Bullfrog (and thousands of non-native Red-eared Slider turtles) for human food consumption. Now, the California Fish and Game Commission is proposing a regulatory ban on the importation of live frogs and turtles for food. These regulations are being introduced this month. If you want to support these regulations, I suggest you contact John Carlson, Executive Director, State Fish and Game Commission at fgc@fgc.ca.gov .

Figure 1. Workers remove excess Cattails during the draining of Pond A at Ellis Creek

A Day at the Park

Story and Photos By Norris (Bob) Dyer

Figure 2. Five Wilson's Snipe, among several hundred, enjoying drained Pond B

Figure 3. A Greater Yellowlegs (center) and smaller Least Sandpipers feed in drained Pond C