Lake Huron Symposium

Esocids

and

Centrarchids

March 21, 2001

Fishery Objectives

Esocids

Northern Pike — **Maintain as prominent predator throughout its native range**

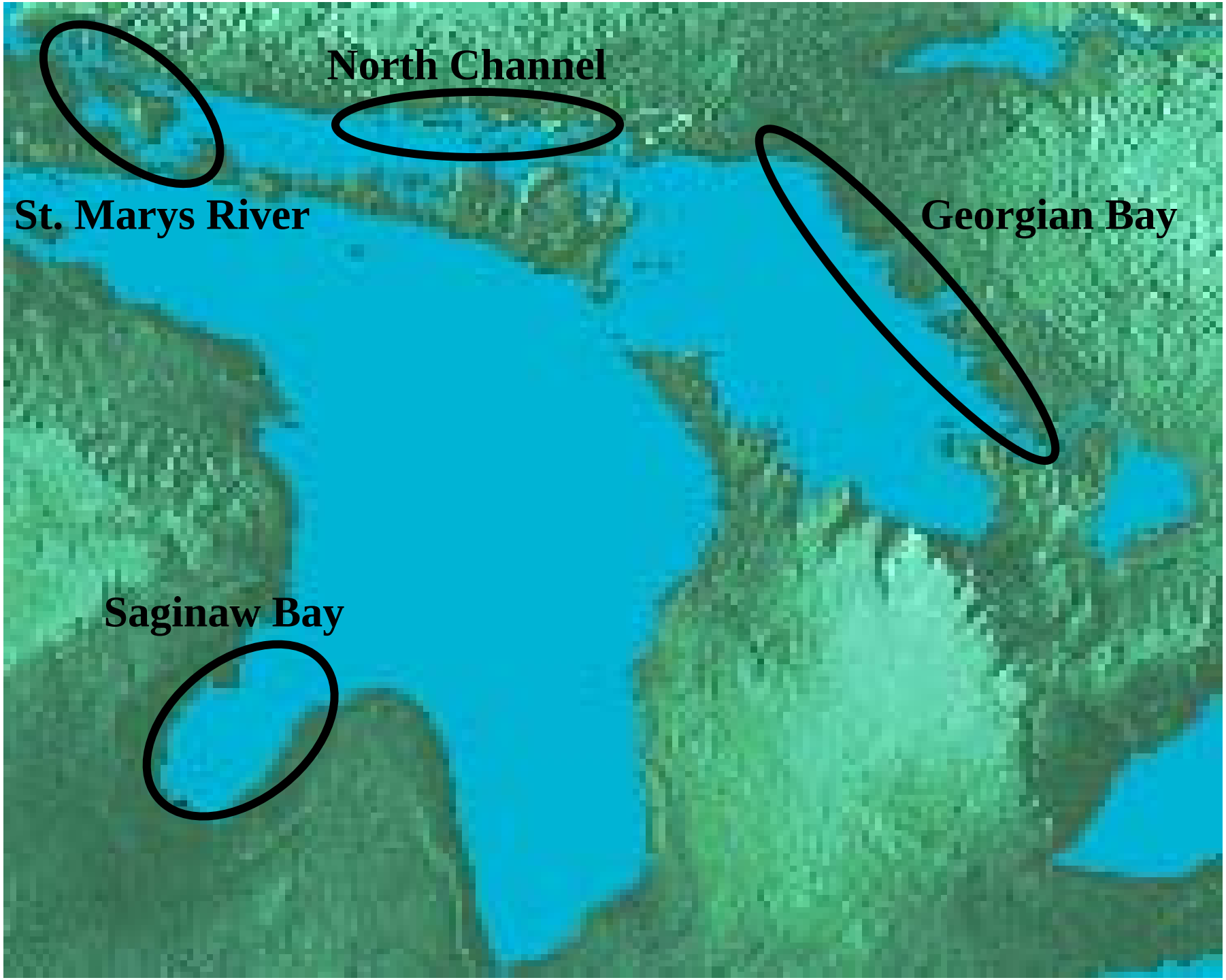
Muskellunge — **Maintain numbers and at sizes that will safe guard and enhance its status and appeal**

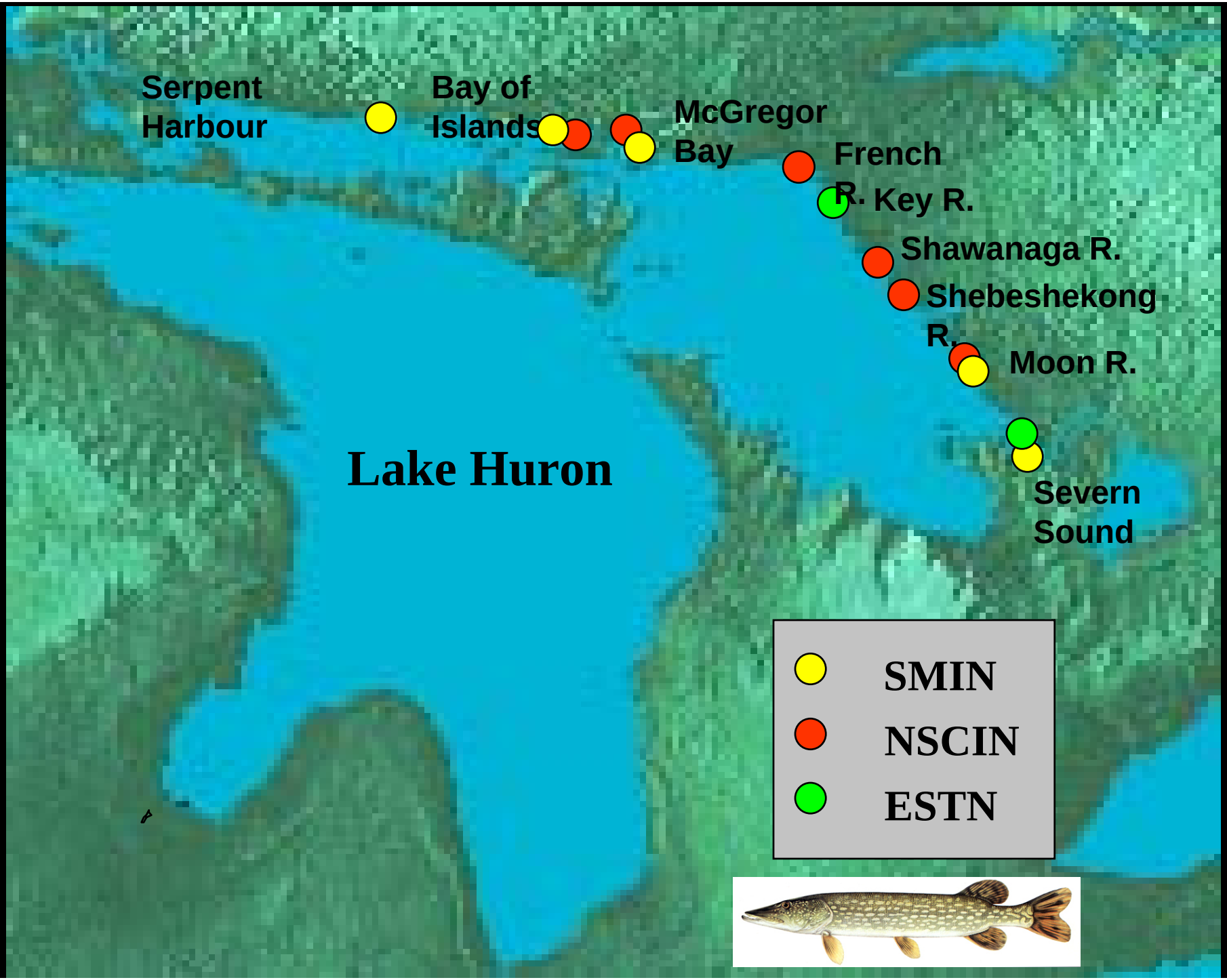
Sustain a harvestable annual surplus of 0.1 million kg of these esocids

