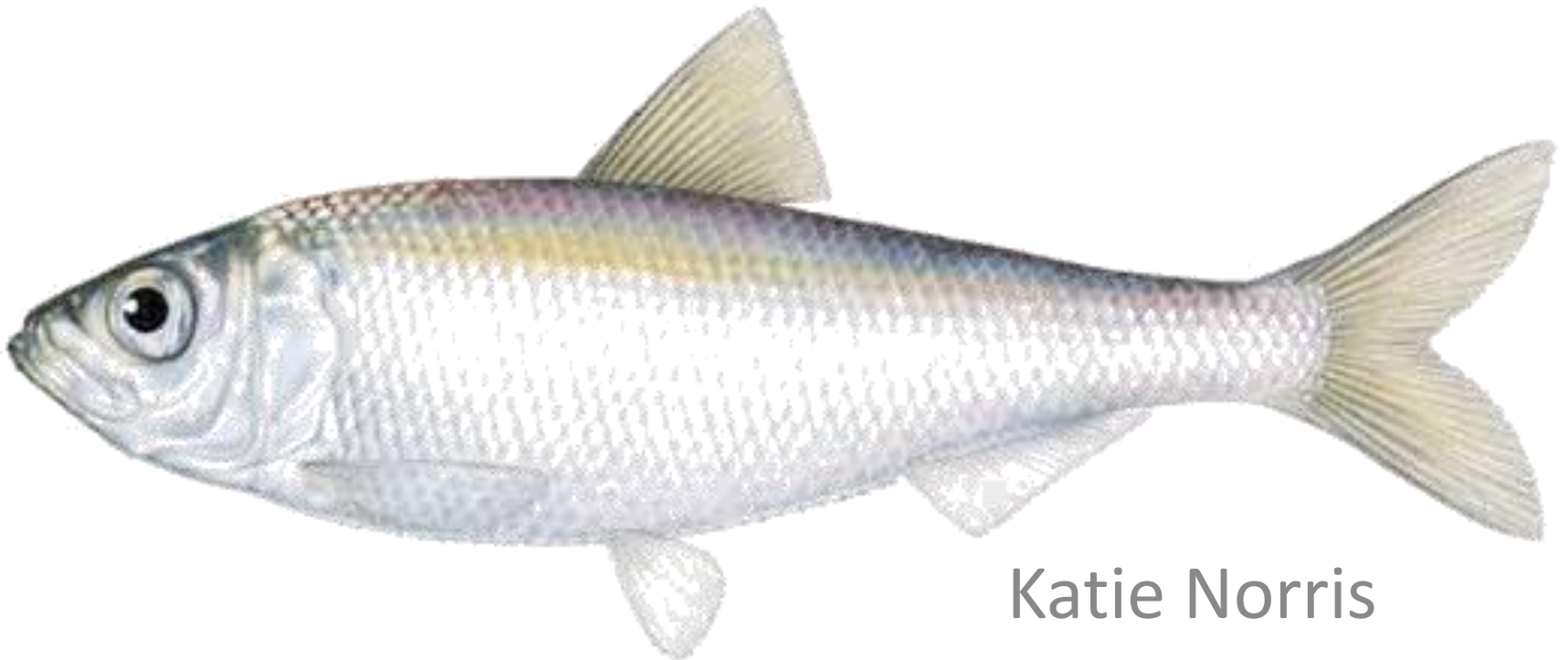


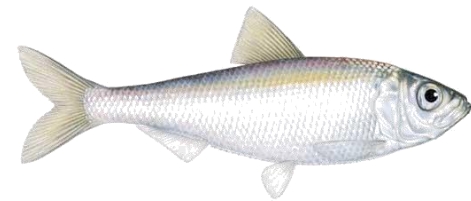
Tracking the influence of
anadromous alewives on Maine
lakes and streams using nutrient
limitation assays



Katie Norris

Hypotheses

- Anadromous alewives bring a nutrient subsidy to freshwater streams and lakes.
 - Nutrient limitation will be relaxed in oligotrophic freshwater systems
 - Higher density alewife runs will cause a greater relaxation of nutrient limitation
 - A system without alewives will exhibit no change in nutrient limitation



Methods

- Nutrient Limitation Assays
 - 4 Treatments: Control, +N, +P, +N+P
 - Measure chlorophyll a and ash-free dry mass
- Lakes: 1 Liter bags
- Streams: Nutrient Diffusing Substrates
- Before, During, After alewife runs

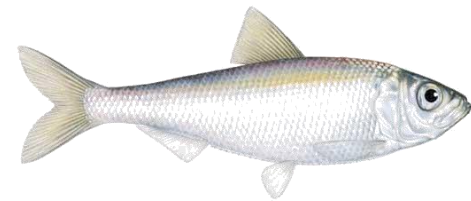


Photos Courtesy of Madeleine Mineau

Experimental Sites

- 10 Freshwater Systems Total
 - 5 lake/stream systems with alewife runs
 - 5 lake/stream systems without alewife runs
- Help Needed!
 - Run notification
 - Run counts
 - Access/Stocking

Thank You!



MIDAS	Lake Name	Size (acres)	Mean Depth (Ft)	Max Depth (ft)	TP ppb	Alewife	Region
4614	Somes Pond	104		25	13	Y	Mount Desert
4662	Wight Pond	135		21	13	Y	Bucksport/Brooksville
4378	Great Pond	233	12	24	12	Y	Old Town
5684	Round Pond	250		37	16	Y	Camden
4630	Seal Cove Pond	283		44	6	Y	Mount Desert
5690	North Pond	338		41	17	Y	Camden
4822	Chickawaukie Pond	352		33	14	Y	Camden
4342	Upper Patten Pond	361		32	10	Y	Ellsworth
4848	Pitcher Pond	371		38	9	Y	Belfast
4844	Tilden Pond	383		11	10	Y	Belfast
2286	Hermon Pond	462	10	17	31	Y	Hampden
4466	Jones Pond	467		48	?	Y	Scoodic Point
4282	Fields Pond	518	13	31	17	Y	Brewer
5686	Seven Tree Pond	523		45	14	Y	Camden
4388	Flanders Pond	537		32	7	Y	NE of Ellsworth
5716	South Pond	548		18	?	Y	Rockland
4894	Washington Pond	551		36	6	Y	W of Camden
5540	Silver Lake	682		33	13	N	Bucksport
4640	Walker Pond	693	30	47	7	Y	Brooksville
4432	Spring River Lake	704		28	?	Y	NE of Ellsworth
4344	Lower Patten Pond	741		87	4	Y	Ellsworth
4300	Phillips Lake	859	40	98	6	Y	Brewer-Ellsworth
4622	Long Pond	897		113	4	Y	Mount Desert
4284	Brewer Lake	958	26	48	9	N	Brewer
4336	Alamoosook Lake	997	16	28	9	Y	Bucksport
4412	Donnell Pond	1120		119	5	Y	NE of Ellsworth
5464	Big Indian Pond	1144	25	28	11	N	Pittsfield
4278	Chemo Pond	1223	13	24	25	N	Eddington
4852	Megunticook Lake	1328	23	64	10	N	Camden
5492	Swan Lake	1388	34	87	6	N	Belfast
4352	Beech Hill Pond	1422	44	104	5	N	Ellsworth
5704	Pemaquid Pond	1537	20	61	10	Y	Damariscotta
4340	Toddy Pond	2408	27	122	5	Y	Bucksport
4328	Branch Lake	2942	39	124	4	N	Ellsworth