BIOLOGICAL CHARACTERISTICS OF BLACK BASS POPULATIONS IN NORTHEASTERN UNITED STATES AND SOUTHEASTERN CANADA

Compiled for NE Divsion AFS Warmwater Workshop:

"Managing Black Bass in Northern Waters"

October 5-6, 1993
Alexandria Bay, NY

LIST OF TABLES

Table 1. Mean backcalculated length (mm) at age for smallmouth bass from selected waters in northeastern United States.

State	Water	Age 1	2	3	4	5	6	7	8	9	10	11	12	13
Massachusetts	Singeltary Lake	81	122	174	237	278	315	374						
Maine	Adroscoggin Lake	67	130	196	269	327	375	414	430	459	438			
	Annabessacook Lake	72	130	194	262	319	359	383	416	438	444			
	Big Lake	62	120	174	226	256	296	323	343	347				
	Carlton Pond	64	133	207	270	318	356	379	402	414	424	437		
	Cathance Lake	61	111	155	197	220	255	282	297	294				
	Damariscotta Lake	65	130	192	249	323	341	369	400					
	Grand Falls Flowage	73	149	208	269	307	340	368	411					
	Great Pond	73	137	183	206	247	285	319	353	406	432			
	Hatcase Pond	60	112	161	218	269	320	332						
	Kennebec River	77	158	220	282	363	400							
	Nicatous Lake	69	141	217	284	332	360	396	429	439	442			
	Penny Pond	57	94	142	185	216	238	258	273	284				
	Pocomoonshine Lake	65	127	192	256	293	338	378						
	Sandy River	81	154	210	266	304								
	South Branch Lake	62	129	188	261	318	358	394	417	434	453	473	488	517
	St. Croix River (lower)	78	154	223	271	312	342	398	381					
	West Grand Lake	62	123	176	219	263	300	327	340	403	419			
	Woodland Flowage	67	128	186	230	266	292	316						
Maine	All waters	68	131	190	246	292	327	352	376	392	436	455	488	517
New York	Cassadaga Lakes (1989)	95	161	221	269	331	342							
	Cuba Lake (1982)	65	138	208	267	310	363	429	455	472				
	Cuba Lake (1985)	93	158	210	262	319	361	394	423					
	Delaware River	94	168	236	284	335	376	401	424	437				
	Findley Lake (1989)	90	156	207	282	341	384	409	423	439				
	Oneida Lake	99	175	249	312	343	373	399	417	424	434			
	Pepacton Reservoir (1986)	107	165	226	277	328	363							
	Pepacton Reservoir (1991)	81	145	206	264	307	320							
	Tomhannock Reservoir	99	191	269	323	353	389							
New York	All waters	91	162	226	282	330	363	406	428	443	434			

Table 2. Mean backcalculated length (mm) at age for largemouth bass from selected waters in northeastern United States.

State	Water	Age														
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Connecticut	Alexander Lake	89	174	241	283	321	349	379	385	434	444	455	467			
	Amos Lake	79	155	230	302	360	401	432	455	483	501	512	546	565		
	Ashland Pond	90	195	269	315	361	393	424	445	466	489	506	518	523	545	554
	Aspinook Pond	100	212	286	334	360										
	Avery Pond	95	196	269	324	370	406	438	465	503	520	538	553	560		
	Ball Pond	76	133	190	252	309	360	400	433	459	478	494	507			
	Bantam Lake	91	185	264	331	375	407	443	481	488	488	493				
	Barkhamstead Reservoir	87	209	297	332	368	383									
	Barshan Lake	107	219	297	348	385	411	464	483	503	539	549	556	564	572	
	Batterson Park Pond	111	218	298	367	406	430	442	458	475						
	Beach Pond	82	164	246	329	378	421	451	477	500	511					
	Bethany Lake	97	240	313	370	400										
	Bigelow Pond	80	188	256	295	350	396	431	453	471	487	502	511	515		
	Billings Lake	78	154	237	303	337	379	410	431	440						
	Black Pond	82	190	275	325	367	398	446	462	484	497	510	526	536		
	Broad Brook Reservoir	108	224	306	367	416	443	455	465	488	493	508				
	Candlewood Lake	84	172	251	321	370	400	430	442	466	469	481	477	487	500	
	Chamberlain Lake	87	184	259	304	352	390	425	406							
	Chapmans Pond	131	265	335	375	403	425	442	461	488	496					
	Congamond Lake	132	255	371	431											
	Connecticut River (Enfield)	113	207	286	342	372	397	423	456	445						
	Connecticut River (Haddam)	169	300	378	418	495	505	519	529							
	Connecticut River (Hartford)	115	235													
	Crow Point Cove	128	231	304	332	392	445									
	Crystal Lake	73	155	243	314	353	383	401	417	437	454	476	492	500	513	
	Dog Pond	81	198	278	329	362	390	411	437	449	461					
	East Twin Lake	77	183	262	302	344	379	404	431	453	464	469	479			
	Eaton Reservoir	79	200	316	370	400	424	442	460	494						
	Glasgo Pond	87	204	288	344	384	398	408	475							
	Gorton Pond	92	210	303	358	393	406	442								
	Halls Pond	79	163	233	285	327	370	404	439	475						
	Hamburg Cove	137	246	327	380	417	441	457	469	483	488					
	Hammonassett Lake	102	239	311	367	405	433	456	482	531	543					
	Highland Lake	108	201	276	344	374	400	428	449	472	517	525	542			
	Keeney Cove	127	205	282	316	358										
	Lake Gaillard	124	292	424	449	472	479									
	Lake Hayward	107	221	289	340	363	337									
	Lake Housatonic	125	207	260	300	337	369	392	416	428	474	491	505	519		
	Lake Lillinonah	130	246	315	365	402	432	459	488	504	488					
	Lake of Isles	82	191	274	326	359	387	427	455	473	496	516	529			
	Lake Quassapaug	85	167	259	330	358	410	427	449	464	515	525				
	Lake Quonnipaug	80	146	216	278	340	385	419	461	489	509	532	530			
	Lake Saltonstall	94	201	291	354	411	447	473	495	511	522	542	549			

Table 2. Mean backcalculated length (mm) at age for largemouth bass from selected waters in northeastern United States.

State	Water	Age 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Massachusetts	Congomond Lakes	75	118	162	200	242	277	308	334	361	394	429				
	East Brimfiled Reservoir	76	149	209	260	287	312	369								
	John's Pond	75	157	239	288	321	345	373								
	Laurel Lake	68	132	191	239	270	318	347	379	420						
	Manchaug Pond	77	152	220	273	324	365	374								
	Singeltary Lake	80	132	185	235	300	338	392								
Massachusetts	Unweighted mean	75	140	201	249	291	326	361	357	391	394	429				
Maine	Androscoggin Lake	83	199	280	346	384	404	423	440	460						
	Annabessacook Lake	87	183	257	312	357	384	413	439	473	477	499				
	Damariscotta Lake	77	183	261	319	369	376									
Maine	Unweighted mean	82	188	266	326	370	388	418	440	467	477	499				
New York	Cassadaga Lakes (1989)	91	152	216	269	330										
	Cassadaga Lakes (1991)	83	158	203	246	313	337	351								
	Cuba Lake (1982)	83	187	253	304	347	361	433	456	442	505					
	Cuba Lake (1985)	90	185	248	296	328	347	379								
	Findley Lake (1989)	80	154	230	289	322	365	384								
	Hudson River	150	244	312	366	404	424	447								
	Tomhannock Reservoir	94	196	267	343	396	429									
New York	Unweighted mean	96	182	247	302	349	377	399	456	442	505					
Rhode Island	Beach Pond (E. Basin)	94	201	288	344	403	442	451	483	501	501	508				
	Beach Pond (W. Basin)	63	145	239	309	346	355									
	Blackstone River	80	172	251	298	305										
	Blue Pond	86	161	223	250	284										
	Bowdish Reservoir (1990)	63	142	227	282	327	358	389	437	475	533					
	Bowdish Reservoir (1991)	65	152	231	288	324	350	382	415	454						
	Chapman Pond (1990)	76	162	230	293	306	339	358	381	388	406					
	Chapman Pond (1991)	91	191	256	297											
	Coomer Lake	89	207	279	319	312	341	365	388	495						
	Echo Lake (1990)	72	186	266	314	348	385	428	458	508	540					
	Echo Lake (1991)	88	193	260	312	369	391	430	462							
	Great Swamp Dike	71	193	271	317											
	Hundred Acre Pond (1988)	74	175	260	321	379	433	453								
	Hundred Acre Pond (1989)	104	173	248	317											
	Indian Lake (1989)	74	217	316	376	416	446	443								

Table 3. Observed mean length (mm) at age for smallmouth bass from selected waters in northeastern United States and southeastern Canada.

State/ Province	Water	Age 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
New Brunswick	Province Mean		212	233	294	340	361	390	434	423	464			455		
New York	Amawalk Reservoir		174	248	315	357	383	416	444	453		496				
	Amawalk Reservoir			277	348	397	403	417		468						
	Ballston Lake	114	172	235	310	378	426	452	474	487	476				580	
	Blind Sodus Bay		236		340											
	Canandarago Lake	83	165	227	276	318	352	393	414	440	440	453	460	474	489	490
	Carry Falls Reservoir	90	133	211	248	276	290	361	355	390						
	Chautauqua Lake	90	177	266	317	367	403	429	453	473	502	525		476	502	
	Chemung River	130	201	267	275	330										
	Cliff Lake		146	215	266	360	416	437	444	445						
	Copake Lake	96	192	225	265	298	351	387	397							
	Cranberry Lake	88	139	182	244	264	334		372	394	398			445		
	Cross River Reservoir	118	162	232	317	367	400	432		460						
	Cuba Lake (1992)	144	193	247	297	349	379	409	406	439	443					
	Delaware River	176	229	276	319	348	405		488	450						
	Friends Lake	84	155	234	274	320	363	406	414	427						
	Grass River	147	167	214	257	280	292	343	360							
	Higley Falls Reservoir	118	176	228	272		380		272							
	Jamesville Reservoir		169	241	233	269			317	437						
	Kayuta Lake			265	302			362			421					
	Kensico Reservoir	86	167	192	245	335	402	418	425							
	Lake Ontario (Eastern Basin)		189	225	262	296	322	346	373	392	401	415	421	415	418	454
	Lamoka Lake				249	293	321		368							
	Long Lake								422							
	Loon Lake	91	163	224	287	318	323	368	396	411		465				
	Marlaville Lake	105	159	224	261	279	287	358	423	457	471	466		403		
	Mohawk River	102	164	245	265	318	366	408		436	432					
	Neversink Reservoir			260	304	328	355		417	393	427					
	Onondaga Lake			256	258	264	268	329	411	389	450	435				
	Oswegatchie River			225	235											
	Otisco Lake			203	210	270	322	370	411	409	422	451	446	433		
	Owasco Lake					292										
	Raquette River			184	212			340								
	Schenevus Lake					387										

Table 4. Observed mean length (mm) at age for largemouth bass from selected waters in northeastern United States.

State	Water	Age 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
New Jersey	Amwell Lake	86	188	244		386	460												
	Assunpink Lake	142	226	341	410	436			508										
	Carnegie Lake	107	183	244	315	386													
	Clinton Reservoir	99	239	307	368														
	Echo Lake Reservoir	61	183	257	325	363	391	432			511								
	Etra Lake	104	185	264	325	378		503											
	Farrington Lake		218	269	305	350	404	457	508										
	Furnace Lake	97	160	234	297														
	Green Turtle	99	193	246	292	345	434	472											
	Lake Musconetcong			215	264	310	343			490									
	Lenape Lake		160	213	267	310	412	480											
	Mean	98	209	277	333	377	408	455	470	478	523								
	Mercer Lake	184	223	297	391	432	469												
	Monksville Reservoir	112	184	277	345	380													
	Parvin Lake	160	210	309	378	454		506											
	Swartswood Lake		220	246	320	359	393	409	450										
	Union Lake	170	251	290	371	419	460	519											
	Westons Mill Pond	97	188	241	302	361													
New Jersey	Unweighted mean	115	201	265	330	378	417	470	484	484	517								
New York	Amawalk Reservoir	80	242	287	332	370	403	423	440	453	464	475	488	499	488	496		491	
	Amawalk Reservoir	119	196	276	346	379	410	425	457	463	469	500		529					
	Ballston Lake	84	174	231	286	371	404	428	451	470	473	489	492	511	508	524	525		557
	Blind Sodus Bay	185	234	270	362	393	424	471											
	Canandarago Lake	105	219	294	323	346	363	384	399	422	436	453	490		507	485			
	Cayuta Lake	135	198	250	282	311	363	403	455		490	440	515						
	Chautauqua Lake	133	202	279	305	335	372	391	409	425	464	470	479	484	521	552			
	Cliff Lake			283	325		420				462			440					
	Copake Lake	106	195	253	278	305	341	361	393	440	467	492	481	523	501		530	524	
	Cranberry Lake	124		374															
	Cross River Reservoir	119	193	283	349	371	384	435		437	485			500					
	Cuba Lake (1992)		217	241	350	364	379	375	415	410									
	Dryden Lake	93	188	259	304	339	371	398	411	414									
	Durand Pond		204	207	299	359	379												
	Fourth Binnewater Lake	132	218	304	346	405	438	458	538										
	Friends Lake	86	185	254	300	325	353	371	404	422		472	470		495				
	Higley Falls Reservoir				410														
	Island Pond				356														
	Jamesville Reservoir		201	223	256	310	292	330		392	424	538							
	Kensico Reservoir			228	307	383	345	432	432	488							570		

Table 5. Electrofishing catch rates for smallmouth bass populations in selected waters from northeastern United States.

State	Water Type	Sample Size	Number Caught / Hour Mean	Number Caught / Hour Range	Bass Size (mm)
Connecticut	Exploited Lakes, Ponds, Reservoirs	30	14.6	0.2 – 45.4	> 200
		30	4.2	0.0 – 22.5	> 300
	Unexploited Lakes, Ponds, Reservoirs	8	18.1	0.1 – 79.2	> 200
		8	13.9	0.0 – 61.5	> 300
Massachusetts	Lake	1	36.6		All
		1	34		>= 178
		1	16.8		>= 279
		1	3.6		>=356
New York	Lakes, Ponds, Reservoirs	59	8.8	0.1 – 45.4	All
		37	6.5	0.1 – 38.3	< 254
		40	4.6	0.1 – 24.0	>= 254
		33	1.8	0.1 – 7.1	>= 305
New York	Large Rivers	11	40.3	4.1 – 142.0	All
Pennsylvania	Large Rivers	55	72		All
	Warmwaters Streams	25	64		All
West Virginia	Warmwater River	2	39.5	39.0 – 40.0	> 102

Table 7. Density of smallmouth bass populations in selected waters from northeastern United States and southeastern Canada.