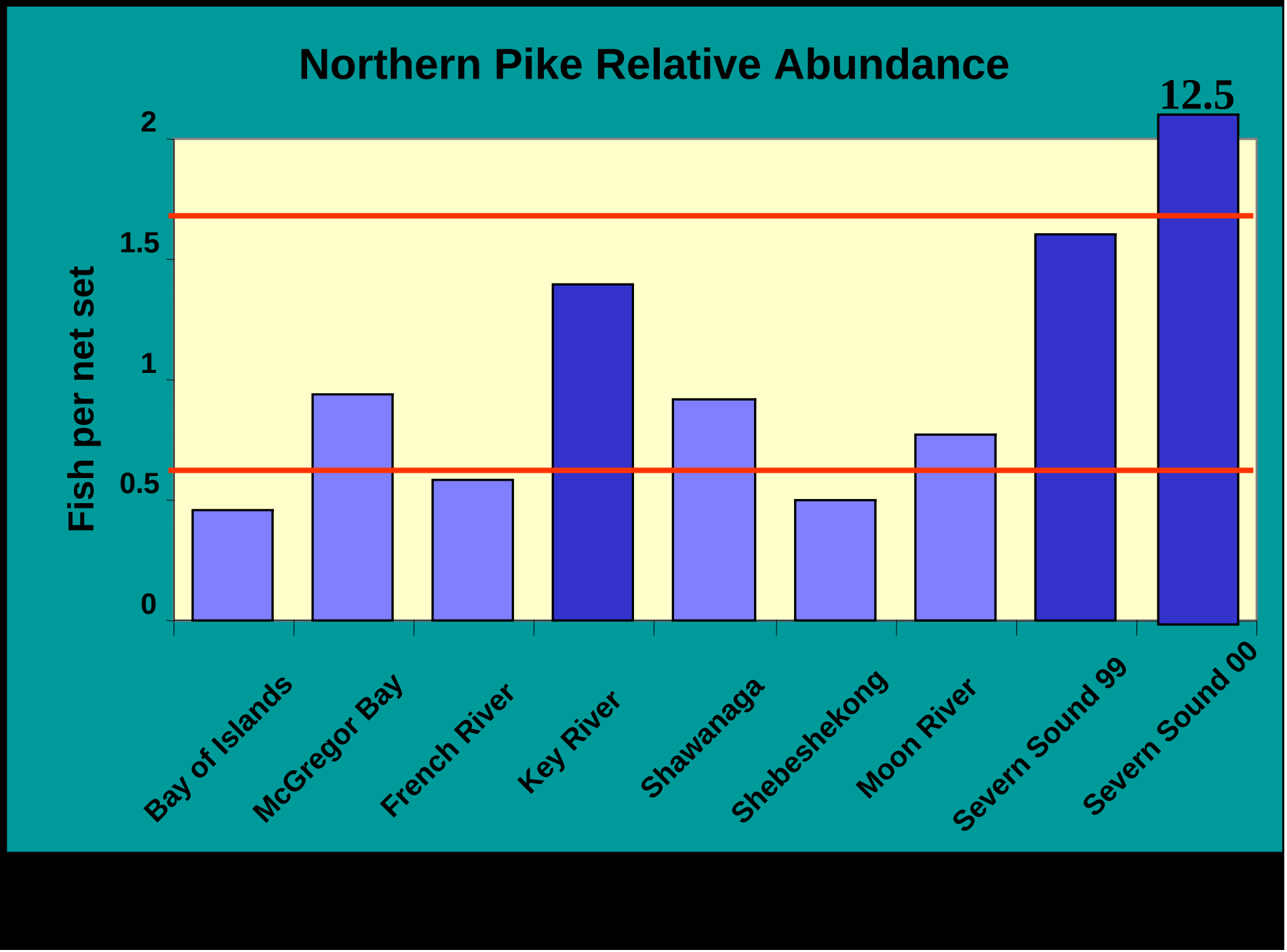
Fishery Objectives

Centrarchids

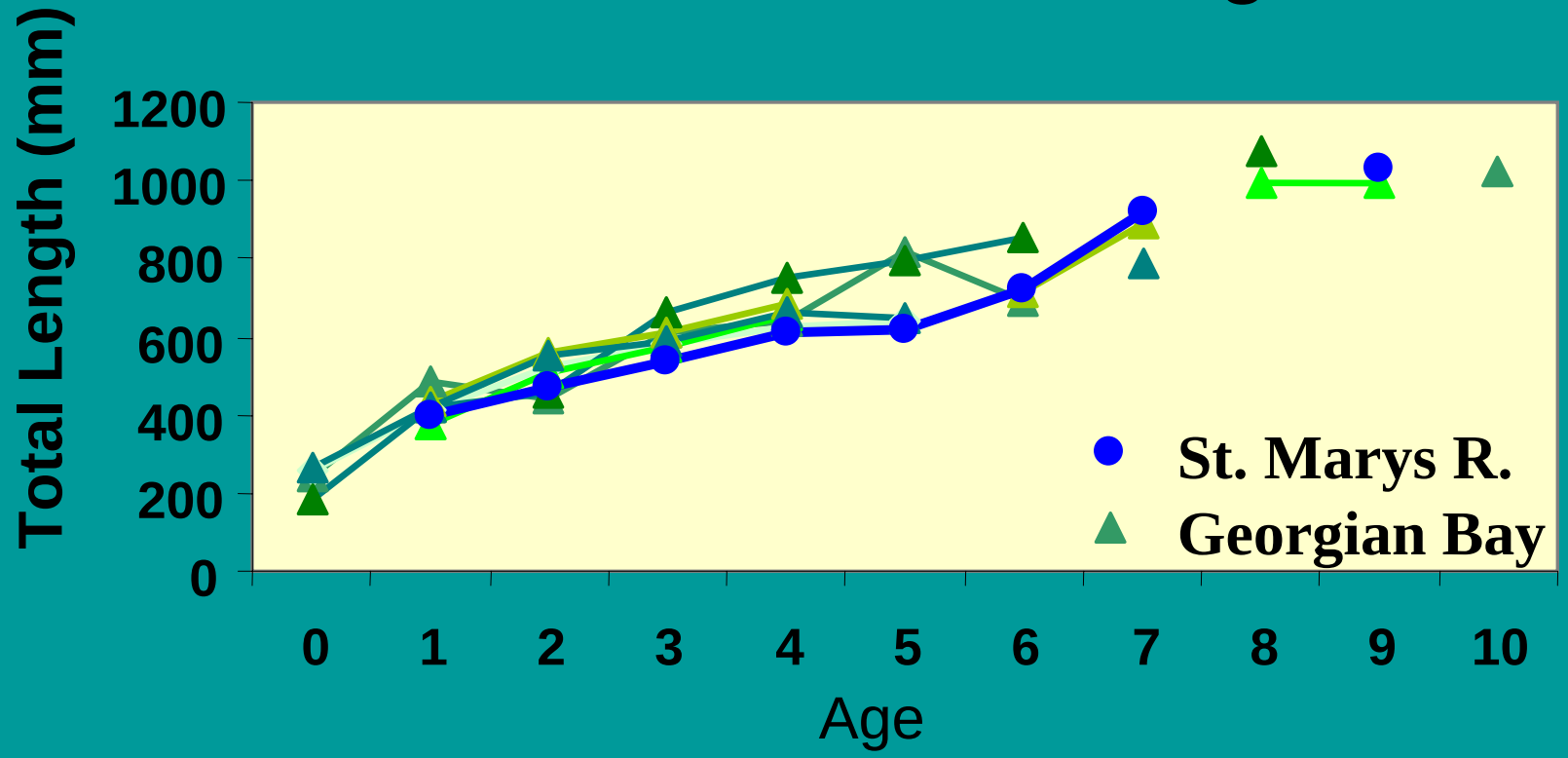
To sustain smallmouth and largemouth and the remaining assemblage of sunfishes at recreationally attractive levels over their natural ranges

