

**INDEX FISHING
in SK & MB**

Monitoring size and abundance

**SRSMB 2012-April-19
(Rob Wallace)**

INDEX FISHING (SK and MB)

The objectives described in 1999 were:

- (1) catch-per-effort data for comparison to historical catch rates (commercial fish over 12 lbs 'market' or 18 lbs 'live')**
- (2) monitor sturgeon sizes and movements**
- (3) measure, tag, release, and recapture sturgeon for estimates of population abundance & trends**

SK	MB
fishing by 8 to 10 crews	fishing by 3 or 4 crews
traditional areas for summer hooks and nets (8, 10, 12")	assigned areas for June nets (5½" and 8, 10, 12")
paid for sturgeon caught	paid daily salary
field data by Project Workers	field data by MB staff

CATCH RATES (NUMBER per CREW-WEEK)

(1) Data from 1983 to 1999 showed abundance of sturgeon was steady or declining:

Average catch/week was declining and frequency of zero-catches was increasing

(2) Catch rate data for 15 years would likely only detect losses of 5% annually (half of population)

(3) Records of fishing effort were very difficult for Project Workers to collect

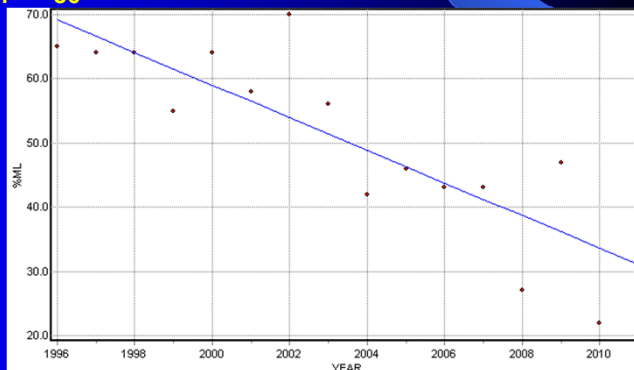
Number per net-night for SK/MB population was similar to other studies on depleted populations

TRENDS IN SIZES

YEAR	%ML	YEAR	%ML
1996	65	2006	43
1997	64	2007	43
1998	64	2008	27
1999	55	2009	47
2000	64	2010	22
2001	58	2011	36
2002	70		
2003	56		
2004	42		
2005	46		

(average 58)

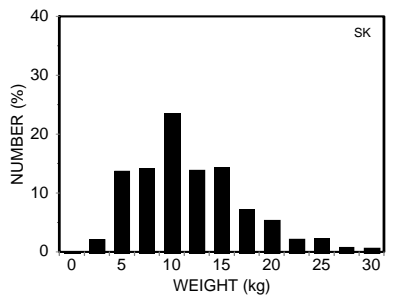
ML is Medium & Large (18 lbs or 8.2 kg)



**LIVE WEIGHT
(kg, 1994 - 2005)**

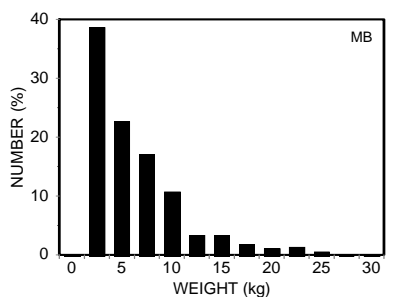
SK

Average 10.7
(24 pounds)
Minimum 0.7
Maximum 33.6
for 1906 sturgeon



MB

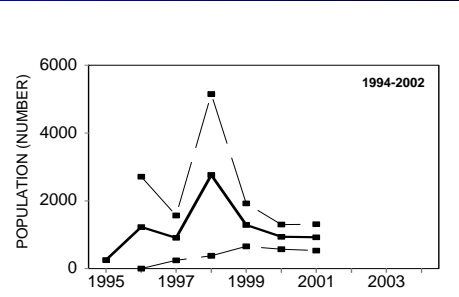
Average 5.1
(11 pounds)
Minimum 0.5
Maximum 26.5
for 394 sturgeon