State	Water Type	Sample Size	Number / Hectare		Kg / Hectare		Bass Size (mm)
			Mean	Range	Mean	Range	
Maine	Ponds	3	12.6	2.7 – 21.6	5.4	2.1 – 8.4	All
New York	Warmwater Rivers	2	13.1	7.4 – 18.8	9.3		>= 305
	Lakes, Ponds, Reservoirs	23	4.5	0.4 – 27.7	1.6		All
		21	1.2	0.3 – 4.1			>= 254
Nova Scotia	Lake	1	254		22.8		All
West Virginia	Warmwater River	1	128.5				> 102

Table 8. Density of largemouth bass populations in selected waters from northeastern United States.

State	Water Type	Sample Size	Number / Hectare		Kg / Hectare		Bass Size (mm)
			Mean	Range	Mean	Range	
New York	Lakes, Ponds, Reservoirs	41	34.1	0.2 – 247.4	11.0		All
		34	16.0	0.3 – 68.4			>= 254
West Virginia	Lake	4	937.7	111.2 – 3056.6	33.9	6.9 – 46.5	All

Table 10. Estimated annual survival rate (S) for selected largemouth bass populations in northeastern United States.

State	Water	S	Age Range	Methodology
Maine	Cobbosseecontee Lake	.66	5 – 11	
New York	Dryden Lake	.60	1 – 3	
	Dryden Lake	.67	5 and older	
	Farm Ponds	.5 – 1.0		
	Bass Study Waters	.65	5 and older	catch curve
Massachusetts	Congomond Lakes	.73	3 – 4	Chapman–Robson
	Laurel Lake	.40	3 – 9	"
	Manchaug Pond	.55	3 – 7	"
	East Brimfiled Reservoir	.47	2 – 9	"
	John's Pond	.57	3 – 7	"
Delaware	Nanticoke River (1990)	.55	2 – 7	catch curve
	Nanticoke River (1991)	.58	2 – 7	catch curve
	Nanticoke River (1992)	.53	2 – 7	catch curve

Table 12. Estimated annual exploitation rate (u) for selected largemouth bass populations in northeastern United States.

State	Water	u	Bass Size (mm)
Connecticut	Lake Saltonstall (1984)	35 %	>= 305
	Lake Saltonstall (1985)	21 %	>= 305
	Lake Saltonstall (1986)	27 %	>= 305
	Lake Saltonstall (1987)	25 %	>= 305
	Lake Saltonstall (1988)	30 %	>= 305
	Lake Saltonstall (1989)	34 %	>= 406
	Lake Saltonstall (1990)	14 %	>= 406
	Lake Saltonstall (1991)	32 %	>= 406
	Lake Saltonstall (1992)	24 %	>= 406
Delaware	Nanticoke River	16 %	>= 305
New York	Bass Study Waters	8 %	>= 305
	Canadarago Lake	11 %	>= 254
	Chautauqua Lake	10 %	>= 254
	St. Lawrence River	14 %	>= 305

List of Contacts for Black Bass Population Characteristics in Northeastern United States and Southeastern Canada:

Connecticut:

Robert P. Jacobs
Connecticut Department of
Environmental Protection
Eastern District Headquarters
209 Hebron Road
Marlborough, CT 06447
(203) 295-9524

Delaware:

Catherine C. Martin
Delaware Division of Fish and Wildlife
RD 1 Box 81
Smyrna, DE 19977
(302) 653-2882

Maine:

J. Dennis McNeish
Maine Department of Inland Fisheries
and Wildlife
8 Federal Street
Augusta, ME 04330
(207) 289-2535

Massachusetts:

Richard A. Hartley
Massachusetts Division of Fisheries and
Wildlife
Field Headquarters
One Rabbit Hill Road
Westborough, MA 01581
(508) 792-7275

New Brunswick:

Peter J. Cronin
New Brunswick Department of Natural
Resources
RR 6
Fredericton, NB E3B 4X7 Canada
(506) 453-1802

New Jersey:

Walter S. Murawski
New Jersey Division of Fish, Game and
Wildlife
P. O. Box 394
Lebanon, NJ 08833
(908) 236-2118

New York:

David M. Green
Cornell University Biological Field
Station
900 Shackelton Point Road
Bridgeport, NY 13030-9750
(315) 633-9243

Douglas L. Stang
New York State Department of
Environmental Conservation
50 Wolf Road
Albany, NY 12233-4753
(518) 457-9435

Nova Scotia:

Alan McNeill
Nova Scotia Department of Fisheries
P. O. Box 700
Pictou, NS B0K 1H0 Canada

Pennsylvania:

Robert M. Lorantas
Pennsylvania Fish & Boat Commission
450 Robinson Road
Bellefonte, PA 16823-9685
(814) 359-5110

March 18, 1994

Tim Sinnott
Secretary/treasurer
New York Chapter AFS
c/o NYSDEC 50 Wolf Road
Albany, New York 12233-4756

Dear Tim:

Thanks for sending the materials enabling me to finish the audit of the chapters' financial records.

Attached is the audited 1993 Annual Treasurers' Report. You will note that I separated the two interest sources for the savings account to make it easier to reconcile the statements with your book keeping.

You also forgot to correct the total interest number from the first version of the annual report to account for the \$20.47 error you discussed with me on the phone. Rather than delay any more I made the change on the report and initialed it.

Sincerely,

Jack

Jack Hasse, Audit Committee

cc: P. McKeown
D. Einhouse

MAR 1994

NEW YORK CHAPTER — AMERICAN FISHERIES SOCIETY

c/o NYDEC, 50 Wolf Road, Albany, NY 12233-4756

1993 Annual Treasurer's Report
Revised 14 Mar 94

	Checking	Student	Certificate	Savings	Total
Balance 1/26/1993	$ 117.95	$ 825.62	$8,791.68	$5,699.12	$15,434.37 JH
				165.81 Albany Savings Bank 20.47 Herkimer Co. Trust	
1993 Receipts					
Interest	45.99		399.87	186.28	632.14 JH
1993 Annual Meeting	4,033.00				4,033.00
1993 Meeting Raffle		352.00			352.00
Dues (After meeting)	2,526.00				2,526.00
Larval Workshop (1992)	1,045.00				1,045.00
Bass Workshop Raffle	456.00				456.00
Loan repayment	942.00				942.00
Sub-total for receipts	$9,047.99	$ 352.00	$ 399.87	$ 186.28	$ 9,986.14
1993 Expenditures					
1993 Annual Meeting	4,140.74				4,140.74
1993 Meeting Raffle		149.84			149.84
1993 Meeting student stipends		300.00			300.00
Postage	14.50				14.50
Bulk mailing permit	75.00				75.00
Travel to NE EXCOM mtg	691.43				691.43
Newsletter printing	503.50				503.50
Newsletter mailing	119.32				119.32
T-shirt loan	1,250.00				1,250.00
Bass workshop raffle	16.75				16.75
1994 meeting raffle	212.63	150.00			362.63
Windsor fish prints	129.58				129.58
NE student stipend donation	120.00				120.00
Sub-total for expenditures	$7,273.45	599.84			$ 7,873.29
1993 Totals	$1,774.54	$-247.84	$ 399.87	$ 186.28	$ 2,112.85
Balances as of 19 Jan 94	$1,892.49	$ 577.78	$9,191.55	$5,885.40	$17,547.22
		Audit OK 3/18/94 J. Haase	Audit OK 3/18/94 J. Haase	Audit OK 3/18/94 J. Haase	Audit OK 3/18/94 J. Haase

Consolidated checkbook total:
$1,892.49
+ $ 577.78
$2,470.27

Audit OK J. Haase 1/27/94

Note: Student sub-unit and chapter checking accounts are consolidated in one checkbook.

Respectfully submitted,

Timothy J. Sinnott

Timothy J. Sinnott
Secretary/Treasurer

afs93trs.rpt

Corrected Treasurer's Report
for the Period 1 Apr 1993 - 31 August 1993
Prepared 15 Sep 1993

	Checking	Savings	CD	Students
Balances	$1188.17	$5,794.85	$9,028.52	$727.78

Total as of 8 Sep 1993: $16,739.32

Checking Account:

Receipts, 1 Apr - 31 Aug:

Larval workshop	1,000.00	
Memberships & rebate	1,376.00	
interest	23.06	
Total	2,399.06	

Expenditures, 1 Apr - 31 Aug:

Travel for G. LaBar	255.78	(1993 Annual mtg)
Travel for Ed Mills	691.43	(NE DIV AFS EXCOM)
Newsletter printing	174.96	
Newsletter postage	41.74	
T-shirts for NE workshop	1,250.00	
Total	2,563.75	

Savings Account:

Receipts, 1 Apr - 31 Aug:

Interest	75.26

Certificate of Deposit:

Receipts, 1 Apr - 31 Aug:

Interest	57.77

Student Unit:

Expenditures, 1 Apr - 31 Aug:

Raffle prize reimbursement	149.84

NEW YORK CHAPTER — AMERICAN FISHERIES SOCIETY

c/o NYDEC, 50 Wolf Road, Albany, NY 12233-4756

Treasurer's Report
for the Period 31 Aug 1993 - 4 November 1993
Prepared 4 November 1993

	Checking	Savings	CD	Students
Previous Balances	$1,750.95	$5,794.85	$9,028.52	$727.78

Total as of 31 Aug 1993: $16,574.32

	Checking	Savings	CD	Students
Current Balances	$2,927.05	$5,841.12	$9,028.52	$577.78

Total as of 8 Sep 1993: $17,796.69

Checking Account:

Receipts, 31 Aug - 4 Nov 93:

Memberships and renewals	245.00
Interest	2.52
NE Workshop raffle	456.00
Repayment of T-shirt loan	942.00
Total	1,645.52

Expenditures, 31 Aug - 4 Nov 93:

Newsletter printing	153.90
Newsletter postage	35.77
Duck Print for Raffle (2)	13.00
Raffle tickets (NE wkshp)	16.75
Raffle donation (fly rod)	100.00
Raffle advance (Stdnt acct)	150.00
Total	469.42

Savings Account:

Receipts, 31 Aug - 4 Nov 93:

Interest 46.27

Certificate of Deposit:

Receipts, 1 Apr - 31 Aug:

Interest 0.00

Student Unit:

Expenditures, 31 Aug - 4 Nov 93:

Raffle prize advance 150.00

AFS:TRPT2

NEW YORK CHAPTER — AMERICAN FISHERIES SOCIETY
c/o NYDEC, Room 530, 50 Wolf Road, Albany, New York 12233-4756

Corrected Treasurer's Report
for the Period 1 Apr 1993 - 31 August 1993
Prepared 15 Sep 1993

	Checking	Savings	CD	Students
Balances	1750.95 ~~$1188.17~~	$5,794.85	$9,028.52	$727.78

Total as of 8 Sep 1993: 17,302.10 ~~$16,739.32~~

Checking Account:

Receipts, 1 Apr - 31 Aug:

Larval workshop	1,000.00	
Memberships & rebate	1,376.00	
interest	23.06	
Total	2,399.06	

Expenditures, 1 Apr - 31 Aug:

Travel for G. LaBar	255.78	(1993 Annual mtg)
Travel for Ed Mills	691.43	(NE DIV AFS EXCOM)
Newsletter printing	174.96	
Newsletter postage	41.74	
T-shirts for NE workshop	1,250.00	
Total	2,563.75	

Savings Account:

Receipts, 1 Apr - 31 Aug:

Interest 75.26

Certificate of Deposit:

Receipts, 1 Apr - 31 Aug:

Interest 57.77

Student Unit:

Expenditures, 1 Apr - 31 Aug:

Raffle prize reimbursement 149.84

TO: Tim Sinnott
FROM: Jack Hasse
SUBJECT: Bill from Ithaca College, Final accounting for workshop
DATE: September 26, 1994

Enclosed is a copy of the bill from Ithaca College that Dave Lemon forwarded to me. I have reviewed it againist our records and find the bill to be correct. PLEASE NOTE THAT THEY HAVE INCLUDED TAX IN THE BILL WHICH SHOULD BE DELETED FROM THE COST SINCE WE ARE TAX EXEMPT.

As we discussed by phone earlier today, all monies are accounted for except the payment owed by Daryl Jenks from the Cortland wildlife staff. He has submitted the paperwork for payment with the check being sent directly to you. Please keep an eye out for it.

I have also included a financial accounting of the 1994 aquatic safety workshop for your records. Let me know if you have any question.

cc; Mckeown, Lemon, Einhouse, file

FINANCIAL ACCOUNTING 1994 AQUATIC SAFETY WORKSHOP

EXPENSES

Instructors fee	$1261.00
Insurance	$ 550.00
Certificates	$ 40.90
Supplies for drill	$ 38.05
Ithaca College Deposit	$ 500.00
Ithaca College Expenses	$4631.25
TOTAL	$7021.20

INCOME

Registration Fees	$8235.00

PROFIT

$8235.00	Income
$7021.20	Expenses
$1213.80	Profit

TO: Tim Sinnott
FROM: Jack Hasse JH
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1993 ANNUAL MEETING

NEW YORK CHAPTER OF THE AMERICAN FISHERIES SOCIETY

Treadway Inn, Owego, New York

28-30 January 1993

SUSTAINING FISH PREDATOR-PREY BALANCES IN LARGE LAKE ECOSYSTEMS: CULTIVATION VERSUS REHABILITATION

FRIDAY 29 JANUARY -- 1993 ANNUAL MEETING, NY CHAPTER AMERICAN FISHERIES SOCIETY

SUSTAINING FISH PREDATOR-PREY BALANCES IN LARGE LAKE ECOSYSTEMS: CULTIVATION VERSUS REHABILITATION

SESSION I -- THE LAKE ONTARIO ECOSYSTEM -- Williamsburg Room

9:00-9:05	**WELCOME TO THE ANNUAL MEETING** Ringler, Neil President of New York Chapter, American Fisheries Society, SUNY College of Environmental Science and Forestry, 1 Forestry Drive, Syracuse, NY 13210.
9:05-9:10	**INTRODUCTION TO SYMPOSIUM** Moderator: Donald Stewart
9:10-9:30	**RECENT DYNAMICS OF FISH POPULATIONS IN LAKE ONTARIO.** O'Gorman, R. US Fish and Wildlife Service, 17 Lake Street, Oswego, NY 13126.
9:30-9:50	**SOCIAL AND ECONOMIC PERSPECTIVES ON THE LAKE ONTARIO FISHERIES SYSTEM.** Dawson, C.P. SUNY College of Environmental Science and Forestry, 1 Forestry Drive, Syracuse, NY 13210.
9:50-10:10	**THE LAKE ONTARIO ECOSYSTEM: MANAGEMENT PERSPECTIVES.** LeTendre, G. Box 292, NYSDEC, Cape Vincent Fisheries Station, Cape Vincent, NY 13618.
10:10-10:30	**THE LAKE ONTARIO ECOSYSTEM: PUBLIC AND SPORTFISHERY PERSPECTIVES.** Hilts, William, Jr. Niagara County Tourism and Sport Fishing, 139 Niagara St., Lockport, NY 14094.
10:30-10:50	COFFEE BREAK
10:50-11:20	**KEYNOTE SPEAKER, FEDERAL AND INTERNATIONAL PERSPECTIVES** Fetterolf, Carlos M. 1992-93 President of American Fisheries Society, 8200 Pine Cross, Ann Arbor, MI 48103.
11:20-12:15	**PANEL DISCUSSION,** with O'Gorman, Dawson, LeTendre, Hilts and Fetterolf. Moderated by Stewart
12:15-1:30	LUNCH

SESSION II -- CASE HISTORIES FOR OTHER LAKES -- Williamsburg Room
Moderator: Gerard LeTendre

1:30-1:50	**THE LAKE ERIE ECOSYSTEM** Einhouse, D. NYSDEC, 178 Point Drive North, Dunkirk, NY 14048.
1:50-2:10	**THE FINGER LAKES ECOSYSTEMS** Creech, C. NYSDEC, Region 7, Box 1169, Cortland, NY 13045.
2:10-2:30	**THE LAKE CHAMPLAIN ECOSYSTEM** LaBar, G. University of Vermont, School of Natural Resources, Burlington, VT 05405.
2:30-2:50	**THE LAKE MICHIGAN ECOSYSTEM** Stewart, D.J. SUNY College of Environmental Science and Forestry, 1 Forestry Drive, Syracuse, NY 13210; and SUNY Oswego, Oswego, NY 13126.
2:50-3:30	COFFEE BREAK, **VIEW POSTERS** IN WILLIAMSBURG ROOM
5:00-5:30	**POSTER PRESENTATIONS, AUTHORS PRESENT** (see next page for listing)

1993 ANNUAL MEETING, NY CHAPTER AMERICAN FISHERIES SOCIETY

FRIDAY 29 JANUARY

SESSION III -- CONTRIBUTED POSTERS -- Williamsburg Room

2:50-3:30pm Available for viewing during coffee break.