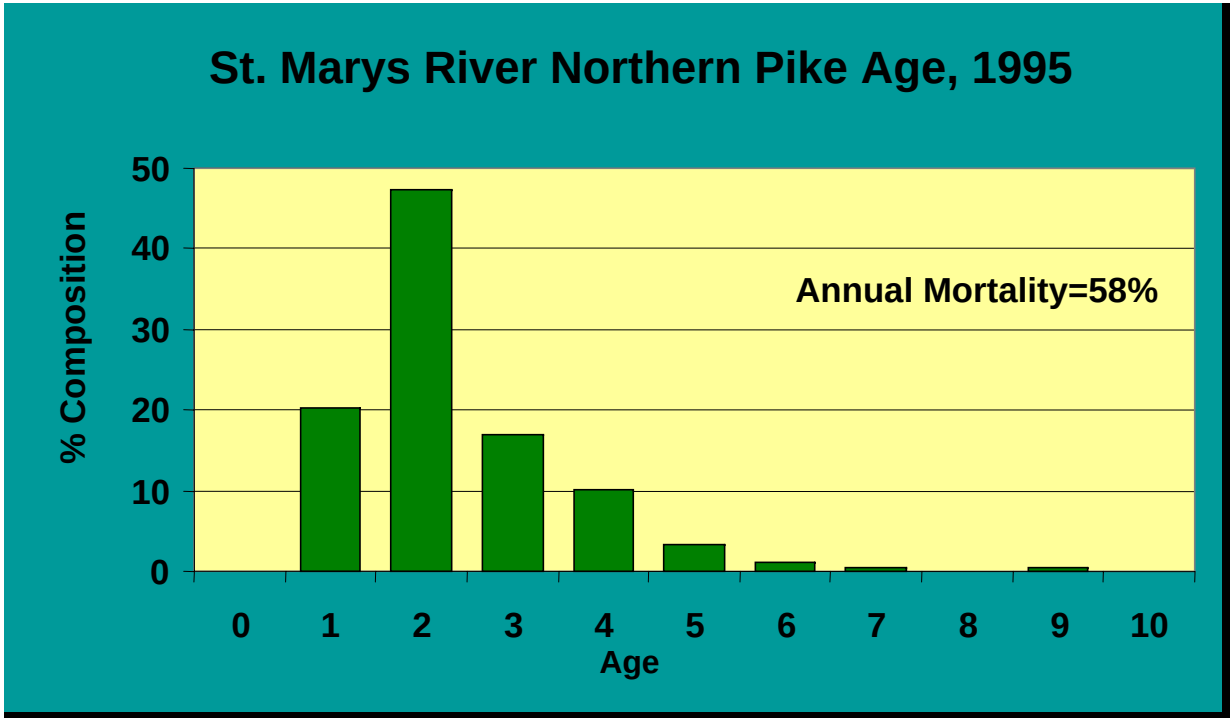

North Channel
St. Marys River
Georgian Bay
Saginaw Bay

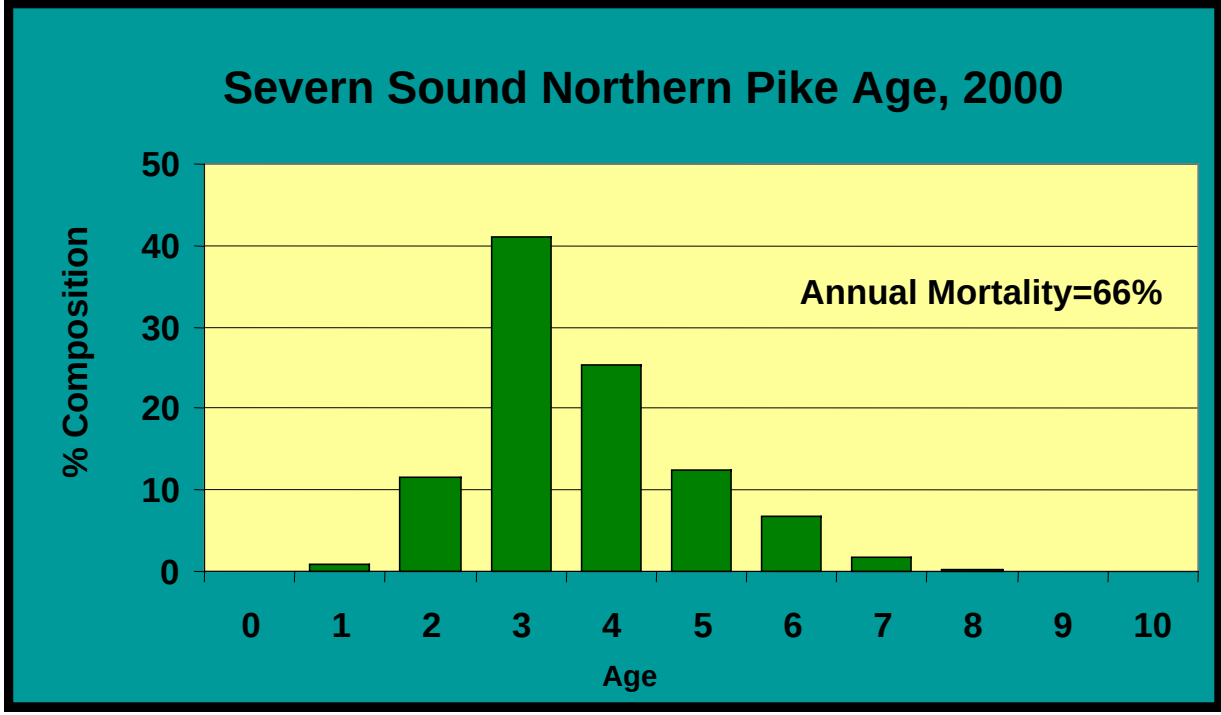

Serpent Harbour
Bay of Islands
McGregor Bay
French R.
Key R.
Shawanaga R.
Shebeshekong R.
Moon R.
Severn Sound
