HS2 Learning Legacy

HS2 Learning Legacy supporting document

		Month and eDNA capture method														
Pond	Apr		Мау		Jun		Jul			Aug		Sep		Oct		Notes
	EP	F	EP	F	EP	F	EP	F	EP	F	EP	F		EP	F	
1																No disagreement between eDNA capture methods.
2																No disagreement between eDNA capture methods.
3																Filtration kit tested positive for inhibition in September,
																thus result was inconclusive as inhibitors could be
																responsible for non-detection of GCN DNA.
4						1										Positive for GCN (low eDNA score) using filtration kit in June
																only. Filtration kit tested positive for inhibition in
																September, thus result was inconclusive as inhibitors could
																be responsible for non-detection of GCN DNA.
5	1				1											Positive for GCN (low eDNA scores) with ethanol
																precipitation kits in April and June only. GCN detection wit
																filtration kits also inconsistent albeit high eDNA scores
																observed in-season and early out-of-season.
6	1															Positive for GCN (low eDNA scores) with ethanol
																precipitation kit in April only. GCN detection with filtration
																kits consistent until August.
7		12														Positive for GCN with ethanol precipitation kits in May and
																July only, with low eDNA score in July. GCN detection with
																filtration kits consistent until August.
8		1					7									Positive for GCN with ethanol precipitation kits in May and
																July only, with low eDNA score in May. GCN detection with
																filtration kits consistent until September, excluding
	_															negative result in June.
9		7														Negative for GCN with ethanol precipitation kit in April only
																otherwise GCN detection with both kit types consistent
													_			from April to July.
10	9						4		1							Negative for GCN with filtration kit when ethanol
																precipitation kit positive in July only. GCN detection

Table 1. GCN status of ponds surveyed from April to October using ethanol precipitation (EP) kits and filtration (F) kits. Cells are shaded according to kit result (navy = negative, turquoise = positive, grey = inconclusive), and white cells represent months where a pond was not surveyed due to drying out and/or health and safety concerns. Numbers in turquoise cells indicate eDNA scores for positive kits.

Learning Legacy Paper - Environmental DNA surveys for great crested newts - time for regulatory changes?



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						Month	and eD								
Pond	Ap			/lay		Jun		Jul		Aug		Sep		Oct	Notes
	EP	F	EP	F	EP	F	EP	F	EP	F	EP	F	EP	F	
															typically stronger for in-season months compared to out-of-
															season months.
11	2														Negative for GCN with filtration kit when ethanol
															precipitation kit positive in September only. Strong GCN
															detection in all months, except October.
12	6														Perfect agreement between kit types from April to
															September. Strong GCN detection in all months, except
												_			October.
13	12														Negative for GCN with filtration kit when ethanol
															precipitation kit positive in September only. Strong GCN
									_						detection in all months, except October.
14	2	8					11		11						Negative for GCN with filtration kit when ethanol
															precipitation kit positive in July only. Strong GCN detection
															from April to August.
15											10				Negative for GCN with ethanol precipitation kits in April and
															June, otherwise GCN detection with both kit types
															consistent from April to September.
16	12		12				12		7						Negative for GCN with filtration kits in April, July and
															August. Strong GCN detection from April to August.
17		12													Negative for GCN with ethanol precipitation kit in April.
18				1											Negative for GCN with ethanol precipitation kit in May.
19	2	9													Positive with both kit types in April.
20	1											5			Negative for GCN with ethanol precipitation kits in June and
															September, otherwise GCN detection with both kit types
			_												consistent from April to October.
21	3	12		12	12	12									Negative for GCN with ethanol precipitation kit in May.
22	1		8												Perfect agreement between kit types from April to August.
															GCN detection typically stronger for in-season months
															compared to out-of-season months.
23		9	10	12											Negative for GCN with ethanol precipitation kit in April.



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						Month a	and eD	Notes							
Pond	Apr		Мау		Jun		Jul		Aug		Sep		Oct		
	EP	F	EP	F	EP	F	EP	F	EP	F	EP	F	EP	F	
24														2	Positive for GCN with filtration kit in October.
25							12	12	12	12	3	6		2	Negative for GCN with ethanol precipitation kit in October.