5:00-5:30pm Poster presentations, authors present, during social.

(p) **HABITAT USE BY NEWLY HATCHED SEA LAMPREYS IN THE UPPER DELAWARE RIVER.**
Bennett, R., and R. Ross. National Fishery Research and Development Laboratory, R.D.#4, Box 63, Wellsboro, PA 16901.

(display) **NEW YORK STATE AMPHIBIAN AND REPTILE ATLAS PROJECT.**
Breisch, A.R., J.W. Ozard and M. Kallaji. New York State Dept. of Environmental Conservation, Wildlife Resources Center, Delmar, NY 12054.

X (p) **LAKE STURGEON RESTORATION IN NORTHERN NEW YORK RIVERS.** R
Carlson, D., A. Schiavone, S. LaPan and B. Gordon. NYSDEC, 317 Washington St., Watertown, NY 13601.

(p) **FISHES OF TUG HILL STREAMS CLASSIFIED AS TROUT WATER.**
Carlson, D., and Copenhagen Youth Fishing Club. NYSDEC, 317 Washington St., Watertown, NY 13601.

(p) **COVER USE BY A HEADWATER-STREAM FISH COMMUNITY IN NORTHCENTRAL PENNSYLVANIA.**
Dropkin, D., and J. Johnson. National Fishery Research and Development Laboratory, R.D.#4, Box 63, Wellsboro, PA 16901.

(display) **4-H SAREP: A MODEL FOR TEACHING FISHING AND ENVIRONMENTAL STEWARDSHIP TO YOUTH.**
Edelstein, K., and B. Matthews. Fernow Hall, Department of Natural Resources, Cornell University, Ithaca, NY 14853.

(s) **CHANGES IN THE RIBOSOMAL DNA OF EUTELEOST FISHES AS A FUNCTION OF EVOLUTION.**
Jahangir, Z., H. Kamel, A. Jagoo, D. Jagoo and R. Eckhardt; Department of Biology, Brooklyn College of the CUNY, Brooklyn, NY 11210.

(p) **MOVEMENT PATTERNS AND HABITAT UTILIZATION OF RADIO-TAGGED SMALLMOUTH BASS (MICROPTERUS DOLOMIEU) IN THE SUSQUEHANNA RIVER NEAR HARRISBURG, PENNSYLVANIA.**
Miller, L., H. Brundage III and D. Miklas. Acres International Corp., 140 John James Audubon Parkway, Amherst, NY 14228-1180.

(p) **A C0MPARISON OF THE TOXICITY OF A SNYERGIZED AND NON-SYNERGIZED FORMULATION OF INSECTICIDE TO YOUNG TROUT.**
Paul, E., H. Simonin and J. Symula. Rome Field Station, 8314 Fish Hatchery Road, Rome, NY 13440.

1993 ANNUAL MEETING, NY CHAPTER AMERICAN FISHERIES SOCIETY

SATURDAY 30 JANUARY -- CONTRIBUTED PAPERS -- Williamsburg Room

Session IV -- Moderator: Lynne Glass.

0810-0830	**LAKE ONTARIO: BRINGING BIOLOGY AND FISHERIES TOGETHER.**	
P	Jolliff, T.; ESLO Fishery Advisory Council, Biol. Rep., Bedford Corners Rd., Cape Vincent, NY 13618.	
0830-0850	**DYNAMICS OF LAKE TROUT REPRODUCTION.**	
S	Perkins, D., and C. Krueger; 206D Fernow Hall, Cornell University, Ithaca, NY 14853.	
0850-0910	**TRENDS IN ALEWIFE ENERGY DENSITY IN LAKE ONTARIO FROM 1978-90 AND IMPLICATIONS FOR SALMONINE ENERGETICS.**	
S	Rand, P., B. Lantry, R. O'Gorman, R. Owens and D. Stewart; SUNY College of Environmental Science and Forestry, 302 Illick Hall, Syracuse, NY 13210.	
0910-0930	**INTERACTION BETWEEN ADULT LAKE TROUT ABUNDANCE AND RECRUITMENT OF STOCKED SALMONINES IN CAYUGA AND SENECA LAKES.**	
S	Bishop, D.; NYSDEC Region 7 Fisheries, 5170 Fisher Ave., Cortland, NY 13045.	
0930-0950	**A HYDRAULIC APPROACH TO FISH HABITAT EVALUATION.**	
S	Danehy, R., N. Ringler and J. Hassett; SUNY College of Environmental Science and Forestry, Illick Hall, Syracuse, NY 13210.	
0950-1010	COFFEE BREAK	

Session V -- Moderator: Pradeep Hirethota.

1010-1030	**CULTURE OF YELLOW PERCH IN REUSE SYSTEMS.**
S	Burz, J.; 6725 Chili Riga Center Road, Churchville, NY 14428.
1030-1050	**BENTHIC MACROINVERTEBRATE COMMUNITY CHANGES ASSOCIATAED WITH ZEBRA MUSSEL COLONIZATION OF SOUTHWESTERN LAKE ONTARIO.**
S	Stewart, T., and J. Haynes; Center for Applied Aquatic Science and Aquaculture, Dept. Biol. Sci., SUNY College at Brockport, Brockport, NY 14420.
1050-1110	**DAPHNIA CONSUMPTION BY AGE-0 GIZZARD SHAD IN ONEIDA LAKE, NY.**
S	Shepherd, W., and E. Mills; Department of Natural Resources, Fernow Hall, Cornell University, Ithaca, NY 14853.
1110-1130	**DOUBLE-CRESTED CORMORANTS ON ONEIDA LAKE, NEW YORK: REPRODUCTION, CHICK WEIGHTS AND DIET COMPOSITION.**
S	Pooler, R., and M. Richmond; New York Cooperative Fish and Wildlife Research Unit, Cornell University, Ithaca, NY 14853.
1130-1150	**MERCURY CONCENTRATIONS IN YELLOW PERCH FROM ADIRONDACK DRAINAGE LAKES.**
P	Simonin, H., S. Gloss, C. Driscoll, C. Schofield, W. Kretser, R. Karcher and J. Symula; NYSDEC Rome Field Station, 8314 Fish Hatchery Road, Rome, NY 13440.
12:10	**BEST PAPER & POSTER AWARDS.**

S9111

HABITAT USE BY NEWLY HATCHED SEA LAMPREYS IN THE UPPER DELAWARE RIVER.

717

Bennett, R., and R. Ross. National Fishery Research and Development Laboratory, R.D.#4, Box 63, Wellsboro, PA 16901.

724 3322

We evaluated habitat use of newly hatched sea lamprey (<u>Petromyzon marinus</u>) ammocoetes over a 2-year period on the upper Delaware River. Ammocoetes were collected with metered plankton and drift nets in four habitat types. Six physical habitat variables were simultaneously recorded: turbidity, current velocity, river depth, sample depth, temperature, and dissolved oxygen. Relations among ammocoetes density, habitat type, and physical habitat variables were determined with regression, principal component, and range analysis.

The 364 ammocoetes collected had a total length range of 8-12 mm, indicating an age of less than 30 days. Ammocoetes were found only after 2030 hours between 15 June and 9 July. Ammocoete incidence was apparently stenothermal (21.1-24.5°C). A significant positive linear regression was found between ammocoete density and sample depth. Turbidity, current velocity, dissolved oxygen, and river depth had no apparent effect on ammocoete density.

Analysis of variance showed no difference in the density of ammocoetes in the four different habitats sampled: riffles, riffle pools, pools, and channels. This wide range of habitat use indicates that the ammocoetes are merely drifting and not utilizing particular habitats between up-river spawning sites and down-river burrowing sites.

RANDY BENNETT

RANDY M.

NEW YORK STATE AMPHIBIAN AND REPTILE ATLAS PROJECT.

Breisch, A.R., J.W. Ozard and M. Kallaji. New York State Dept. of Environmental Conservation, Wildlife Resources Center, Delmar, NY 12054.

The Amphibian and Reptile Atlas Program has the goal of determining which species of herps occur in New York and where. Previously there has been very little effort to document the distribution of amphibians and reptiles in New York. The salamanders are the only order of herpetofauna that have been intensely treated, and that was by Sherman Bishop over 50 years ago. A few select species, primarily those listed as endangered or threatened, have been the subject of recent status surveys. The majority of the species remain basically unknown and poorly documented.

In 1990, D.E.C.'s Division of Fish and Wildlife began to actively solicit information on the distribution of both native and introduced herps. By the end of 1992 field season, over 300 volunteers have provided more than 3,000 observations of reptiles and amphibians from throughout the state. The objective of the Atlas is to record all species found within each of the approximately 1,000 grid blocks in the state within 10 years. A checklist of species known to be found in the state and procedures for recording observations is available to anyone who would like to participate.

FISHES OF TUG HILL STREAMS CLASSIFIED AS TROUT WATER.

Carlson, D., and Copenhagen Youth Fishing Club. NYSDEC,
317 Washington St., Watertown, NY 13601.

Fish species changes since 1931 were examined in a region of Tug Hill that is known for brook trout fishing. This Deer River system is south of Watertown and has a watershed of 98 mi^2. The earliest fish and habitat surveys from 1931 provided a basis for stocking trout in 30 tributaries, and after 1953 these and other trout streams were protected and classified as "suitable for trout" under the NYS stream classification system.

We sampled 44 streams in 1991-92 to better understand fish distribution and see where brook trout lived. There were 22 streams classified as suitable for trout, and 12 of them had trout in 1991-92. Since there were seven additional streams inhabited by trout which were not so classified in 1931 and not protected by the NYS system, these findings show changes rather than substantial losses of trout waters.

Creek chub, blacknose dace, common shiner, northern redbelly dace and redside dace frequently occurred in samples with and without brook trout. White sucker and hornyhead chub were more frequently in collections without trout, and pearl dace occurred more frequently with trout.

A HYDRAULIC APPROACH TO FISH HABITAT EVALUATION.

Danehy, R., N. Ringler and J. Hassett; SUNY College of Environmental Science and Forestry, Illick Hall, Syracuse, NY 13210.

Fifty-seven kilometers of stream channel larger than first order within the watershed of the South Branch of Onondaga Creek N.Y. were studied in 1992. Stream channel morphological features such as gradient, substrate size/sorting, width to depth and entrenchment ratios, bankfull width and sinuosity were examined at 14 sites, representative of the channels found in the valley. Stage/Discharge relationships were developed at 12 locations in the watershed. Hydraulic evaluations were made using Froude number to evaluate flow state at 31 cross sections at each site. Results from the hydraulic habitat modeling are used to evaluate aquatic habitat and compared to visual descriptive techniques of habitat evaluation (Platts et al. 1983).

COVER USE BY A HEADWATER-STREAM FISH COMMUNITY IN NORTHCENTRAL PENNSYLVANIA.

Dropkin, D., and J. Johnson. National Fishery Research and Development Laboratory, R.D.#4, Box 63, Wellsboro, PA 16901.

We evaluated summer cover used by the fish community in Straight Run, a second-order stream in the upper Susquehanna watershed in northcentral Pennsylvania. Cover was estimated visually in 5% gradations within a radius of four fish body-lengths for overyearling and underyearling brook trout (*Salvelinus fontinalis*), overyearling and underyearling slimy sculpin (*Cottus cognatus*), blacknose dace (*Rhinichthys atratulus*), and longnose dace (*R. cataractae*). Available cover within the 0.5-km study section of Straight Run was also quantified. We categorized cover as (1) no cover, (2) substrate cover, (3) overhead vegetation, (4) substrate and surface turbulence, or (5) substrate and overhead vegetation. All species occupied areas having significantly different amounts and types of cover than were generally available within the study section. Significant differences occurred in the amount of cover used for all fish pairings except underyearling brook trout with overyearling slimy sculpin and blacknose dace with underyearling slimy sculpin. Significant differences in the amount of cover used by overyearling brook trout versus underyearling brook trout and overyearling slimy sculpin versus underyearling slimy sculpin indicates that these species used more cover as they grew. Substrate was the most frequent type of cover used by all species. Longnose dace had the greatest similarity with other species in cover-type usage and blacknose dace the least. The fish community of Straight Run exhibited substantive differences among species in terms of cover utilization.

THE LAKE ERIE ECOSYSTEM: A CASE STUDY.

Einhouse, D. NYSDEC, 178 Point Drive North, Dunkirk, NY 14048.

Lake Erie ranks as the second smallest, shallowest, most productive, and most heavily populated of the Laurentian Great Lakes. Over a century of cultural stresses that included overexploitation of fish stocks, environmental changes and new species, all contributed to the degradation of Lake Erie's biotic community through the 1960's. Significant reductions of some stresses during the last 20 years have produced a great deal of recovery. Most notable is the western basin Lake Erie walleye resource that had collapsed in 1957, but now appears fully recovered. Invading species such as rainbow smelt and white perch have also emerged as abundant members of the fish community. Rainbow smelt have become both a valuable commercial fishery resource, as well as an important component of the forage base. Newly emerging concerns on Lake Erie include the invasion of zebra mussels, nutrient reductions and resource allocation. Results from recent assessment programs will be provided to illustrate these concerns.

LAKE ONTARIO: BRINGING BIOLOGY AND FISHERIES TOGETHER.

Jolliff, T.; ESLO Fishery Advisory Council, Biol. Rep.,
Bedford Corners Rd., Cape Vincent, NY 13618.