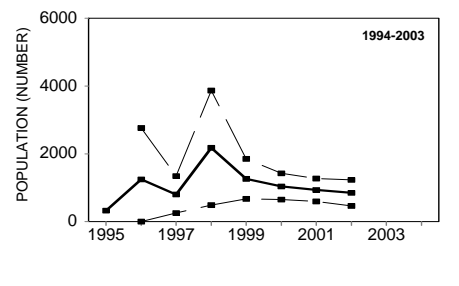
ABUNDANCE

SK & MB (MEDIUM & LARGE)

ANALYSIS DONE FOR 2002 ->
AVERAGE = 1,184
(396 to 2,327)



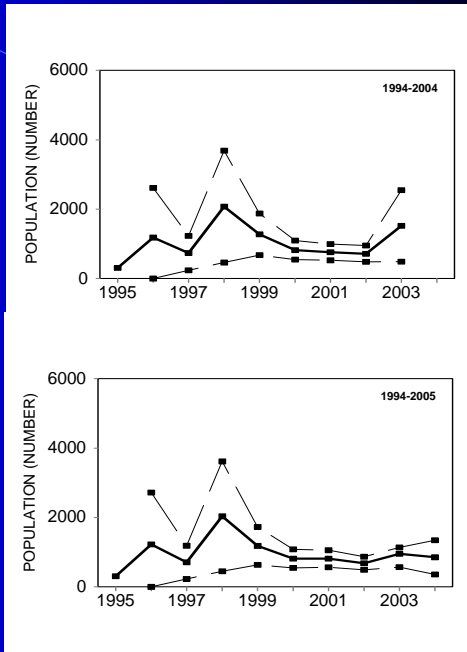
ANALYSIS DONE FOR 2003 ->
AVERAGE = 1,077
(445 to 1,963)



**ABUNDANCE
SK & MB (MEDIUM & LARGE)**

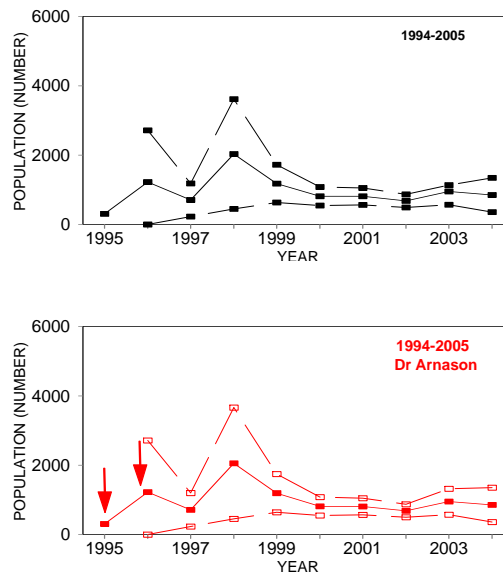
ANALYSIS DONE FOR 2004 - >
AVERAGE = 1,042
(426 to 1,873)

ANALYSIS DONE FOR 2005 - >
AVERAGE = 957
(427 to 1,637)



**ABUNDANCE
FOR 2005 - >**
AVERAGE = 957
(Wallace)

**ABUNDANCE
FOR 2005 - >**
AVERAGE = 962
(Arnason)



SUMMARY OF PREVIOUS ANALYSIS

PERIOD	ABUNDANCE	SURVIVAL
1994 – 2002	1,184	93 %
1994 – 2003	1,077	89 %
1994 – 2004	1,042	93 %
1994 – 2005	957	89 %

SK & MB ... MEDIUM & LARGE

MARK-RECAPTURE ... SK and MB

YEAR	ALL	M&L
1994 - 2005	2654	1532
2006	278	120
2007	366	156
2008	437	120
2009	390	184
2010	614	135
2011	197	70
1996 - 2011	4937	2317