Lake Huron
SMIN
NSCIN
ESTN

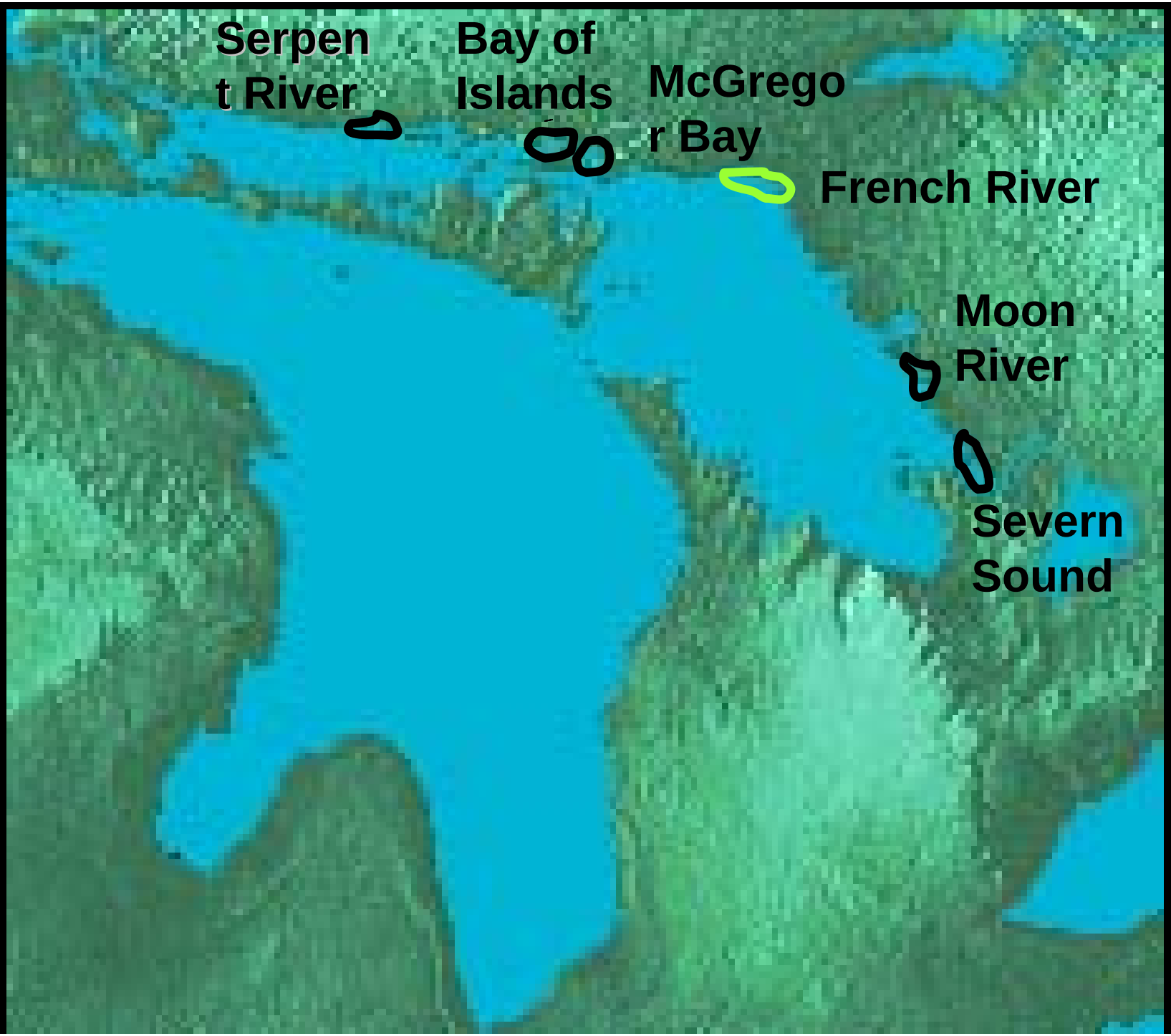

Northern Pike Relative Abundance
12.5
2
1.5
1
0.5
0
Fish per net set
Bay of Islands
McGregor Bay
French River
Key River
Shawanaga
Shebeshekong
Moon River
Severn Sound 99
Severn Sound 00