ABSTRACT: Relevant material through 1991 does not indicate overexploitation of alewives by salmonines. Evidence for this include symptons of overpopulation of alewives with respect to their food source, zooplankton, which reflects classic symptoms of overgrazing, and lack of downward trend in growth of fast-growing salmonines through 1992.

Some data sets indicate a longterm decline in phosphorus and photosynthesis but others suggest no recent decline. Historically low temperature and effective sunlight are posed as reasons to consider primary productivity for 1992 as anomolous. Predation on stocked salmonines by large salmonines has undoubtedly reduced existing stocks of large salmonines, and this could account for some of the recent fisheries decline. Increased growth, younger age at maturity and increased fecundity are well-documented biological responses that would enhance recovery of alewives in the event of severe population decline. Short or long-term alewife depression would enhance resurgence of native fish species now being suppressed by exotic alewives. Based on Lake Michigan, the worst-case risks of continuing present stocking including alewife collapse, would be no greater than unavoidable punitive impacts on fisheries from stocking reduction. Also, scientific confirmation of key predator/prey issues could be lost by stocking reduction.

THE LAKE ONTARIO ECOSYSTEM: MANAGEMENT PERSPECTIVES.

LeTendre, G. Box 292, NYSDEC, Cape Vincent Fisheries Station, Cape Vincent, NY 13618.

The Lake Ontario sport fishery is reviewed to show the development from 1968 to present. The stocking of chinook and coho salmon was extremely successful and rapidly expanded through 1989. However, by the mid 1980's some professionals suggested restrictions on numbers of salmon and trout stocked by Ontario Ministry of Natural Resources and New York because of possible limitations on the production of alewives, the principal forage fish.

Alewife numbers and biomass remained high through 1991, and generally seemed to be little affected by trout and salmon predation. A stocking target of 8.2 million salmon and trout per year for Lake Ontario was set. In 1990 the first warning of a possible forage problem was sounded. Condition of alewives, the primary prey species in Lake Ontario, was poor and there was a trend toward a declining population. The feeling was that a cold winter could reduce the alewives drastically with little chance of a quick recovery. No management changes were made and in 1992 the alewives didn't respond as normal in their slowly declining cyclical pattern.

Province of Ontario, FWS, Sea Grant and New York staffs met to discuss the forage problem and review possible solutions. A task force of experts was called in to determine the extent of the problem and to help set up a direction. Then a public review process began to identify the problem to the interested people. They were asked for their help in determining a vision for the salmonid program and development of management solutions.

Presently Ontario and New York are evaluating public input and determining a management approach. Discussion of choices include: The effects of stocking various species of trout and salmon: determining whether or not to protect alewives: downsizing the Lake Ontario sport fishery: and alternate forage species.

RECENT DYNAMICS OF FISH POPULATIONS IN LAKE ONTARIO.

O'Gorman, R. US Fish and Wildlife Service, 17 Lake Street,
Oswego, NY 13126.

ABSTRACT: The biomass of alewife and rainbow smelt in the U.S. waters of Lake Ontario declined in the late 1980s, reached a low level in 1990, and failed to increase in 1991-92. During 1990-92, the weight of adult alewife and of all smelt caught per standard trawl tow (CPUE) were about 50% lower than the mean CPUE's during 1980-86 and about 60% lower than the peak CPUE's. Numbers of large prey fishes declined in concert with prey biomass. During 1990-92, the CPUE of smelt ≥150 mm was about 5%, and that of alewife ≥165 mm about 10% of the highest values observed in the past 15 years. Although condition of adult alewife declined in the late 1970s and early 1980s as biomass of adult's rose, condition failed to improve when adult biomass declined in the late 1980s and, most importantly, it fell to a new low in 1992. Growth of age-1 alewife dropped sharply in 1986 whereas growth of age-0 alewife apparently did not decline until 1990. Annual releases of hatchery-reared salmonines has been constantly high since 1984, although there is some indication that survival of the fish has declined. A computer simulation model suggests that present levels of predation demand do not exceed those required to sustain alewife biomass at current levels if overwinter survival of alewife remains high. But if a modest mortality of 25% occurs, it would be sufficient to collapse prey populations. The model, however, does not incorporate any effect for a decline in system productivity. Because alewife of all ages depend on zooplankton for food during the summer months, any decline in productivity would quickly result in an imbalance between prey demand and predation supply.

DYNAMICS OF LAKE TROUT REPRODUCTION.

Perkins, D., and C. Krueger; 206D Fernow Hall, Cornell University, Ithaca, NY 14853.

During the 1970's, fisheries agencies established a management program to restore naturally reproducing populations of lake trout to Lake Ontario. As a result of annual stockings of yearling lake trout and lamprey control, adult lake trout are now abundant in Lake Ontario. However, few naturally reproduced post-emergent or yearling lake trout have been captured to date. The survival of stocked yearling lake trout suggests that natural recruitment is being blocked prior to the yearling life stage. To help explain the lack of natural recruitment, we have been studying the dynamics of lake trout reproduction on an historical spawning reef in eastern Lake Ontario for several years. Recent efforts have focused on obtaining quantitative estimates of egg deposition, fertilization rates, embryo survival, and fry emergence. Egg density increased dramatically between 1990 and 1991 and was also high in 1992. Based on stocking records and genetic data, we suspect a strong year-class of Seneca strain fish was entered spawning population in 1991 and was responsible for the increased egg deposition. Survival of naturally deposited eggs to swim-up fry was 1.3%. If survival from swim-up to yearling was 5%, then detection of natural recruitment at the yearling life stage by current fish assessment activities would require fry production from about 20 other similar reefs.

TRENDS IN ALEWIFE ENERGY DENSITY IN LAKE ONTARIO FROM 1978-90 AND IMPLICATIONS FOR SALMONINE ENERGETICS.

Rand, P., B. Lantry, R. O'Gorman, R. Owens and D. Stewart; SUNY College of Environmental Science and Forestry, 302 Illick Hall, Syracuse, NY 13210.

We measured lengths, weights, and caloric density of alewife collected in south-eastern Lake Ontario from May to November 1989 and March 1990. We found a significant linear relationship between length-weight parameters and energy density. We used this regression to estimate alewife caloric density over the period 1978-90 using observed length-weight data collected by the USFWS. We found that energy density of adult alewife reached a peak in 1979 (1596 cal g^{-1}) and declined steadily over the subsequent six years and has remained level through 1990 (at approx. 1150 cal g^{-1}). We hypothesize that this decline in energy density is dependent on the magnitude of the alewife population, although during recent years abundance has continued to trend down without a noticeable increase in alewife condition. This loss in resiliency may be a result of the reduced production potential of the lower food web in Lake Ontario. We used bioenergetic models to explore the implications of this reduced prey caloric density on salmonine energetics. Conversion efficiency in chinook salmon was found to be significantly higher in 1979 (27%) than in 1990 (21%). We estimated the number of adult alewife consumed daily by individual chinook in order to achieve observed growth in 1979 and 1990. To compensate for reduced alewife energy density over the period, daily consumption increased from 2.6 to 3.4 alewife predator^{-1}day^{-1} during the period of fastest lake growth (August-October). Similar simulations for steelhead trout indicate less effect on conversion efficiency due to a lower dietary reliance on adult alewife.

MERCURY CONCENTRATIONS IN YELLOW PERCH FROM ADIRONDACK DRAINAGE LAKES.

Simonin, H., S. Gloss, C. Driscoll, C. Schofield, W. Kretser, R. Karcher and J. Symula; NYSDEC Rome Field Station, 8314 Fish Hatchery Road, Rome, NY 13440.

ABSTRACT: In an effort to better document the mercury levels in Adirondack fish we collected yellow perch from 12 drainage lakes in the upper Hudson and Mohawk - Hudson watersheds. The fish were collected with gill nets in the fall of 1987 as part of the Adirondack Lakes Survey Corporation (ALSC) fish survey efforts. The fish were aged and tissue samples analyzed for mercury concentration by the DEC laboratory at Hale Creek and by Syracuse University. Water chemistry data collected by the ALSC were used to relate fish mercury concentrations to lake surface water chemistry. Mercury levels were found to exceed the New York State guidelines of 1.0 ppm in several large perch from three of the lakes. Using age 4+ yellow perch, among lake comparisons showed that pH, acid neutralizing capacity, conductivity and calcium were the water quality variables best correlated with mercury concentrations. Within an individual lake, fish age, length and weight were directly related to the mercury level in the muscle tissue of the fish. Air equilibrated pH of the lake surface water and length of the fish were used to create a model predicting mercury levels in perch from Adirondack drainage lakes.

BENTHIC MACROINVERTEBRATE COMMUNITY CHANGES ASSOCIATED WITH ZEBRA MUSSEL COLONIZATION OF SOUTHWESTERN LAKE ONTARIO.

Stewart, T., and J. Haynes; Center for Applied Aquatic Science and Aquaculture, Department of Biological Sciences, SUNY College at Brockport, Brockport, NY 14420.

ABSTRACT: Benthic macroinvertebrate communities of southwestern Lake Ontario were sampled in 1991 and 1992. Organisms inhabiting artificial reef and natural cobble substrates were collected using a dome suction sampler, and by picking rocks from within a square frame. Fifty-one taxa, representing four phyla and nine classes, were identified. The zebra mussel, Dreissena sp., was the numerically dominant organism at both reef and cobble sites; comprising 91% (X=25,572 + 8309 individuals/m) of reef and 73% (X=9266 + 4294 individuals/m) of cobble communities. Other taxa of numerical importance included the amphipod, Gammarus fasciatus, and the snails, Goniobasis livescens and Amnicola limosa. Comparisons of data with those of Bader (1985) indicated that native macroinvertebrate densities were at least five times greater in 1991-92, than in 1983. In this study, densities of native reef inhabitants were lowest in May, 1992 (X=1376 + 684 individuals/m), and highest in September, 1991 (X=5268 + 1170 individuals/m). Cobble site densities were also lowest in May, 1992 (X=1322 + 386 individuals/m), but peaked in August, 1992 (X=4965 + 2566 individuals/m). Species richness was also greater in 1991-92, than in 1983, at both sites. A likely explanation for these results is that zebra mussels are transferring energy from limnetic to benthic habitats by consuming phytoplankton and depositing organic detritus. At the same time, mussels are providing complex, protective substrate, for many macroinvertebrate species.

Northeast Division of American Fisheries Society
Warmwater Workshop:

"MANAGING BLACK BASS IN NORTHERN WATERS"

Hosted by:
New York Chapter of American Fisheries Society

October 5 - 6, 1993
Alexandria Bay, New York

Workshop Sponsors:

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Northeastern Division, American Fisheries Society, Warmwater Workshop
"Managing Black Bass in Northern Waters"

October 4, 1993 Registration (4-9 PM, Sunset Room) and Social (7:30-10 PM, Florida Room).

October 5, 1993

7:15 Registration (all day, Sunset Room).

8:30 Welcome and Introduction - B. D. Shupp, NYS Dept. Environmental Conservation (Home of the Stars Room).

8:45 Keynote Address: Basic Bass Biointegrity - R. O. Anderson, Missouri Cooperative Fishery Unit (retired).

Population Biology (Home of the Stars Room), D. L. Stang, NYS Dept. Environmental Conservation., moderator.

9:15 The management implication of observed differences in unexploited and exploited Connecticut bass populations - R. P. Jacobs, E. B. O'Donnell and A P. Petrillo, CT Dept of Environmental Protection.

9:35 Population dynamics of smallmouth bass in four central Ontario oligotrophic lakes - G. E. Morgan and C. J. Brady, ONT Ministry of Natural Resources.

9:55 Population dynamics of smallmouth bass in the Lower Mohawk River-N. McBride, NYS Dept. Environmental Conservation

10:15 Coffee break.

Concurrent Sessions; Session 1 (Home of the Stars Room), P. J. Cronin, NB Dept. of Natural Resources, moderator.

10:40 An overview of the smallmouth bass fishery in Nova Scotia - A. McNeill, NS Dept. of Fisheries.

11:00 Recruitment of smallmouth bass in moderate-sized streams - T. D. Simonson, J. Lyons and M. T. Kaminski, WI Dept. of Natural Resources.

11:20 The impact of exploitation on smallmouth bass populations in three Adirondack lakes - P. Kazyak, Versar, Inc.

11:40 Exploitation of smallmouth bass in a small Maine lake - D. P. Boucher, ME Dept. of Inland Fisheries and Wildlife.

Concurrent Sessions; Session 2 (Burgundy Room), R. W. Miller, DE Div. of Fish and Wildlife, moderator.

10:40 The status of Connecticut's lake and pond bass populations - A. P. Petrillo, E. B. O'Donnell and R. P. Jacobs, CT Dept of Environmental Protection.

11:00 Characteristics of an unexploited smallmouth bass (*Micropterus dolomieui*) population in a small Maine lake - J. D. McNeish, ME Dept. of Inland Fisheries and Wildlife.

11:20 Survival of tournament-caught largemouth and smallmouth bass in three Maine lakes - R. A. Hartley, MA Div. of Fisheries and Wildlife.

11:40 Smallmouth bass: Which way did they go? - P. Kanehl and B. Houslet, WI. Dept. of Natural Resources.

12:00 Lunch

Regulations (Home of the Stars Room), R. P. Jacobs, CT Dept of Environmental Protection, moderator.

11:20 Interpopulation variation in growth, natural mortality, and the effects of exploitation rates and size restrictions on simulated fishery quality for largemouth and smallmouth bass in North America - R. C. Beamesderfer, A. A. Nigro and J. A. North, OR Dept. of Fish and Wildlife.

1:40 Effects of experimental length limits on largemouth bass in three Connecticut lakes - E. B. O'Donnell, A. P. Petrillo and R. P. Jacobs, CT Dept of Environmental Protection.

2:00 The influence of black bass recruitment on the success of a 11-15 inch slot limit and four 15 inch minimum size limits - D. M. Green, Dept. of Natural Resources, Cornell University.

2:20 Effects of a closed fishing season on largemouth and smallmouth bass reproductive success in southern Ontario -D. Philipp and M. Kubacki, IL Natural History Survey, and F. Phelan, Queen's University.

2:40 Simulating special regulations and angler characteristics in a recreational smallmouth bass fishery - A case study -A. E. Creamer, FERC, and D. J. Orth, Dept. of Fisheries and Wildlife, Virginia Polytechnic Institution & State Univ.

3:00 Coffee and soda break.