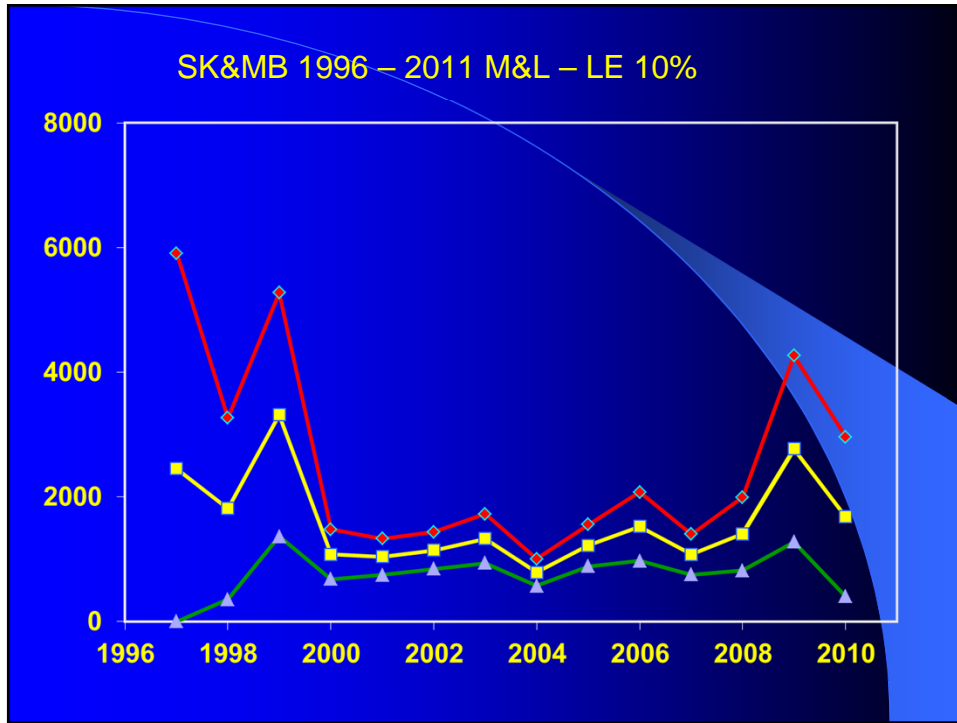
MARK-RECAPTURE ... Basic data

Number =	183	146	134	348	298...	275	248...	437	614	5003
FISH ID#	1996	1997	1998	1999	2000	2002	2004	2008	2010	Times
5607						1				1
24362437										0
5613						1				1
25302531	1									1
25322533										0
41454146		1			1		1	1		4
43594360			1	1					1	3
44124413				1						1
44144415				1						1

MARK-RECAPTURE ... 'Recaps' missing

TRMSQ34013285GTF			
TRMSQ3GU1HBGP5LF			
TRMSQ3GU1JC0Q8TF	<--- 1 , 0 (one, zero)		
TRMSQ3GU1JCOQ8TF	<--- 1 , 0 (one, oh)		
TRMSQ3GUIJCOQ8TF	<--- 1 , 0 (aye, oh)		
TRMSQ3H01HBPSEDF	<--- 0		
TRMSQ3HM1J38BILF			
TRMSQ3HM1J39QODF			
TRMSQ3HO1HBPSEDF	<--- 0		
TRMSQ3HO1J3B5GTF			
TRMSQ3LR1J3A7RDF			
TRMSQ3MQ1HBPL45F			
TRMSQ3MQ1IP5MELF			

Year	Nov2011	Now
2011	17 %	7 %
2010	11 %	4 %
2008	7 %	7 %
2007	11 %	10 %
2004	6 %	5 %
2000	9 %	8 %



PERIOD	ABUNDANCE	SURVIVAL (M&L)
1994 – 2002	1,184	93 % Wallace
1994 – 2003	1,077	89 %
1994 – 2004	1,042	93 %
1994 – 2005	957	89 %
1994 – 2005	962	80 % Dr Arnason
1996 – 2006	1,032	81 %
1996 – 2011	1,615	86 % M&L only
1996 – 2011	4,901	87 % ALL sizes

QUESTIONS ?