Northern Pike Size at Age

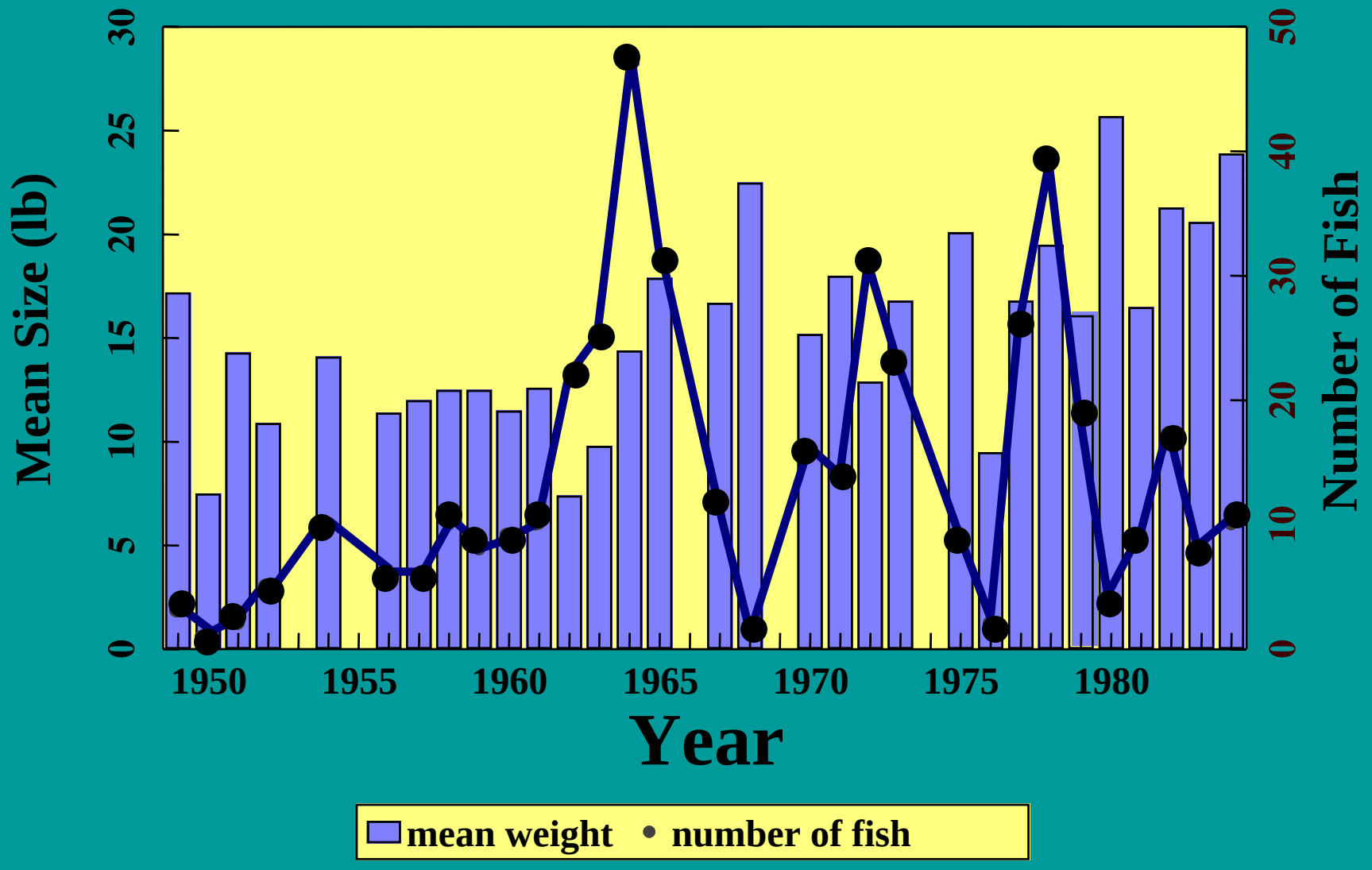


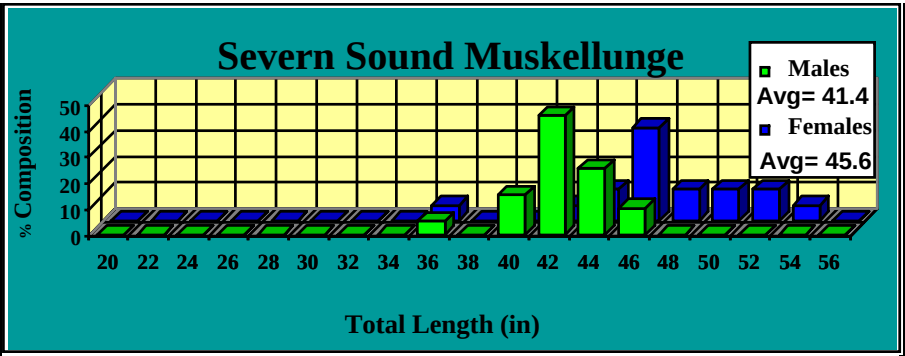

St. Marys River Northern Pike Age, 1995
% Composition
50
40
30
20
10
0
Annual Mortality=58%
0 1 2 3 4 5 6 7 8 9 10
Age

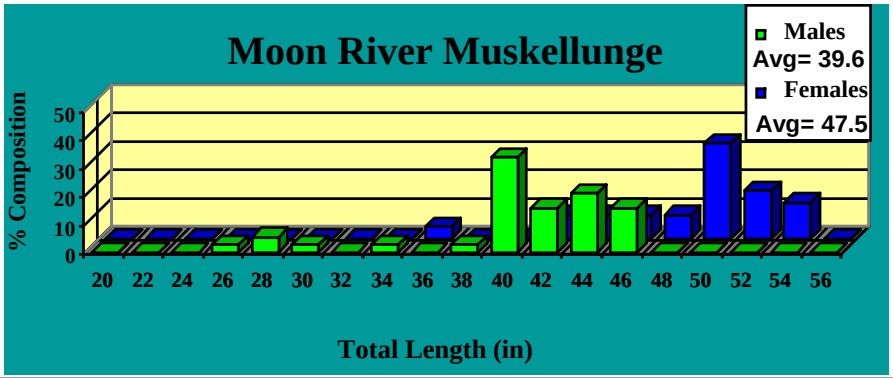

Severn Sound Northern Pike Age, 2000
% Composition
50
40
30
20
10
0
Annual Mortality=66%
0 1 2 3 4 5 6 7 8 9 10
Age

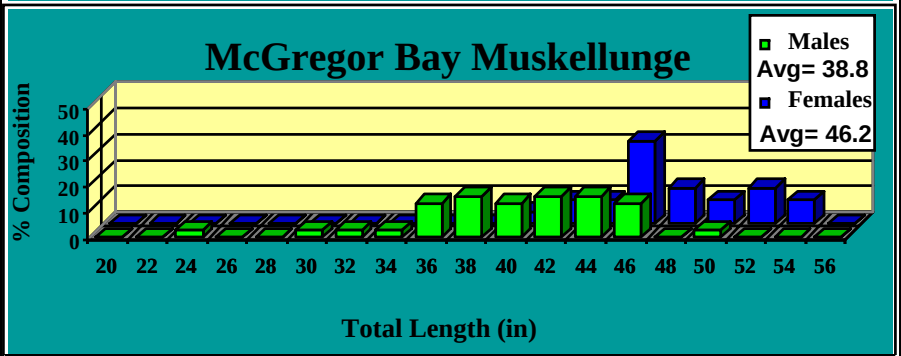

Serpen
t River
Bay of
Islands
McGrego
r Bay
French River
Moon
River
Severn
Sound

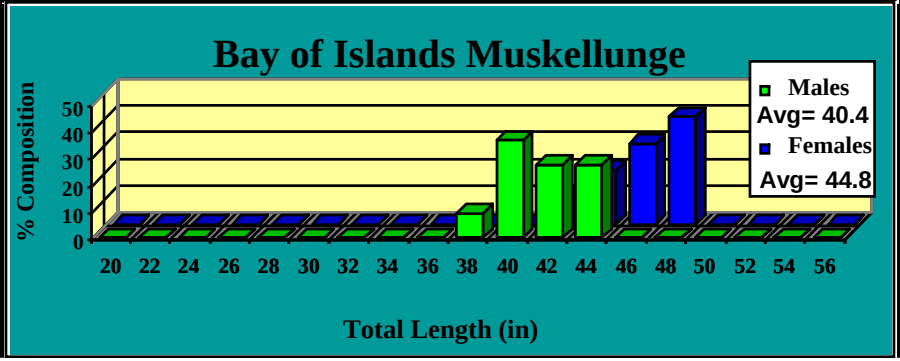
Muskellunge Guide Data from Southern Georgian Bay