The Northeast Division of American Fisheries Society 1993 Warmwater Workshop Committee:

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Robert P. Jacobs, Connecticut Dept. Environmental Protection
Catherine C. Martin, Delaware Division of Fish and Wildlife
J. Dennis McNeish, Maine Dept. Inland Fisheries and Wildlife
Kenneth L. Beal, National Marine Fisheries Service
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RICHARD O. ANDERSON (retired)

Missouri Cooperative Fishery Research Unit
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Effective management of ecosystems which include black bass and other gamefish and panfish results in a sustained, favorable biointegrity and level of benefits. The principles of fish population structure and dynamics are common to populations in the South and North. Processes of reproduction, recruitment, growth, and mortality determine annual production; these rates are reflected by structural patterns including standing crop, biomass ratios, and length-frequency distribution. Food and feeding conditions influence longevity, fecundity, and condition, i.e. relative weight. The keys to effective management are simple: sustain favorable environmental quality; avoid overharvest, i.e. removal of more than the surplus. The surplus depends on existing structure and dynamics, and management objectives. A spectrum of objectives is important to satisfy a range of angler values. Values are similar for bass anglers North and South. For many dedicated bass anglers the quarry has become the sacred cow. These anglers support measures to protect and sustain high quality populations. High minimum and slot length limits can be effective for protecting fish of preferred sizes. The keys to management success are simple; however, the development of effective plans and programs is a primary challenge for fishery professionals.

POPULATION DYNAMICS OF SMALLMOUTH BASS IN FOUR CENTRAL ONTARIO OLIGOTROPHIC LAKES

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Various diagnostic population parameters and measures of stress were estimated from the 1981 to 1990 index sampling programs and summer creel surveys carried out by the Haliburton-Hastings Fisheries Assessment Unit on the smallmouth bass *Micropterus dolomieu* populations in Dickey, Drag, Koshlong, and Twelve Mile Lakes.

In these oligotrophic lakes, smallmouth bass annual mortality appears to be density-dependent, suggesting that these populations are food limited. This mechanism is reflected in the sensitivity of smallmouth bass condition indices to variation in diet and recruitment. Smallmouth bass display niche segregation in lakes with established rock bass *Ambloplites rupestris* populations. Anglers function as size selective predators and recreational fishing is a depensatory mortality factor. The present levels of exploitation cause a shift towards smaller sizes of fish and virtually eliminate the larger size-classes. The results demonstrate that differences between smallmouth bass populations appear to be related to recreational fishing pressure and the presence of rock bass.

AN OVERVIEW OF THE SMALLMOUTH BASS FISHERY IN NOVA SCOTIA

ALAN MCNEILL

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First introduced into Nova Scotia waters in 1942, smallmouth bass *Micropterus dolomieu* have provided an alternative fishery to the more popular brook trout *Salvelinus fontinalis* in localized areas. In recent years angler interest in smallmouth bass has increased dramatically and a modest tournament fishery has developed in addition to non-competitive angling. Since the most recent government sanctioned introductions in 1971, illegal transfers and movements within watersheds have been responsible for approximately doubling the distribution of this species over the past fifteen years. Estimated total annual catches have increased 32 times and average catch per angler has increased eight times over the same time period. Preliminary biological surveys indicate that for most watersheds, population structure and length-at-age data are similar to other northern waters (ie: New Brunswick, Ontario, Maine and Vermont). One lake exhibited a stunted population where the average length-at-age was lower than any values observed in the literature. Observations of bass nesting activity suggest that nest building and spawning commence when water temperatures first reach 16 to 18°C which typically occurs during the end of May or first week of June in Nova Scotia. Current management practices focus on restricting the illegal introduction of smallmouth bass between watersheds and sustaining a quality fishery where bass are well established.

THE IMPACT OF EXPLOITATION ON SMALLMOUTH BASS POPULATIONS IN THREE ADIRONDACK LAKES

PAUL KAZYAK

Versar, Inc.
Columbia, Maryland

Smallmouth bass *Micropterus dolomieu* populations in three interconnected Adirondack lakes were examined to evaluate the impact of different exploitation rates on the quality of the fishery. A total of 1600 smallmouth were taken by electrofishing, angling, gill-netting, and creel census during the study, including multiple recaptures of 14 uniquely marked fish used for partial age validation. Catlin Lake was dominated by large, older smallmouth, while fewer large smallmouth were observed in Rich Lake and very few large smallmouth were observed in Lake Harris. Yearly growth increments of smallmouth bass were similar among lakes and independent of density. Growth increments were correlated with summer air temperatures in younger fish. Fishing pressure and annual exploitation varied from 1.3 h/ha and 0.05, respectively, in Catlin Lake to 32.6 h/ha and 0.68 in Lake Harris. Angler catch rates of smallmouth bass > 305 mm ranged from 0.03/h in Lake Harris to 0.74/h in Catlin Lake. Exploitation is suggested as the dominant force shaping size and age composition of smallmouth bass in the study lakes. The results indicate that Lake Harris could sustain a quality smallmouth fishery if exploitation was restricted, but catch rates would not approach those observed in Catlin Lake since effort was 25 times greater in Lake Harris.

THE STATUS OF CONNECTICUT'S LAKE AND POND BASS POPULATIONS

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Since 1953, management of largemouth bass *Micropterus salmoides* in Connecticut has been primarily accomplished through a statewide 305 mm minimum length limit. In an effort to identify bass populations which might be in need of alternative management, a statewide electrofishing survey of over 70 Connecticut lakes and ponds including the Connecticut River was conducted from 1987 to 1993. Largemouth bass were sampled from 99% of the lakes at stock size (> 20 cm) densities ranging from 2.7 to 98.8 fish/hr. Smallmouth bass were detected in 43% of the lakes and at densities typically less than largemouths. Age and growth analyses revealed that 11.1% of the lakes had largemouth bass recruit (30 cm) by age 3, 64.7% by age 4 and 29.8% by age 5. Generally slower growth rates were observed for smallmouth bass, with the mean-age-at recruitment at 4.7 years. Catch curve estimates of total instantaneous mortality (Z) for largemouth bass ranged from 0.1 to 1.3 among lakes with 62% of the Z values falling between 0.4 and 0.7 and 14% being above 0.7. Smallmouth bass mortality estimates ranged from 0.4 to 2.3 with 56% being above 0.7. PSD was found to be undesirably low (<40%) in 27% of the lakes for largemouths and 67% for smallmouths. Significant negative correlations were detected for linear regressions of largemouth PSD on age-at-recruitment ($R=0.35$, $P>0.95$) and Z values ($R=0.81$, $P>0.99$). Although many of Connecticut's bass populations appear to be in a desirable state of balance, some lakes might benefit from alternative management strategies. The potential benefits of slot length limits, preferred (> 38 cm) and memorable (> 45 cm) size limits for selected lakes will be discussed.

SURVIVAL OF TOURNAMENT-CAUGHT LARGEMOUTH AND SMALLMOUTH BASS IN THREE MAINE LAKES

RICHARD A. HARTLEY

Massachusetts Division of Fisheries and Wildlife
Field Headquarters
Westborough, Massachusetts 01581

Nine bass tournaments were monitored on three Maine lakes from June through October, 1989 to determine initial and delayed mortality rates. Age, weight, length, species, geographic location, season and size of the tournament were analyzed to determine if these factors influenced mortality rates. Dissolved oxygen levels were monitored in boat livewells during spring, summer and fall tournaments. Initial mortalities ranged from 0 to 14.6%, and delayed mortalities ranged from 0 to 6.9%. Total mortalities ranged from 0 to 19.5%. Mortality rate may be a function of handling time associated with the tournament. Mortalities were lowest in tournaments that minimized both the number of steps and the time elapsed between the removal of bass from the livewell and its subsequent release into the lake. Location, size and season of the tournament, species, length and weight were all significant factors in mortality rates. Age was not significant. Dissolved oxygen levels in boat livewells indicated potentially stressful conditions for fish during the tournaments.

INTERPOPULATION VARIATION IN GROWTH, NATURAL MORTALITY, AND THE EFFECTS OF EXPLOITATION RATES AND SIZE RESTRICTIONS ON SIMULATED FISHERY QUALITY FOR LARGEMOUTH AND SMALLMOUTH BASS IN NORTH AMERICA

RAYMOND C. BEAMESDERFER, ANTHONY A. NIGRO, AND JOHN A. NORTH

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We described averages and extremes in growth and natural mortality rates reported for largemouth and smallmouth bass populations from throughout North America and used this information to evaluate variability in the effects of harvest restrictions on fishery quality. Correlations between growth and natural mortality rates were explored in an attempt to simplify analyses. Population simulations indicated that effects of regulations on yield, harvest, catch rate, and size composition may vary substantially depending on growth and natural mortality. Minimum, maximum, and slot size limits were evaluated. Growth and mortality rates constrained the benefits of many regulations and different regulations produced similar results. Geographical trends in population characteristics, fishery potential, and effective regulations were apparent. We present examples where these conclusions are used to define feasible alternatives for management of bass populations in Oregon.

THE INFLUENCE OF BLACK BASS RECRUITMENT ON THE SUCCESS OF A 11-15 INCH SLOT AND FOUR 15 INCH MINIMUM SIZE LIMITS

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The effect of an 11-15 inch slot length limit on largemouth bass was evaluated over an eight year period at Lake Ronkonkoma and the effect of 15 inch minimum size limits were evaluated on four lakes: at Fort Pond on largemouth and smallmouth bass over a seven year period, at Lower Canopus Lake on largemouth bass over a six year period and at Loon and Friends lakes on largemouth and smallmouth bass over a five year period. Severe stock piling occurred at Lower Canopus Lake, the proportion of largemouth bass $\geq$12 inches and $\geq$15 declined, and the number of bass $\geq$15 inches declined. Size structure and density of largemouth bass were variable at Fort Pond and there were no detectable improvements in the largemouth bass population. Density of smallmouth bass $\geq$15 inches declined towards the end of the study at Fort Pond. There was no change in the size structure of largemouth or smallmouth bass in Loon Lake. Density of largemouth bass $\geq$15 inches steadily increased at Loon Lake and density of smallmouth bass $\geq$15 inches declined. The proportion of largemouth bass $\geq$15 inches doubled at Friends Lake and the number of largemouth bass $\geq$15 inches increased. Size structure of smallmouth bass was relatively stable during the study period in Friends Lake and density of bass $\geq$15 inches increased. The slot limit at Lake Ronkonkoma may have been a factor in reducing recruitment and improving the quality of the largemouth bass population, however, the major factor in reducing excessive recruitment was probably a result of changes in the size and abundance of subordinate species. Size structure improved dramatically, the density of bass $<$11 inches declined and density of bass $\geq$15 inches increased.

Recruitment processes are a major controlling factor in the success of slot and high minimum size limits. Bass populations that experience highly variable and often excessive reproduction require a slot length limit in order to prevent stock piling of small bass and resultant density dependent growth. However, slot limits often fail because anglers harvest too few bass shorter than the lower protected size limit. In order for slot limits to be effective anglers must be convinced that they will substantially improve the quality of their fishing by harvesting small bass. In New York the proportion of the largemouth bass population $<$12 inches should be less that 25-35%. High minimum size limits can only be effective where recruitment is low and exploitation is high. Smallmouth bass in ponded waters in New York are most likely to meet these two criteria.

SIMULATING SPECIAL REGULATIONS AND ANGLER CHARACTERISTICS IN A RECREATIONAL SMALLMOUTH BASS FISHERY - A CASE STUDY

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DONALD J. ORTH

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A computer-implemented simulation model was modified to compare various regulation schemes and determine how they are affected by angler non-compliance and voluntary catch-and-release fishing. In this model, potential fishing mortality (i.e., catch rate) and the probability that a released fish will die were adjusted according to length limits and/or creel limits, the proportion of anglers who do and do not comply with regulations, and a voluntary catch-and-release rate for both complying anglers and non-complying anglers.

The model was demonstrated with data on a smallmouth bass, *Micropterus dolomieu*, fishery for the upper and lower James River, Virginia. Simulated regulations were assessed based on adjustments to angler non-compliance, which averaged 17 percent, and voluntary release, which averaged 90 percent. Model results indicate that more restrictive regulations improved PSD and catch, whereas numerical harvest and yield in weight benefitted from liberal regulations. However, variability among the 81 regulations was low, suggesting that voluntary release (90% average) is a dominant control in the James River smallmouth bass fishery. From a management standpoint, these findings also suggest that, where appropriate, management strategies should focus on increasing voluntary release and rely on regulations only in certain fisheries.

THE USE OF SUPPLEMENTAL STOCKING TO RESTRUCTURE LARGEMOUTH BASS POPULATIONS IN LAKES WHERE TRADITIONAL FISHERIES MANAGEMENT METHODS WERE INEFFECTIVE OR RESTRICTED

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In large potable water supply lakes many traditional management strategies can not be used to manipulate fish populations. The use of fishing regulations had no major impact on improving the largemouth bass, *Micropterus salmoides* (Lacepede) population. As a result a cooperative supplemental stocking program was implemented in 1990 to rebuild the severely deteriorated largemouth bass populations. Two lakes, Lake Bloomington and Evergreen Lake located in central Illinois, were each stocked with 11800, 50 to 200 mm largemouth bass in 1990; 2500 and 3000 respectively, 200 mm marked largemouth bass in 1991; and 3000, 200 mm marked largemouth bass in 1992. 1991 eletroshocking survey results of the two lakes showed that bass stocked in 1991 comprised 26 and 80% of similar size largemouth bass captured. In 1992, largemouth bass stocked in 1991 comprised 44 and 62% of similar size bass; while bass stocked in 1992 made up 43 and 62% of similar size bass captured. The three year stocking program developed optimal catch per unit effort rates, PSD and RSD-380 mm values in each lake. The largemouth bass population characteristics developed due to this program represent the highest in the 20 and 30 year history of the lakes.

MODELING MANAGEMENT OPTIONS OF THE SMALLMOUTH BASS FISHERY IN THE FRENCH RIVER, ONTARIO

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The French River is a 105 km waterway park flowing from Lake Nipissing through a series of interconnected lakes and gorges, rapids and swifts before emptying into Georgian Bay. During the 1992 open water fishing season, creel surveys were conducted on two sections of the river. The lower French River has limited access and offers a scenic wilderness experience. The upper French River is highly developed with numerous access points, lodges, and cottages.

During the summer, anglers fishing for smallmouth bass *Micropterus dolomieu* on the lower French River accounted for 37% of the total fishing effort. These anglers had an average success rate of 0.325 bass•rod-hour. On the upper French River bass fishing was more popular (54% of the total fishing effort) although success rates were significantly lower (0.183 bass•rod-hour). Anglers on both sections of the river released 70% of the bass they caught. The average size of the harvested bass was 29 cm fork length.

Given the poor quality of the bass fishery, it is clear that stricter management rules need to be developed. In order to evaluate several management strategies, a survey was mailed to 800 individuals who provided their addresses during the creel survey. One major part of the survey contained a strategic choice model, an experimental behavioral research technique, which is well suited to evaluate angler preferences for a large number of currently non-existing management scenarios. Attributes included in the model were fish species, catch rate, catch limits, slot sizes, and crowding of fishing spots.

