



Wildlife Survey & Photo Service

2443 Fair Oaks Blvd. # 209 • Sacramento, CA 95825 • (916) 747-8537

REPORT 4753

Pleasants Cr. Watershed



Miller Creek at Martell Ranch. At an elevation of 320 feet, this remarkable intermittent waterway supports a healthy community of "0" rated BMI species.



Pleasants Creek at Bill Nichols Property. The invertebrate community is generally limited to snails, beetles, and mosquitos.



Lower Putah Creek is capable of supporting a wealth of sensitive BMIs with the elimination of sediment loading and prudent gravel injection.

March 20, 2014

To: Richard Marovich
Putah Creek Streamkeeper

From: Ken W. Davis
Aquatic biologist
Wildlife Survey & Photo Service

Subject: BMI Monitoring in Putah Creek Drainage
(Pleasants Creek Segment)

Report:

Recent Benthic Macroinvertebrate surveys in the Pleasants Creek watershed continue to demonstrate the wealth of high-quality invertebrates that thrive in nearby intermittent tributaries. Surveys in 2008 determined that Miller Creek is the probable source of the invertebrate community that populated the Lower Putah Creek / Dry Creek Restoration area until sediment filled the interstitial spaces in the cobble.

Pleasants Creek is devoid of all common BMIs found in upstream tributaries due to high sediment loading and lack of benthic structure.

Note that in 2012, I collected a significant number of *Caenis* sp., a small mayfly, in several Pleasants Creek isolation ponds. Two of the ponds appeared to have springs or some sort of subsurface flow. *Caenis* is of interest because the population in Lower Putah Creek disappeared after the discovery of mudsnails. *Caenis* is highly tolerant of organic pollution and has a Tolerance Rating of 7.



I provided below a chart of BMI monitoring per quarter for the Putah Creek / Pleasants Creek watershed and information about the "Invertebrates of Interest."

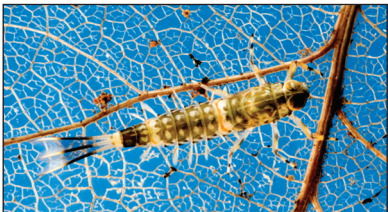

Ken W. Davis

Ken W. Davis, Aquatic Biologist



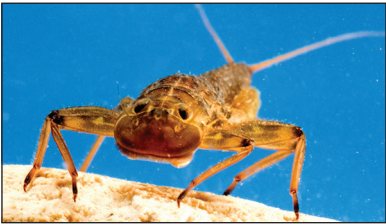




BMI Monitoring History - Putah Creek / Pleasants Creek Watershed

Year / Quarter	Miller Creek	Pleasants Creek	Lower Putah (Pickerel)	Lower Putah (Morales)	Comments
Prior to 2012	2009 - Q1	-	All Quarters	All Quarters	
2012 - Q1	collected	-	collected	collected	
2012 - Q2	collected	-	collected	collected	
2012 - Q3	-	collected	collected	collected	<i>Caenis</i> in Pleasants Creek
2012 - Q4	-	Limited water	collected	collected	
2013 - Q1	collected	collected	collected	collected	
2013 - Q2	collected	-	collected	collected	
2013 - Q3	-	-	collected	collected	
2013 - Q4	-	limited water	collected	collected	
2014 - Q1	collected	collected	collected	collected	
2014 - Q2	planned	planned	planned	planned	Flows will increase (rain)

Benthic Macroinvertebrates of Interest in Pleasants Creek Watershed

BMI Image	Species	BMI Rating	Miller Creek	Pleasants Creek	Lower Putah Creek	Comment
	<i>Ameletus sp.</i>	0	Very Common	Never collected	Very Rare	Miller Creek: Recent survey, <i>Ameletus</i> was 52% of total collection. (43/82)
	<i>Corydalus cornutus</i> "Hellgrammite"	0	Common	Never collected	Never collected	Common in most intermittent waterways that have freestone condition.



Images	Species	BMI Rating	Miller Creek	Pleasants Creek	Lower Putah Creek	Comments
	<i>Epeorus sp.</i>	0	Common	Never collected	Rare	Population has increased in InterDam Reach of Putah Creek upstream of Pleasants Creek Confluence
	<i>Drunella coloradensis</i>	0	Common	Never collected	Very Rare	Common in many Intermittent Putah Creek tributaries
	<i>Ironodes sp.</i>	0	Common (January)	Never collected	Never collected	Large mayfly that is somewhat common in Intermittent tributaries.
	<i>Leptophlebia</i>	2	Common	Never collected	Very Rare	Paraleptophlebia is more common in Lower Putah Creek.
	<i>Cinygmula sp.</i>	2	Common	Never collected	Never collected	
	<i>Hesperoperla pacifica</i>	2	Unusual	Never collected	Very Rare	
	<i>Calineuria californica</i>	2	Common	Never collected	Very Rare	




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Images	Species	BMI Rating	Miller Creek	Pleasants Creek	Lower Putah Creek	Comments
	<i>Baumannella alameda</i>	2	Common	Never collected	Never Collected	

Submitted via e-mail March 27, 2014



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