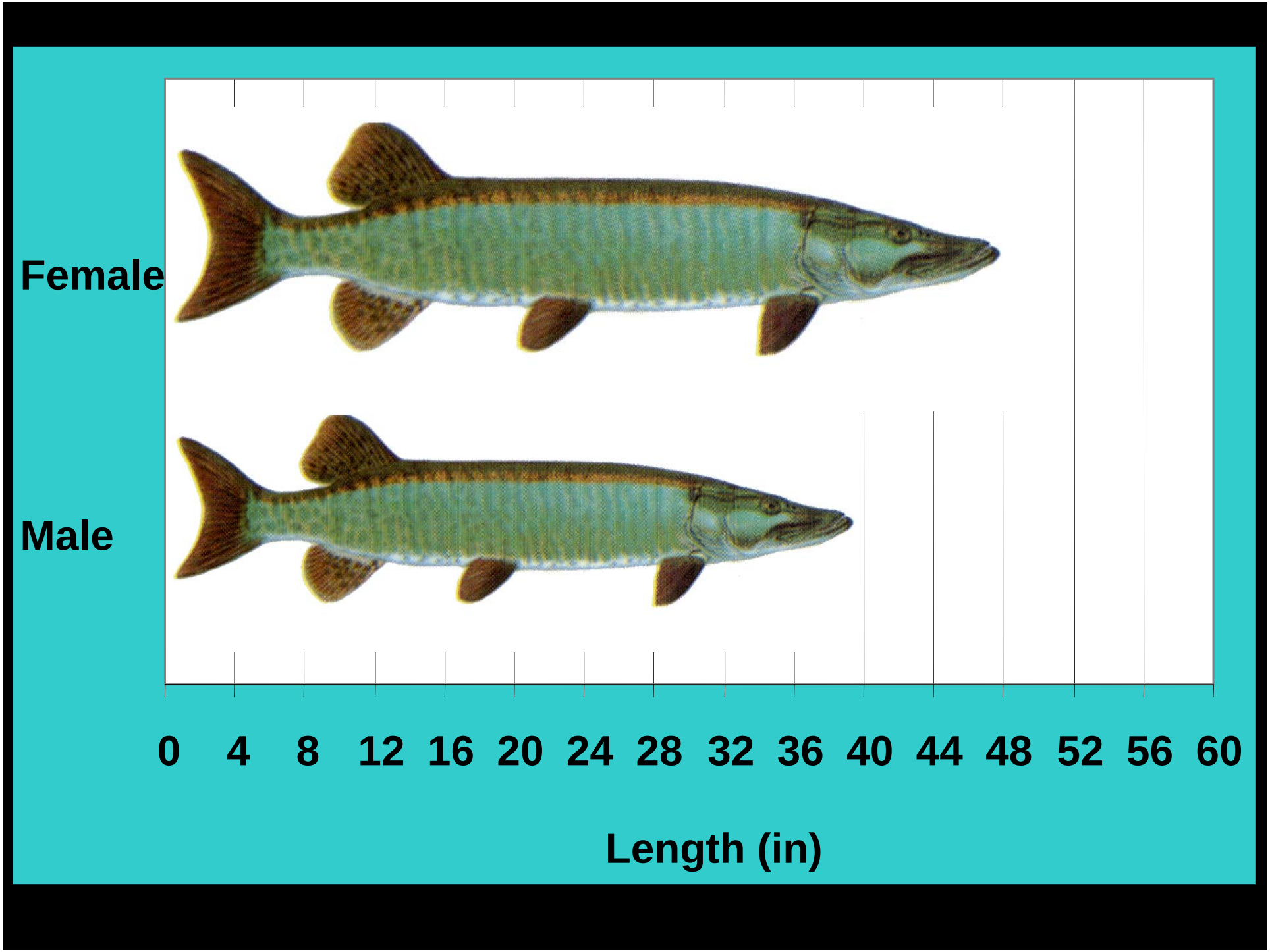


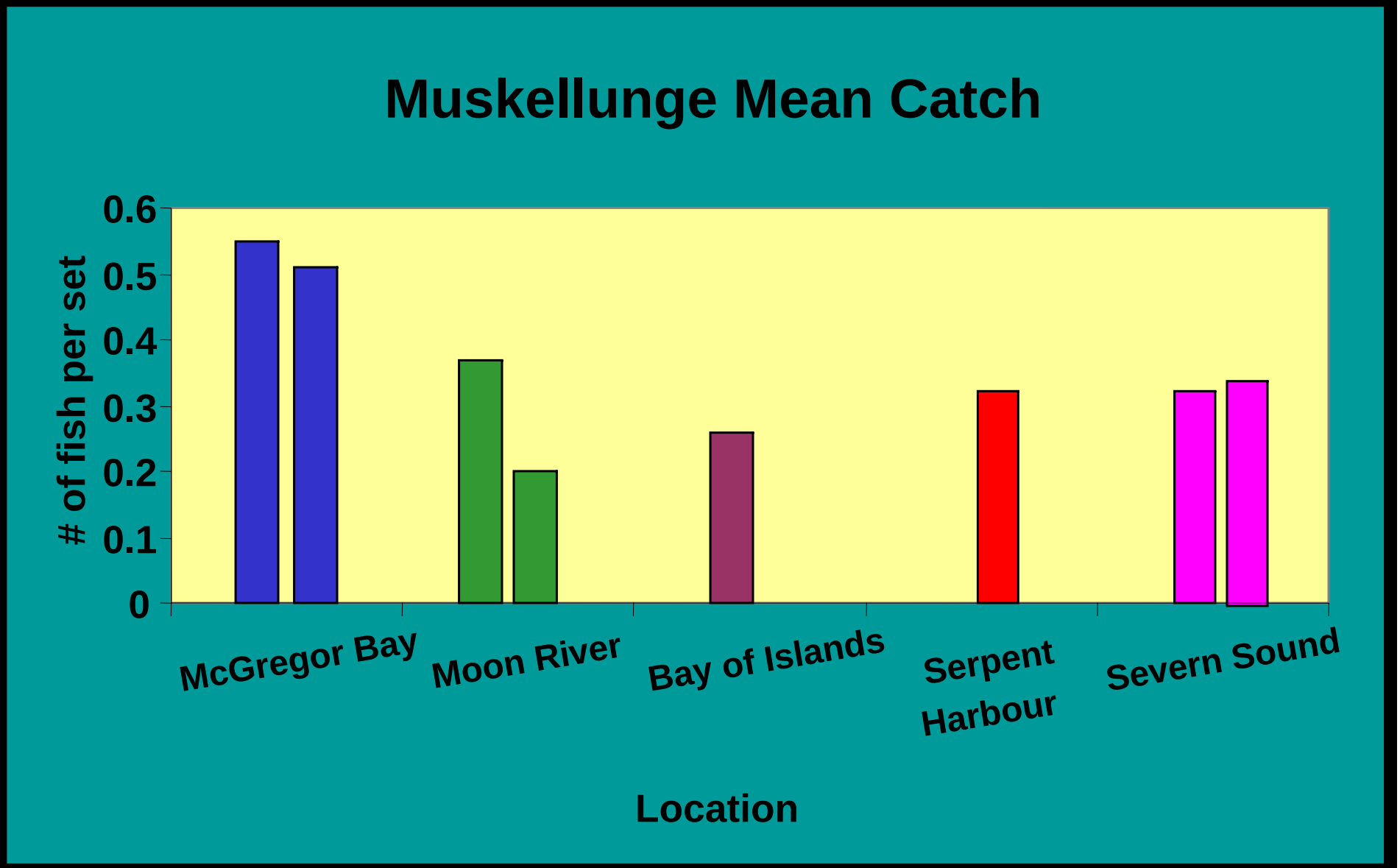

Severn Sound Muskellunge
Males
Avg= 41.4
Females
Avg= 45.6
% Composition
0 10 20 30 40 50
20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54 56
Total Length (in)


Moon River Muskellunge
Males
Avg= 39.6
Females
Avg= 47.5