EVALUATION OF A 381 mm MINIMUM LENGTH ON LARGEMOUTH BASS IN A NEW SOUTHWESTERN PENNSYLVANIA IMPOUNDMENT

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Cross Creek Lake is a productive 98.8 ha impoundment filled in 1982 and opened to angling in June 1985. Fish population, creel survey, and angler opinion data were collected from 1985 through 1989. The objectives of this study were to determine if an acceptable largemouth bass *Micropterus salmoides* population abundance and size structure, and angler satisfaction could be maintained in a new lake with anticipated heavy fishing pressure using a restrictive size regulation. Estimated bass abundance and biomass in May 1985 (pre-harvest) was 145/ha and 13.9 kg/ha, and a mean of 70/ha and 14.1 kg/ha for 1986-1989, respectively. Bass electrofishing catch effort in 1985 was 35/ha for fish $\geq$300 mm and 21/hr for fish $\geq$375 mm, and a mean of 35/ha and 4/hr from 1986-1989, respectively. Angling effort was 1474 hrs/ha in 1985, with a mean annual effort of 726 hrs/ha from 1986-1989. Anglers seeking bass caught 1.2 bass/hr in 1985 and averaged 0.4 bass/hr from 1986-1989. Angler harvest in 1985 was 27 bass/ha and 28 kg/ha; the 1986-1989 mean harvest was 1.5 bass/ha and 1.0 kg/ha. Even though bass catch and harvest rates declined from 1986-1989, 61% of the total angling effort was directed at bass in 1989, 70% of anglers rated the fishing good or excellent, and 82% liked the restrictive regulations in effect. Stated objectives were accomplished for largemouth bass utilizing restrictive regulations.

MANAGING BLACK BASS IN NORTHERN WATERS: MAINE'S NEW FISHERY REGULATIONS

RICHARD M. JORDAN

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Maine's black bass populations are wild and self-sustaining. Recent findings on movements, reproductive success, and importance of first-year growth in relation to overwinter survival by smallmouth bass researchers in Canada suggests that conservative fishing regulations are necessary to manage this species in northern waters. Based on bass population studies from several waters, Maine adopted new, more conservative statewide fishing regulations in 1992 to maintain and improve populations in the presence of increasing angler use. The new regulations are intended to increase numbers of larger bass over present levels and to increase overall abundance of bass by better protection during the spawning period, resulting in higher fry survival. Most anglers have readily accepted the new regulations and the concept of reduced harvest levels in order to create more abundant bass populations with an improved opportunity to catch larger bass in the future.

DISCREPANCIES IN AGING SMALLMOUTH BASS FROM HOUSATONIC RIVER,CORNWALL, CONNECTICUT USING SCALES AND OTOLITHS

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State of Connecticut
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Between 1987 and 1989, 1,036 smallmouth bass *Micropterus dolomieu* were sampled from the Housatonic River, Cornwall, Connecticut and aged using scales. Aging by this structure was consistent between different readers and years. Growth was determined to be slow in comparison to other riverine populations of smallmouth bass throughout the U.S. In 1990, both scales and otoliths were taken from a small number of fish (~30) to corroborate previously determined age/length data. Discrepancies were found between structures, for fish greater than age 5. In 1992, a greater number (124) of smallmouth bass were sampled for otoliths and scales. Agreement of ages (±1 year) between two groups of readers (two readers/group) was 89% from scales and 100% from otoliths. However, smallmouth bass >5 years old were consistently underaged by scales when compared to otoliths. Results of age analysis from otoliths demonstrate slower growth rates than originally determined. This study has important management implications, since findings based on spurious scale readings could lead to instituting inappropriate length/creel limits on slow-growing populations of riverine smallmouth bass.

May 1993

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Secretary...................Eric Fickbohm

COMMENTS AND ITEMS OF INTEREST

If you have any items of interest or suggestions for the newsletter, please send them to the following:

Lars Rudstam
Cornell Biological Field Station
900 Shackelton Point Road
Bridgeport, New York
TEL (315) 633-9243
FAX (315) 633-2358

EDITOR'S NOTES

IF THERE IS A "1991" ON YOUR MAILING LABEL, PLEASE AVOID BEING DELETED FROM OUR MAILING LIST BY SENDING YOUR DUES TO TIM SINNOTT BY **JUNE 30, 1993.** Please mail your dues to Tim at N.Y.S.D.E.C., Room 530, 50 Wolf Road, Albany, New York 12233-4756. As this is our final edition of the newsletter, we wish to extend our sincere gratitude to Jack Hasse, Denise Richardson, and Donna Iloff for their help in processing the newsletter. Best wishes to Lars and Myriam in their tenure as editors.

Steve LaPan and Al Schiavone

EXCOM Meeting Minutes, 28 January 1993

The meeting was called to order at 7:06 PM. Members present were Neil Ringler, Steve LaPan, Brian Jonckheere, Paul McKeown, Caroline Griswold (NE Division), Tom Field, Don Stewart, Jack Hasse, Gary Neuderfer, Alan Petersen, Doug Carlson, Tim Sinnott. The minutes of the September EXCOM meeting were accepted with slight modifications. Caroline Griswold requested that a copy of the minutes be sent to NE Division. Tom Field pointed out that the Officer's handbook tells who and where to send copies of the minutes.

Neil outlined his plan for the annual business meeting. He would report on the Chapter's accomplishments over the last year, and discuss new initiatives developed with Ed Mills. Neil also wanted to raise the issue of producing a new Aquatic Ecologist film/video, and discuss cultural diversity, based on the discussion held at the Parent Society Meeting in Rapid City, S.D..

Jack Hasse presented the treasurers report, copy attached. The Chapter still has not received $1,000 from the ESF Continuing Education Center representing the profit made from the larval fish workshop. The annual meeting cost about $1,700 more than last year. This was also the first year the Chapter had to pay for printing the newsletters and directory. A discussion ensued about increasing revenues. Caroline indicated that the NE Division offered a ready assets account that may be better than straight savings accounts, but there were some limitations to it. Perhaps the Chapter should establish a fund-raising committee to look at ideas like selling Tee shirts or the AFS cookbook.

There used to be a cash reserves committee made up of past presidents. The committee's purpose was to plan for saving resources. Perhaps this committee should be re-activated. It was agreed that the Chapter should not subsidize the annual meeting. The bottom line was $12,000. Funds should not go below that point. The treasurer's report was accepted.

Currently there are 338 members in the New York Chapter. The parent Society is supposed to keep the Chapter's membership updated, and provide special reports on request as to members paying dues through the parent Society.

<u>Newsletter</u>

Al Schiavone and Steve LaPan are resigning as Newsletter editors to give someone else a chance. They will do one more newsletter (Spring 93 edition). They offered to switch to program committee instead, and are volunteering to plan the 1994 meeting. During their tenure they instituted the feature article idea, and went from four editions to three. This was to save money and reduce redundancy.

Student Unit
Brian Johnckheere summarized the report for the business meeting. The Student Unit had several fund-raising events including a bake sale, tee shirt sale, calendar sale, and annual meeting raffle. Their main activity for the year was to sponsor Bob Carline as a speaker for two talks. Next semester they plan on raising money to fund other invited speakers.

The students are concerned because of confusion about the $50 travel stipends. No one applied and none were awarded stipends. There was no clear plan on how to award stipends. Based on the newsletter, the impression was left that all students that presented papers would receive stipends. It was decided to award stipends to all nine students that presented. The student unit would pay $300, as they originally budgeted, and the Chapter would cover the remaining $150. For next year, the rules for awarding stipends must be clearly presented.

NE Division
Caroline was invited to address the EXCOM. She did not have any comments for this meeting, but wanted to talk briefly at the annual business meeting. The issues she would address are: membership, increasing the number of women members, the new NE newsletter editor, grants for student stipends to attend the NE Annual Meeting, and plans for a continuing education course on creel census techniques.

Parent Society
Carlos Fetterolf was invited to speak. He declined, but requested 15 minutes at the business meeting.

Professional Incentives
Paul McKeown briefed on award presentations and nominations. John Forney would be carried over as the 1993 nominee for the AFS Award of Excellence. He is also a nominee for honorary membership to the parent society. At the NE Division level, C. Lavett Smith will be carried over as the 1993 nominee for the Dwight Webster award. At the Chapter business meeting, Paul Neth will receive Honorary Chapter Membership, and Bob Engstrom-Heg will receive the Chapter Professional Achievement award. Any member can nominate someone for this award. The last fisheries issue described awards available from the parent Society.

Resolutions
Nothing to report, as Bob Werner and Dieter Busch are not able to attend the meeting.

Willowemoc/Beaverkill Project
Tom Field spoke on the Willowemoc River Restoration Project proposal. This is a joint DEC, Trout Unlimited, AFS project proposal under the auspices of the Fisheries Action Network program. The Chapter role would be to provide professional fisheries review of the DEC/TU program suggestions, and students to work on the project. Tom has already reviewed a rough TU

proposal.

A draft proposal has been received that contains no dollar estimates. The TU leadership changed. The new leader, Bob Bresline wants to flesh out the proposal with the DEC regional staff and angler groups concerned about the Beaverkill and Willowemoc Rivers. They would like to create a model restoration project. The estimated cost would be 3.8 million dollars over a number of years, and TU can probably come up with the money. Neil asked Tom to discuss the issue at the business meeting.

Neil brought up the Aquatic Ecologist movie, and indicated he wanted to raise the issue at the business meeting also.

The meeting was adjourned at 9:33 PM.

NEW YORK CHAPTER AMERICAN FISHERIES SOCIETY ANNUAL MEETING
JANUARY 29, 1993
OWEGO, NEW YORK

The annual meeting of the New York Chapter of the American Fisheries Society was called to order at 3:40 p.m., January 29, 1993 in the Owego Room of the Treadway Inn, Owego, New York by president Neil Ringler. Fifty members were in attendance, thus a quorum was present.

A motion was made, seconded and accepted by the members present to accept the minutes of the 1992 annual meeting.

President's Report - N. Ringler
The president attended the NE Division meeting and National meeting at Rapid City, South Dakota representing the Chapter. The president chaired the Larval Workshop with 35 people from eight states attending. The workshop took place at Onondaga Lake and ESF. The Chapter made a profit of $1,000.

The president tried to involve women and minorities in the organization with mixed results. He also pushed for student involvement.

The "Aquatic Ecologist" film was a previous successful effort of the Chapter. Discussion has begun on producing and updated video version.

Treasurer's Report - J. Hasse
The treasurer's report was accepted with no discussion. Treasurer Hasse reported that we have not received the money from the Larval Workshop but that the paperwork was being processed by ESF for payment. The Chapter currently has $943.57 in checking, $8,791.68 in CD's, and $5,699.12 in savings for a total of $15,434.37. When we receive the workshop money, we will have dropped $317.64 in the treasury from the previous year. The 1992 audit conducted by Steve LaPan showed the books to be in order. A detailed

treasurer's report is attached to the minutes.

<u>**Membership**</u> - E. Mills/J. Hasse
Ed Mills sent letters to prospective members (mostly students) and it appears to have resulted in several new members. Current membership is 338. Eighty-four percent of the membership has current dues status.

<u>**Honorary Membership and Awards**</u> - P. McKeown
John Forney was nominated to AFS for the Award of Excellence and Honorary membership. Our NE Division Dwight Webster Award nominee was C. Lavett Smith. The Chapter Honorary Membership Award was presented to Paul Neth while the Professional Achievement Award was given to Bob Engstrom-Heg. The nominee for the 1993 Professional Achievement Award was C. Lavett Smith. The members present voted unanimously to award the honor to Dr. Smith. A special "thank you" was given to Jack Hasse for six years of service to the Chapter as secretary/treasurer.

<u>**Nominations**</u> - T. Field
The president-elect candidates for 1994 were Don Stewart and Paul McKeown. There were no nominees from the floor. Both candidates expressed their visions for the future if elected. Paul McKeown was elected by those present as well as several absentee ballots.

<u>**Newsletter**</u> - S. LaPan
Because we lost our funding support for the newsletter the number of issues was reduced to three per year. We began a featured article format. A new newsletter editor is needed starting with the summer 1993 issue.

<u>**Program**</u> - D. Stewart
Approximately 140 attendees were at the 1993 meeting. Attendance was up from the last few meetings.

<u>**Student Subunit**</u> - M. Pike
Dr. Robert Carline spoke to their group urging more participation on their part. The subunit seeks additional support from the Chapter. The students asked several questions concerning finances between the Chapter and the subunit. Suggestions were made to allow more efficient use of funds by the subunit.

<u>**National AFS Update**</u> - Carlos Fetterolf
AFS officers are making an effort to attend chapter meetings. A new editor for <u>**Fisheries**</u> has been chosen. Carlos encouraged members to become active in the parent Society. We have credibility and information that we should advocate for the resource and organization. Parent Society is trying to develop a policy on resource issues. Professional groups are not influencing government as often as environmental groups such as Audubon, Sierra Club, etc. We may want to work more closely with these groups. Continuing education is a real problem that needs to be addressed. We should think of the Fish Action Network (FAN)

as Fish Information Network (FIN).

NE Division Update - Caroline Griswold
Women and minorities were encouraged to become more involved. Perhaps we should try a one-on-one approach to sell the Chapter to prospective members. There are 10 travel stipends to the NE Division meeting for students presenting papers. There is a new editor for the Division newsletter. There will be a continuing education course on creel survey design and techniques at the NE Division meeting.

NE Warmwater Workshop - D. Green
The workshop will be held this fall at the Bonnie Castle Resort on the St. Lawrence River at Alexandria Bay. The theme is black bass management. Abstracts are being solicited at this time and members are encouraged to participate.

Professional Diversity - B. Brett
Research shows that women start out in the aquatics profession but do not stay for various reasons. The gender balancing act needs to be addressed.

Resolutions
None

Environmental Concerns - G. Neuderfer
Although things are quiet at present, there are several issues approaching that we will develop advocacy positions to defend.

Return a Gift - N. Ringler for B. Knuth
There is $1.4 million available for work. The current trend is to place more emphasis on habitat management and analysis than in the past.

Past Presidents Report - T. Field
We are looking into a joint project between the Chapter and Trout Unlimited, parent Society and other environmental groups involving a watershed wide project on the Willowemac and Beaverkill Rivers. The project is in the planning stage.

Old Business
None

New Business
We received a request to support a student for lodging at the NE Division meeting. The student does not need to present a paper but would be asked to help around the meeting. The Chapter voted to pay for two nights lodging.

There was a lengthy discussion about remaking the film "The Aquatic Ecologist" on video. This film was a successful money maker when it was produced by the Chapter. It was agreed we should use a team approach. It was suggested we contact other groups that just produced a video so we did not "reinvent" the video. The audience should include women and minorities. A funding mechanism needs to be developed. We should utilize existing footage. 1993 should be a planning year for this project.

We will consider meeting with the Wildlife Society and possibly the Society of Foresters. We will consider moving the meeting site if needed. We would still have our separate meeting but there would be a joint session with the other groups.

Bill Pearce and Bruce Shupp then escorted Ed Mills to the Podium where Ed took over as president. His first official act was to award the past president's certificate to Neil Ringer. President Mills then asked members to serve on the various committees and reviewed his proposed budget (copy attached).

The meeting was adjourned at 5:45 p.m. by president Mills.

