

# Research at the James: *Mountain Yellow-Legged frog*

## *Multiagency/organization effort*

Records dating back from 1908 demonstrate that the mountain yellow-legged frog (*Rana muscosa*) was a common inhabitant of the mountain streams of the San Jacinto Mountains. However, with the introduction of nonnative trout, the frogs have been eliminated from many of the streams and lakes. Additional factors contributing to the decline are reduced habitat, habitat alteration, stream diversions, and more recently, the occurrence of the chytrid fungus, which causes the deadly fungal disease chytridiomycosis (<http://www.my1frog.info/threats/disease.html>). The decline of the yellow-legged frog precipitated efforts to reverse this trend, much of that work being spearheaded by the U.S. Geological Survey (USGS). The USGS has been surveying for mountain yellow-legged frogs since the late 90's and have identified few extant populations across southern California. The San Diego Zoo's Institute for Conservation Research (<http://blogs.sandiegozoo.org/tag/mountain-yellow-legged-frogs/>) has been an integral part of the conservation efforts of the frogs with their captive breeding program. Frogs were brought into the zoo's facilities and were successfully mated. From those matings, egg masses, tadpoles and juveniles became available for reintroduction efforts at sites across the San Jacinto Mountains, including the James Reserve.



At the James Reserve in 2010, 2011, and 2013, egg masses, tadpoles, and juvenile frogs were released into Indian Creek. Since that time, field teams from USGS and the Zoo have continued to closely monitor the progress of reintroduced frogs. Thus far, the frogs appear to be thriving. Though there is some concern regarding the possible threat of the chytrid fungus, which has appeared in reintroduced areas, there is no evidence of it harming the frog population at the James. One possible reason that the Indian Creek frogs are healthy is that a naturally occurring bacteria might be providing the frogs resistance to the fungus, and if that is the case, it is hoped that the frog population in Indian Creek will grow and once again visitors to the James will be able to easily spot frogs in Indian Creek.



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