% Composition
0 10 20 30 40 50
20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54 56
Total Length (in)

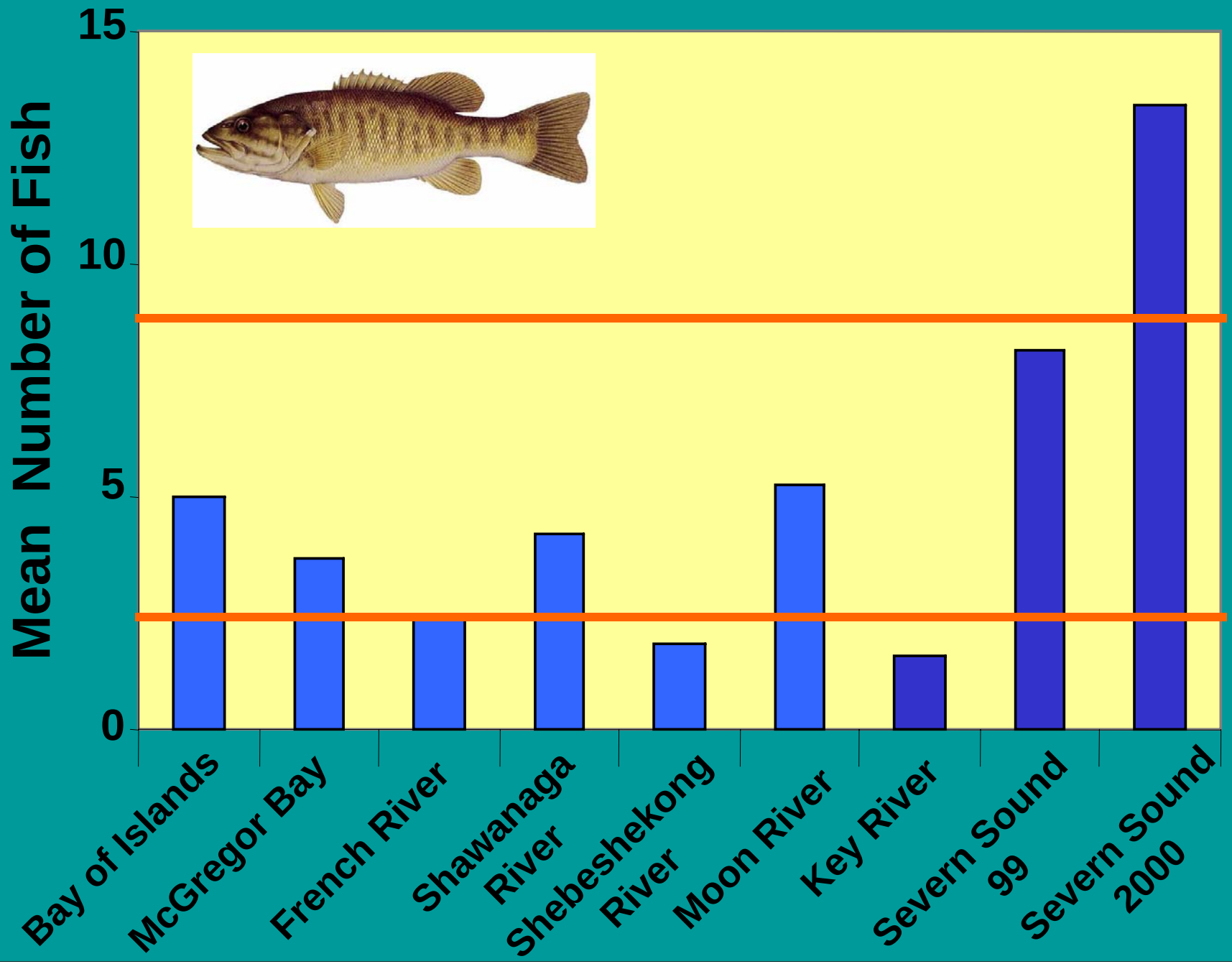

McGregor Bay Muskellunge
Males
Avg= 38.8
Females
Avg= 46.2
% Composition
0 10 20 30 40 50
20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54 56
Total Length (in)