ANNOUNCING THE 1994 ANNUAL MEETING OF THE NEW YORK CHAPTERS OF THE AMERICAN FISHERIES SOCIETY AND THE WILDLIFE SOCIETY OWEGO TREADWAY INN WEDNESDAY, JAN. 26 TO FRIDAY, JAN. 28

You won't want to miss all of the excitement at the upcoming combined annual meeting of New York AFS and the Wildlife Society. The theme for the 1994 annual meeting is **"Managing ecosystems for multiple objectives: perspectives and solutions from natural and social sciences"**. Please note that activities will commence on Wednesday evening, January 26, and the meeting will adjourn on Friday afternoon. Plan on arriving in Owego on Wednesday for a social you'll not soon forget! For further information, contact Al Schiavone, Steve LaPan, or Al Peterson. Look for the first call for papers in the summer edition of the newsletter.

NORTHEAST DIVISION, AMERICAN FISHERIES SOCIETY
WARMWATER WORKSHOP
MANAGING BLACK BASS IN NORTHERN WATERS
Hosted by the New York Chapter, AFS
Bonnie Castle Resort, Alexandria Bay, New York
October 4 - 6, 1993

Early registration deadline: August 16, 1993. AFS member, $58; student, $48; non-members, $68. **After August 16:** AFS member, $63; student, $53; non-member, $73.

All those who register by August 16 will have their name entered in a drawing for a guided St. Lawrence River fishing trip on October 7, including accommodations at Bonnie Castle Resort on the evening of October 6, 1993.

Send registration to: Tim Sinnott, NYSDEC, Room 530, 50 Wolf Road, Albany, New York 12233-4756
Checks should be made out in U.S. currency to: "1993 Northeast Workshop". Reservations for accommodations should be made directly with Bonnie Castle Resort, Holland St., P.O. Box 219, Alexandria Bay, NY 13607. Telephone (315) 482-4511. Cost Room on 10/5, coffee breaks, lunch on 10/5, banquet on 10/5 including all gratuities is $82/person, double occupancy of $112/person, single occupancy. Each additional night will cost $65.00 per room (32.50/person).

Workshop schedule:		
	10/4	Registration and evening social.
	10/5	8:30, Welcome; 8:45 Keynote; Morning Population Biology Session
	10/5	Afternoon regulations Session
	10/6	8:30 continuing Regulations Session, Panel Discussion "Black Bass Research and Management Directions and Partnerships"

For information, contact: Dave Green, Cornell Biological Field Station, 900 Shackelton Point Road, Bridgeport, Ny 13030. (315) 633-9243.

REGISTRATION FORM FOR "MANAGING BLACK BASS IN NORTHERN WATERS"
BONNIE CASTLE RESORT, ALEXANDRIA BAY, NEW YORK
October 4 to 6, 1993

Name ______________________________

Name as it should appear on name badge ________________________

Address ____

City __________ **State/Province** __________ **Postal Code** __________

Telephone __________ **AFS Member? Yes** _____ **No** _____

Spouse/Guest name as it should appear on name badge ______________

Projected Annual Budget - E.L. Mills, President Elect

New York Chapter AFS

1/29/93

Checking Account 1/26/93	$ 943
Certificates of Deposit 1/26/93	$ 8,791
Savings 1/26/93	$ 5,700
Total Cash 1/26/93	$15,434

PROJECTED REVENUES for 1993

1993 Annual Meeting	$ 3,090
1993 Dues	$ 2,000
Dues Rebate, Parent Society	$ 500
Interest	$ 1,000
Student Raffle	$ 300
Miscellaneous	$ 100
TOTAL REVENUES	$ 6,990

PROJECTED EXPENSES FOR 1993

1993 Annual Meeting	$ 5,000
1993 Invited Speakers	$ 850
Office Supplies	$ 50
Postage	$ 325
Travel, AFS Division (Atlantic City)	$ 500
Travel, AFS Division (Portlant)	$ 1,300
Student Subunit	$ 625
Newsletter and Directory (Printing)	$ 1,700
Miscellaneous	$ 50
TOTAL EXPENSES	$10,400

1/26/93

SULLIVAN MEMORIAL MEMBERSHIP AWARD

The Sullivan Memorial Membership Award was established in 1991 by the late Carl R. Sullivan, former Executive Director, to support AFS membership for non-North American fisheries scientist, with emphasis on Irish, Australian, English, and other candidates from English speaking countries. The award is administered by the American Fisheries Society (AFS), and includes an annual membership in AFS and a year's subscription to one of the AFS peer-reviewed journals.

To qualify , applicants must submit a one-page letter describing professional goals and current efforts toward those goals. A brief statement of how membership in the AFS might assist in the goals should also be included. Recommendation from one member of a professional fisheries organization is desirable.

Applications must be sent to the American Fisheries Society, 5410 Grosvenor Lane, Suite 110, Bethesda, Maryland 20814-2199, U.S.A. Fax (301) 897-8096 and received by July 20, 1993, to qualify for the 1994 award. Selection will be made in late August and all candidates will be notified of results.

AFS PUBLISHES INVESTIGATION AND VALUATION OF FISH KILLS

Investigation and Valuation of Fish Kills, American Fisheries Society Special Publication 24, presents the latest methods for determining the economic consequences of fish kills. It revises, updates, and extends the information in Monetary Values of Freshwater Fish and Fish-Kill Counting Guidelines (AFS Special Publication 13), which has been widely used to estimate monetary damages for pollution-related fish kills since 1982.

The new volume guides fishery managers and assessment biologists from the moment a kill occurs until the final fishery value is calculated, and it stresses legal defensible data acquisition and analysis. It has a new chapter on organizing fish kill investigations, including requirements for interagency coordination, field procedures, and sample record-keeping and report forms. It also contains expanded sections on field sampling and statistical principles, updated replacement values of fish (here stratified by geographic region), based on a new survey of U.S. and Canadian hatcheries, and--for the first time--methods for calculating the value of lost angling opportunities. The book emphasizes the importance of local expertise and data, but it shows how to estimate economic losses even when local information is unavailable. Procedures are illustrated with examples and sample calculations.

Investigation and Valuation of Fish Kills is prepared by the Pollution Committee of the AFS Southern Division and the AFS Socioeconomics Section. Books can be purchased from the American

Fisheries Society for: $28.00, ($22.00 AFS Members). Prices include postage and handling inside the U.S. Outside the U.S. add $3.50 per book for postage.

Coming Soon:

Sourcebook for Investigation and Evaluation of Fish Kills will be available in March 1993. This will supplement Special Publication 24 with details of the hatchery survey used to calculate fish replacement costs, economic concepts and procedures for fisheries valuation, an annotated bibliography of fishing trip valuations, and legal precedents for restitution of damages.

New York Chapter - American Fisheries Society
Newsletter September 1993

NEW YORK CHAPTER AMERICAN FISHERIES SOCIETY

3 New York Chapter Officers:

dent: Edward Mills

President: Neil Ringler

President-Elect: Paul McKeown

Secretary-Treasurer: Tim Sinnott

nittees:

onmental Concerns:Gary Neuderfer/Randy Vaas

FinanceJack Hasse/Tom Fields

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ting	Bob Werner, Dave Bryson, Don Stewart
ship	Neil Ringler
er	Paul McKeown
Pnal Incentives	Lars Rudstam/Myriam Ibarra
Vp	Dave Green
Pnal Diversity	Neil Ringler
Rift	Betty Lou Brett
Stbunit	Barbara Knuth/Norm Soule
	Brian Wood/Mark Arrigo

Table 1. Fish regurgitated by nestling cormorants on Wantry Island, Oneida Lake in 1988 - 91.

Species	1988 No.	1988 %	1989 No.	1989 %	1990 No.	1990 %	1991 No.	1991 %	Total number
Walleye	14	40	10	9	19	27	14	9	57
Yellow Perch	15	43	1	1	30	43	35	22	81
Drum	1	3	28	26	0	0	0	0	29
White perch	1	3	1	1	0	0	2	1	4
LM Bass	0	0	0	0	1	1	0	0	1
SM Bass	1	3	0	0	2	3	0	0	3
Sunfish	0	0	14	13	10	14	6	4	30
Rock Bass	0	0	0	0	4	6	1	1	5
Crappie	0	0	3	3	1	1	0	0	4
Gizzard Shad	0	0	42	39	0	0	87	54	129
Burbot	0	0	3	3	0	0	0	0	8
Lamprey	1	3	0	0	0	0	0	0	1
Log Perch	0	0	1	1	0	0	0	0	1
Unidentified	2	6	4	4	3	4	11	7	20

Table 2. Age distribution of walleye and yellow perch recovered from stomachs of cormorants nesting on Wantry Island, Oneida lake 1988-91.

Age	Walleye	Yellow perch
1	8	9
2	17	4
3	17	19
4	4	8
5	0	3
6	0	1
7	0	1

NOTE THE NUMBER 91, 92, OR 93 ON YOUR MAILING LABEL.
THIS DENOTES YOUR DUES STATUS.
TO BE A CURRENT PAID UP MEMBER YOU SHOULD HAVE A 93 ON THE LABEL.

IF YOUR LABEL IS MARKED 91, YOUR NAME WILL BE DELETED FROM THE MEMBERSHIP ROLE AS OF 1 AUGUST 1993.

ENCLOSED IS A MEMBERSHIP BLANK FOR NEW OR RENEWAL MEMBERSHIPS.

SEND YOUR 1993 DUES TO SECRETARY/TREASURER.

If you have joined the chapter when you paid your Parent Society dues, please fill out a membership form and send it in, so we will have your complete information in the directory - Thanks

---

Application for Membership

New York Chapter of the American Fisheries Society

(information provided will be used in the membership directory)

Applicant's name: ______________________ Regular ($10.00)___ Student ($5.00)___
Mailing address: ______________________

______________________ ______________________
Employer or School: ______________________ Student members must be endorsed by a faculty member signing above.
Specialization(s) or interest* ______________________
Telephone ______________________ Home
area code and number
______________________ Business

___ Check here if you wish to receive information about national AFS membership.

*Please indicate area(s) of interest by numerical code from list below.

Make check payable to NY Chapter - AFS and mail this application to address on reverse side of this form.

Specialization or Interest

1. Administration
2. Aquaculture
3. Aquatic biology,ecology(freshwater)
4. Biological controls
5. Benthic organisms
6. Communications (writing,publishing, publicity
7. Exotic species
8. Fish and Fishing, general
9. Fish behavior
10. Fish biology-freshwater species
11. Fish biology-marine species
12. Fish biology-estuarine species
13. Fish biology-salmonids & cold water species
14. Fish biology-warm water species
15. Fisheries management (population dynamics, habitat improvement, etc.)
17. Genetics
18. Health-medicine, aquatic animals
19. Ichthyology, taxonomy
20. Illustrations
21. Impact assessment
22. International fisheries development
23. Legislation and law enforcement
24. Limnology
25. Pesticides
26. Physiology
27. Plankton
28. Pollution
29. Power plants
30. Research
31. Striped bass
32. Sturgeon
33. Toxicology-all phases
34. Water quality-analysis, improvement, etc.
35. Crustaceans
36. Education/Teaching
37. ______
38. ______

MAIL APPLICATION TO:

Timothy Sinnott
SECRETARY/TREASURER
NYC-AFS
c/o NYSDEC
Room 530, 50 Wolf Road
Albany, NY 12233-4756

New York Chapter - American Fisheries Society
Newsletter December 1993

1993 New York Chapter Officers:

President: Edward Mills
Past President: Neil Ringler
President-Elect: Paul McKeown
Secretary-Treasurer: Tim Sinnott

Committees:

Environmental Concerns:	Gary Neuderfer/Randy Vaas
Audit/Finance	Jack Hasse/Tom Fields
Program	Al Schiavone, Steve LaPan, Alan Peterson
Resolutions	Bob Werner, Dave Bryson, Don Stewart
Nominating	Neil Ringler
Membership	Paul McKeown
Newsletter	Lars Rudstam/Myriam Ibarra
Professional Incentives	Dave Green
Workshop	Neil Ringler
Professional Diversity	Betty Lou Brett
Return a Gift	Barbara Knuth/Norm Soule
Student Subunit	Brian Wood
ESF Student Chapter	Mark Arrigo

in early October at Bonnie Castle in Alexandria Bay which was a tremendous success. Organizers Dave Green and Doug Stang as well as local arrangements chairs Bill Gordon and Al Schiavone did a splendid job. Their efforts were greatly appreciated by the Chapter and the Division and on behalf of the Chapter, I would like to say "thanks" for a job well done.

In the last newsletter, I had indicated that the chapter was exploring the feasibility of developing a videotape entitled "The Aquatic Ecologist". Many of you were enthusiastic and supportive of this idea. Since that newsletter, a subcommitte made up of the chapter president, Jim Haynes, Neil Ringler, and Don Stewart learned that the National AFS Education Section is producing a similar video complete with script and film footage. Rather than compete with the Education Section, we chose to submit comments on the script to the AFS Video Committee and, for now, put the idea of a video showing the diversity of professional activities in fisheries on hold.

Lastly, I would like to comment on the new emphasis of proactive advocacy now being generated by the Parent Society of AFS. Anyone who has read the latest issues of Fisheries and who was able to attend the AFS meeting in Portland can see that the Society is entering into advocacy role with some reservations relative to if a professional scientific society is suited to political action. For years AFS has been a source of scientific commentary on legislative issues. As you know, our New York Chapter has provided resolutions and position statements on various issues in the past. The question remains, is this approach most effective in today's economic and political climate? Probably not and this is why I believe AFS's future role in advocacy will take on a more proactive approach. The benefits can be great as shown by the Illinois experience. Recently the Illinois Chapter became involved in the Department of Conservation's Conservation Congress (a collection of natural resource constituents). Through a long series of advocacy actions and focused legislative efforts, the Illinois Chapter is now among the Governor's leading environmental advisors. The Illinois Chapter along with the other members of the conservation congress were able to motivate the public to where legislation resulted in the raising of fishing license fees and the near doubling of the Department of Conservation's fisheries management staff.

The increase in advocacy will demand more from Society officers and volunteers. Many chapters are already making involvement in advocacy one of their top priorities by sending Chapter representatives to the Society's Annual Legislative Conference in Washington, D.C. Eventually each subunit will be asked to desiginate an individual from a chapter who will serve as the link between the Parent Society and the Chapter. This individual will also serve as a link between the local media and government leaders. Where does New York fit in all this? How involved will we be? Are we prepared to evolve along with the rest of the Society? If all of this makes you a bit uncomfortable, you are not alone. However, the "writing is on the wall" from the Parent Society and we need to be prepared on how we will deal with this issue. I hope that this will be a and has been a frequent contributor of papers at annual Chapter meetings.

CAN YOU ENHANCE YOUTH FISHING OPPORTUNITIES?

The numerous youth fishing programs in New York all have one thing in common: they are in dire need of more adult leaders. Most of us are aware of the "failing recruitment" that sport fishing is starting to experience. There is no better time for **you** to utilize your special skills in an **existing** fishing program. If you would also like to exercise your organizational talents, we can give you tools to make your task easier.

A brief meeting will precede our annual banquet on Thursday, January 27 from 6:00-6:30 PM. Please consider attending this meeting to exchange ideas about increasing youth fishing opportunities in New York State.

