

Streamwatch

Peak Flows, Bottomland Channels, and Willow Flycatchers

by Greg Reis

As reported in the Summer 2004 *Newsletter*, Rush Creek was given a 380 cubic feet per second (cfs) peak flow this year. While DWP engineers focused their attention on the Mono Gate One Return Ditch (see photo page 17), the testing of which was the purpose of the flow, scientists and others involved in the stream restoration were looking at the flow's effects on the natural stream between the ditch and Mono Lake.

Two days after June's Mono Basin Bird Chautauqua and ten days after the peak, when the flow was down to 100 cfs, the Mono Lake Committee took some scientists on a tour of some channels in the Rush Creek bottomlands. These channels were ordered for rewatering by the State Water Resources Control Board, however some parties are considering petitioning the Water Board for a change in the order and this year's high flows provided more

information for that debate.

While there, we encountered a jeep, then a pair of sandals, and then Chris McCreedy himself, who is studying Willow Flycatchers with PRBO Conservation Science. He gave us an impromptu talk on the Willow Flycatchers and tagged along on the rest of our tour, sharing his observations of where the water was during the peak flow. While the peak flow did flood many areas and may cause a response in riparian vegetation, a major reason for rewatering some channels is to create ponded waterfowl habitat, which will not occur in the fall migration season unless construction is undertaken.

Some areas don't look so good at all, such as the Channel 8 area, which water seeped into for the first time (following construction) this year. The Mono Lake Committee is monitoring newly installed piezometers in this area, where many

cottonwoods are dying back and have a similar look as trees in the Mill Creek bottomlands.

There wasn't time to visit the Channel 13 Complex, which dried out this year as a result of incision taking place in Channel 10. Chris McCreedy did take me to this area earlier in the spring, since it has the densest Willow Flycatcher nesting territories, and the cottonwoods and rose were dying back and had smaller leaves. The lack of cover increased predation of Yellow Warblers, however the Willow Flycatchers seemed to do okay this summer.

Lee Vining Creek doesn't seem to have these dying-back areas, and as Rush Creek begins getting peak restoration flows in the next few years, we will see if these areas disappear on Rush Creek as well. ❖

Greg Reis is the Committee's Information Specialist. He just planted 34 species of native plants in his yard.

Lakewatch

Thousands of Species Live in Mono Lake; Lake Level Continues to Fall

by Greg Reis

When people ask about what lives in Mono Lake, they are usually thinking of multicellular organisms: Brine Shrimp, Alkali Flies, Rotifers, and a nematode.

However, Mono Lake contains more viruses than possibly any other lake, and thousands of species of prokaryotic organisms such as bacteria: the hosts for most of those harmless viruses. Of the more complex single-celled organisms with organelles, the eukaryotes, there are maybe 100 species of protozoans and algae—far fewer than in freshwater lakes. The first protozoan found in Mono Lake

was in the genus *Frontonia*, found by David Mason in the 1960s. Virtually no research occurred on these organisms until last year, when Lloyd Davidson from Loyola and Northwestern Universities began looking for them with help from Bob Jellison and a grant from the Mono Lake Microbial Observatory. His most intriguing discovery has been millions of heliozoans in February of 2004, which may have a significant role in the food chain.

In the macro world, fascinating things can be seen as well. Due to a warm spring, there was a drastic shrimp die-off and diatom bloom at the end of August. This was caused in part by a large and crowded first generation producing a small live second generation. Luckily for the Eared Grebes, just arriving now, shrimp numbers rebounded somewhat in September—their

algae-grazing making the water a little less murky.

The lake is now at 6381 feet above sea level. The last time it was this low was March 1997. This is a four foot drop from July 1999, when it was the highest it has reached in 30 years. The hydrologic model predicts it will drop about half a foot by December and return to near this elevation by next April, resulting in a net .4 foot drop for the runoff year. In recent years the model has underpredicted the fluctuations of the lake, so it is likely that the lake will fall even lower.

If next year is dry, it is likely that Mono Lake will fall below 6380 feet above sea level. This would reduce the amount of water DWP is allowed to export from the Mono Basin from 16,000 acre-feet to 4,500 acre-feet per year. ❖

6417

Prediversion lake level, 1941

6392

Target lake level

6381

Current lake level

6372

Historic low, 1982