From the parent society, we received the following press releases:
1) "On the dynamics of exploited fish populations" by Beverton and Holt is available through AFS. Also the Sourcebook for investigation and valuation of fish kills, a supplement to AFS Special Publication No 24. Contact Publication Department 301 897 8616.
2) AFS Excellence in Fisheries Education Award is presented annually to an individual to recognize excellence in organized teaching and advising in some aspects of fisheries education. Nomination deadline is June 1, 1994. Additional information from Mat Sabo, Louisiana State University, Baton Rouge, LA 70803 Tel 504 388 4560.

Upcoming events

New York Chapter Annual Meeting - Owego January 26-28, 1994. See information at the end of the newsletter.

50th Annual Northeast Fish and Wildlife Conference, May 1-4, 1994 at Sheraton Burlington Hotel and Conference Center, Burlington, Vermont. Hosted by Vermont Department of Fish and Wildlife, 111 West STreet, Essex Junction, VT 05452 Tel (802) 878 1564. Conference Theme: The public and the profession: changing constituencies, changing roles. Contact the Vermont DFW for more information

1994 Coolwater Culture Workshop. The workshop will be held at the Sheraton Inn on 7th North Street and Electronics Parkway in Liverpool (Syracuse), New York. Registration and social gathering will occur on the evening of January 10th. The meeting will end on January 12th. Please make room reservations directly with Sheraton (315) 457-1122; specify the meeting. Room rate is $ 67. For additional information contact Rip Colesante, Oneida Fish hatchery, Box 303, hatchery Road, Constantia, New York 13044, Tel 315 623 7311

Newsmakers

Robert E. Lange, Principal Aquatic Biologist, Division of Fish and Wildlife recently was awarded a Certificate of Appreciation for outstanding management of New York's Great Lakes Fisheries. As Great Lakes Section Head, Bob played a vital role in determining DEC's group/individual session on modeling was given by Ray Beamesderfer, Oregon Dept. of Fish and Wildlife and by Allen Creamer, FERC. The meeting closed with a sometimes lively panel discussion. Paul McKeown, DEC, assisted by Shaun Keeler, DEC, served as panel facilitator. Richard Anderson, Art Knapp, NY B. A. S. S. Federation, Mark Ridgeway, Ontario Ministry of Natural Resources, Harold Schramm, USF&WS and Bruce Shupp were panel members and each gave a 10 minute presentation. Ed Cowan, professional bass fisherman from New York, gave a seminar following the workshop banquet on fishing for bass in northern waters.

As a result of the presentations and the discussion, the attendees voted to recommend a work group/task force be formed within NED to establish and maintain lines of communication between agencies within NED. The charges included identify areas of research necessary to effectively manage bass populations. Interest was expressed in factors that influence recruitment in northeast bass populations; the impacts of preseason fishing on bass populations; post-tournament dispersal of bass; genetic benefits to resident populations by periodic introductions of non-resident bass; formulation of objectives for managing bass fisheries and identifying areas of common ground amongst agencies; and pursuit of improving lines of communications with anglers. Bill Hyatt, NED president- elect volunteered to oversee the formation of the work group.

A summary of data on northeast bass populations was prepared by Doug Stang, DEC, for workshop attendees. Sixteen of the presenters have indicated they plan to submit their papers as a group for publishing in the North American Journal of Fisheries Management. A summary of the panel presentations and discussion and a workshop summary was prepared and mailed to all attendees.

The workshop committee consisted of Peter Cronin, NB; David Green (Committee Chair), NY; Richard Hartley, MA; Robert Jacobs, CT; Catherine Martin, DE; Dennis McNeish, ME; Douglas Stang, NY; Kenneth Beal, MA; Joseph Bergin, MA. The NY Chapter liaison committee consisted of Mark Arrigo, Neil Ringler and Al Schiavone. Tim Sinnott served as treasurer for the workshop.

Fisheries Activities at the Center for Applied Aquatic Science and Aquaculture, From Jim Haynes

Address: Department of Biological Sciences, SUNY College at Brockport, Brockport, NY 14420-2973.-Tel: 716-395-5783, FAX 716-395-2416

Overview

The Center for Applied Aquatic Science and Aquaculture, formed in 1990, complements traditional academic departments at the State University of New York College at Brockport while developing further the College's potential in the aquatic sciences and related fields. Since the late 1960's, SUNY Brockport has provided substantial support for aquatic science education, research and extension activities in western New York. The College has: employed continuously three or more

◆Dr. Joseph C. Makarewicz
LIMNOLOGY, ECOLOGY: ecosystem approach to environmental analysis and community ecology; nutrient cycling; zooplankton-phytoplankton interactions; toxic chemicals; water quality and watershed analysis.

Personnel in cooperating disciplines:
◆Dr. Robert W. Adams
OCEANOGRAPHY, SEDIMENTOLOGY: sedimentary and erosion processes in the Great Lakes and coral reef systems.
◆Dr. Gregory P. Byrd
SYNOPTIC METEROLOGY: weather forecasting; Great Lakes meterology; mesoscale phenomena; lake effect storms.
◆Dr. Richard M. Liebe
PALEONTOLOGY, BIOLOGICAL OCEANOGRAPHY: sediments and stratigraphy; coral reef biology; environmental issues.
◆Dr. Christopher Norment
BEHAVIORAL ECOLOGY, ORNITHOLOGY: bird ecology and behavior, riparian and wetland organism/habitat interactions.
◆Dr. Stanley C. Ross
BUSINESS ADMINISTRATION, ECONOMICS: economics of small business creation and planning; strategic planning.
◆Dr. Robert S. Weinbeck
METEOROLOGY: climatic statistical pattern analysis; climatic influences and sunspot cycles.

Current Research Projects of Aquatic Science Faculty at SUNY Brockport

♦ Benthic macroinvertebrate community changes after zebra mussel invasion of Lake Ontario
♦ Impacts of large-scale cage culture in the St. Lawrence River
♦ Phosphorus recycling in zebra mussel communities
♦ Why aren't zebra mussels colonizing streams with flows augmented by the Erie Canal?
♦ Developing aquaculture potential of the Bay of Quinte
♦ Phosphorus remediation effects in Lakes Michigan and Ontario
♦ Spring thermal fronts and salmonine catches in Lake Ontario
♦ Habitat assessment of the lower Salmon River (Ontario) for potential aquaculture fishes
♦ Stressed stream analysis in western New York watersheds

DEC - Region 9 Fisheries Programs From Paul McKeown

Bordered on the north by the Niagara River and Lake Ontario, to the west by Lake Erie, and to the south by the Pennsylvania State line, Region 9 incorporates the most westerly portion of the New York State. The main regional DEC Office is located in the City of Buffalo where a fisheries biologist is responsible for urban fisheries issues, the review of habitat protection permits and regional responsibilities for Lake Ontario and the Niagara River. The remainder of the regional fisheries staff are located in the Olean suboffice. Regional responsibilities can be broken down into two general categories; "species management" and "people management". Species management can be further segregated into inland warmwater management, inland coldwater management, Great Lakes fisheries management and public access.

viability of one of the State's finest wild muskellunge fisheries.

No less important is the sustainability of fishing opportunities through the acquisition and maintenance of public fishing rights (PFR) and fishing access sites (FAS). To date, 132 miles of streamside easements have been acquired in Region 9 alone and public access in the form of launch ramps and parking have been acquired on all major regional lakes. Such access held in "public trust" will ensure the availability of these resources for generations to come.

A comprehensive review of the Region 9 fisheries program would be incomplete without inclusion of "people management" responsibilities. These responsibilities include one-on-one interactions with anglers and non-anglers alike, presentations to affiliated organizations such as the Federation of Sportsmen, Trout Unlimited, BASS, Rotary Clubs, Lions Clubs, Aquarium Clubs, etc., and the incorporation of user input into fisheries management plans. Regional staff also expend considerable effort presenting an informational slide series extolling the benefits of a healthy aquatic environment to all interested seventh grade classes in the region.

Other Regional activities include surveys for endangered/threatened fishes (for example, longear sunfish), participation in three Great Lakes Remedial Action Plans (RAP), providing technical support for habitat enhancement/ restoration programs, conducting angler cooperator programs (primarily warm water fisheries), collecting fish for contaminant analysis and assessing impacts of many types of projects on aquatic resources.

<u>Regional Staff</u>

Stephen Mooradian (Supervisor)

Scott Cornett	Olean
Joseph Evans	Olean
Barry Hohmann	Olean
Paul McKeown	Olean
Thomas Murray	Olean
James Pomeroy	Olean
Emilio Rende	Olean
James Spinelli	Olean
Michael Wilkinson	Buffalo

Annual Meeting of the New York Chapters of the
American Fisheries Society and the Wildlife Society

Natural Resource Management in New York:
Cross-Disciplinary Perspectives

January 26 - 28, 1994, Owego Treadway Inn, Owego, N.Y.

Wednesday, January 26

6:15 PM Executive Committee Meetings (Separate)
8:30 PM Mixed Social

Thursday, January 27

9:00 AM Introductions: Charlie Smith, NYCTWS and Edward Mills, NYCAFS

9:10 AM Keynote Address: Participatory Approach to Decision Making,
Steve Harper, USDA Forest Service (ret.)
Steve Harper served eight years as the Supervisor of the Green Mountain and Finger Lakes National Forests for the USDA Forest Service. He spent three years as Coordinator of the Northern Forests Land Study. He is currently the President of the Board of Trustees for the Vermont Institute of Natural Science, an organization devoted to environmental education, avian research, and raptor rehabilitation.

10:00 AM Fisheries and Wildlife Management in New York Today:
a Cross Disciplinary Perspective, Barbara Knuth, Cornell University

10:30 AM Break

10:45 AM Panel Discussion: Public Involvement in Natural Resource Management Decisions
Mike Cavanaugh, NYSDEC, Moderator
(15 min) Public Involvement in Fisheries Management Decisions:
Lake Ontario Salmonid Stocking Policy
Robert Lange, NYSDEC, Albany
(15 min) Public Involvement in Wildlife Management Decisions:
the Northern New York Moose Reintroduction Experience
Alan Hicks, NYSDEC, Delmar
(30 min) Open Panel Discussion with S. Harper, B. Knuth, R. Lange, and A. Hicks

11:45 AM Effects of Increasing Beaver Populations in New York
Paul Bishop, NYSDEC, Delmar

12:15 PM Lunch

NEW YORK CHAPTERS - AMERICAN FISHERIES SOCIETY
AND THE WILDLIFE SOCIETY
SECOND AND FINAL CALL FOR PAPERS
ANNUAL MEETING - JANUARY 28, 1994

AUTHOR:

TITLE:

STUDENT ☐ PROFESSIONAL ☐ POSTER ☐

ADDRESS SENIOR AUTHOR: ____________________

TELEPHONE (DAYS): ____________________

SUBMIT ABSTRACTS TO:

<u>Fisheries</u>
Steve LaPan
NYSDEC
317 Washington St.
Watertown, NY 13601

<u>Wildlife</u>
Dave Nelson
NYSDEC
50 Wolf Rd., Rm 459
Albany, NY 12233

NEW YORK CHAPTER — AMERICAN FISHERIES SOCIETY
c/o NYDEC, 50 Wolf Road, Albany, NY 12233-4756

New York Chapter, American Fisheries Society
1994 Annual Meeting Registration, and Membership Renewal

SPEEDY REGISTRATION INSTRUCTIONS: Complete all of the items marked * in advance. Bring the completed form to the registration table with your check for the correct exact amount. The receipt will be checked, signed, cut-off, and given to you. Complete items 2 - 6. only if you are a new member, or you wish to change any of the information. Check the directory if you are unsure.

1. * NAME ______
2. * Employer or School ______
3. * Address (Street, PO Box, Apt #) ______
4. * Address (City, State, Zip) ______
5. * Telephone number, Home: ______ Work: ______
6. * Interest or Specialization (see codes on back) ______
7. * ALL: Membership New ______ Renewal ______

* Circle all applicable fees:

	STUDENT MEMBER	REGULAR MEMBER
Meeting Registration	\$22.00	\$29.00
Chapter Membership	\$ 5.00	\$10.00

* Enter Total: ______

Make checks payable to **NY Chapter, AFS**

- -

NEW YORK CHAPTER, AMERICAN FISHERIES SOCIETY
RECEIPT

* January ____, 1994

Received from * ______, \$ ______

for 1994 Annual Meeting Registration ______ 1994 NY Chapter Membership ______
Student Rate ______ Regular Rate ______

______

Timothy J. Sinnott
Secretary/Treasurer

NOTE THE NUMBER 91, 92, OR 93 ON YOUR MAILING LABEL.
THIS DENOTES YOUR DUES STATUS.
TO BE A CURRENT PAID UP MEMBER YOU SHOULD HAVE A 93 ON THE LABEL.

IF YOUR LABEL IS MARKED 91, YOUR NAME WILL BE DELETED FROM THE MEMBERSHIP ROLE AS OF 1 AUGUST 1993.

ENCLOSED IS A MEMBERSHIP BLANK FOR NEW OR RENEWAL MEMBERSHIPS.

SEND YOUR 1993 DUES TO SECRETARY/TREASURER.

- -

Application for Membership

New York Chapter of the American Fisheries Society

(information provided will be used in the membership directory)

Applicant's name: ______________________ Regular ($10.00)___ Student ($5.00)___

Mailing address: ______________________

______________________ ______________________

Employer or School: ______________________ Student members must be endorsed by a faculty member signing above.

Specialization(s) or interest* ______________________

Telephone ______________________ Home

area code and number

______________________ Business

___ Check here if you wish to receive information about national AFS membership.

*Please indicate area(s) of interest by numerical code from list below.

Make check payable to NY Chapter - AFS and mail this application to address on reverse side of this form.

Specialization or Interest

1. Administration
2. Aquaculture
3. Aquatic biology,ecology(freshwater)
4. Biological controls
5. Benthic organisms
6. Communications (writing,publishing, publicity
7. Exotic species
8. Fish and Fishing, general
9. Fish behavior
10. Fish biology-freshwater species
11. Fish biology-marine species
12. Fish biology-estuarine species
13. Fish biology-salmonids & cold water species
14. Fish biology-warm water species
15. Fisheries management (population dynamics, habitat improvement, etc.)
17. Genetics
18. Health-medicine, aquatic animals
19. Ichthyology, taxonomy
20. Illustrations
21. Impact assessment
22. International fisheries development
23. Legislation and law enforcement
24. Limnology
25. Pesticides
26. Physiology
27. Plankton
28. Pollution
29. Power plants
30. Research
31. Striped bass
32. Sturgeon
33. Toxicology-all phases
34. Water quality-analysis, improvement, etc.
35. Crustaceans
36. Education/Teaching
37. ______________
38. ______________

MAIL APPLICATION TO:

Timothy Sinnott
SECRETARY/TREASURER
NYC-AFS
c/o NYSDEC
Room 530, 50 Wolf Road
Albany, NY 12233-4756