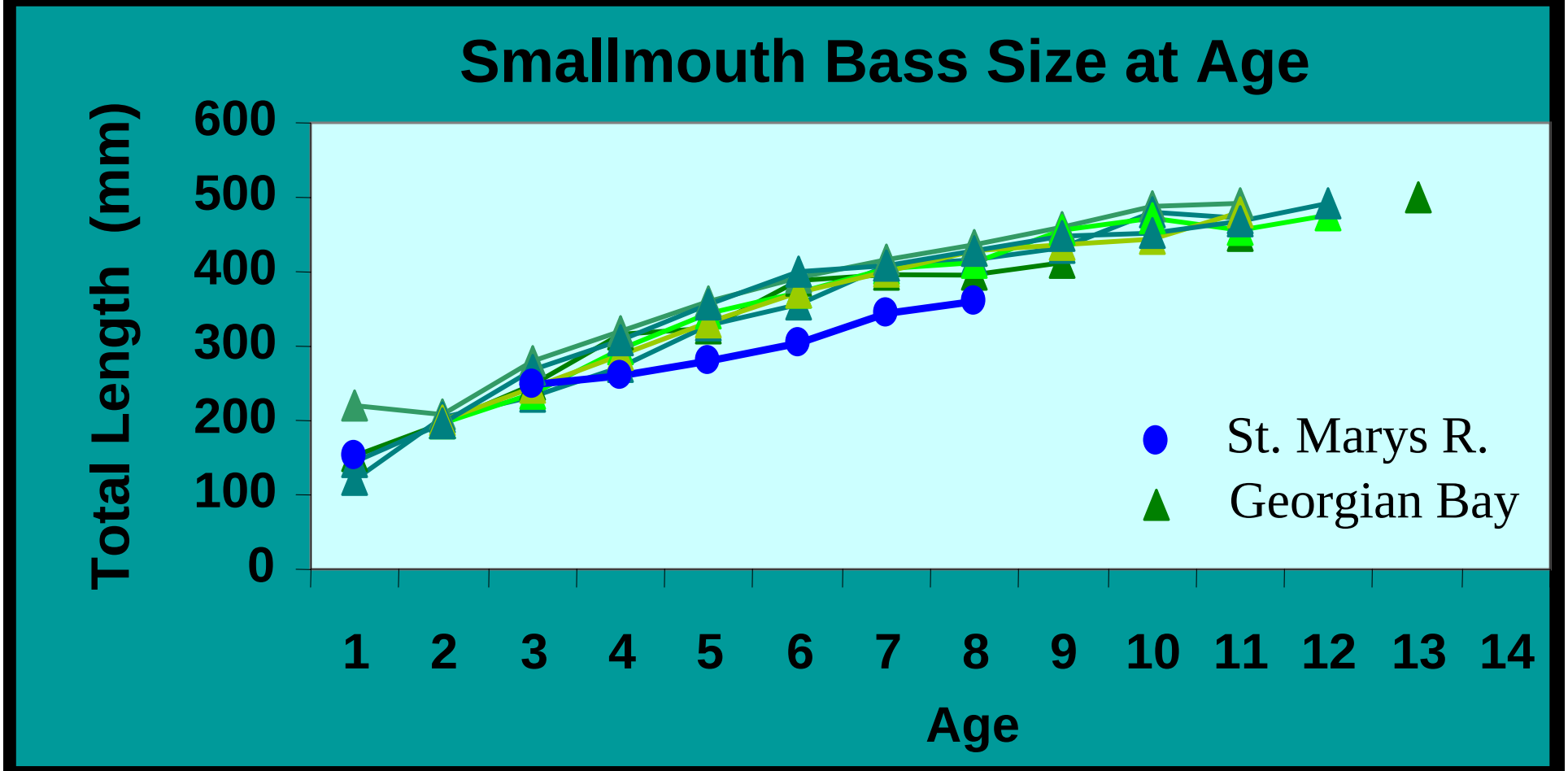

Bay of Islands Muskellunge
Males
Avg= 40.4
Females
Avg= 44.8
% Composition
0 10 20 30 40 50
20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54 56
Total Length (in)

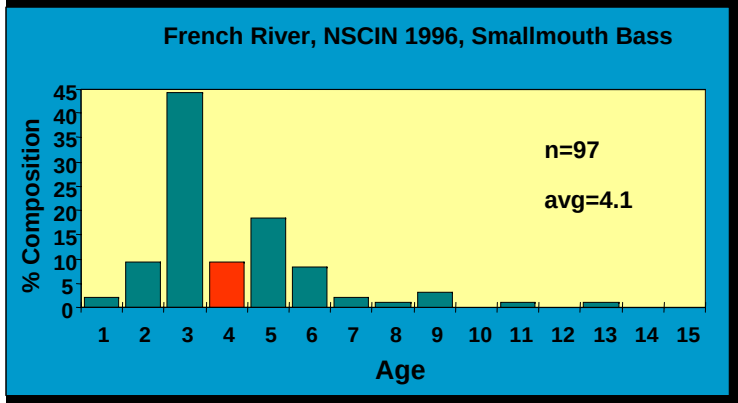

Female
Male
0 4 8 12 16 20 24 28 32 36 40 44 48 52 56 60
Length (in)

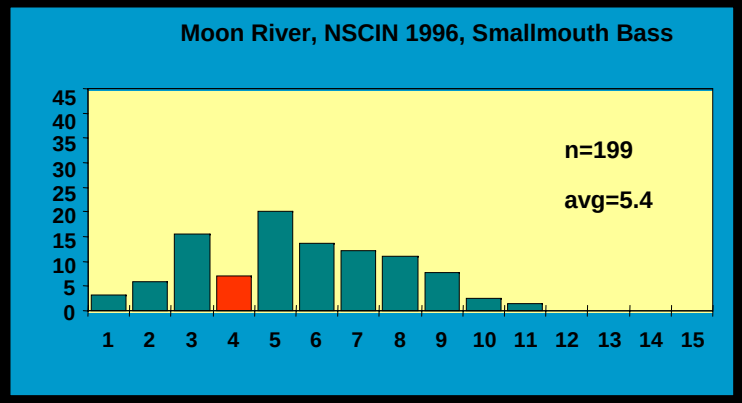

Muskellunge Mean Catch
# of fish per set
0.6
0.5
0.4
0.3
0.2
0.1
0
McGregor Bay
Moon River
Bay of Islands
Serpent Harbour
Severn Sound
Location

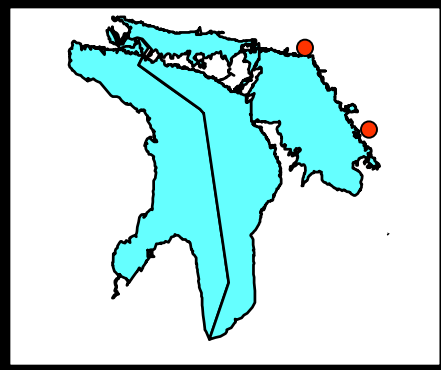
Smallmouth Bass Catch Rates

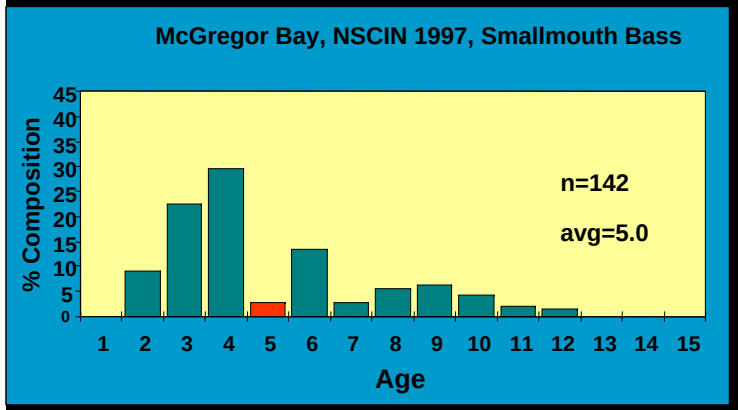


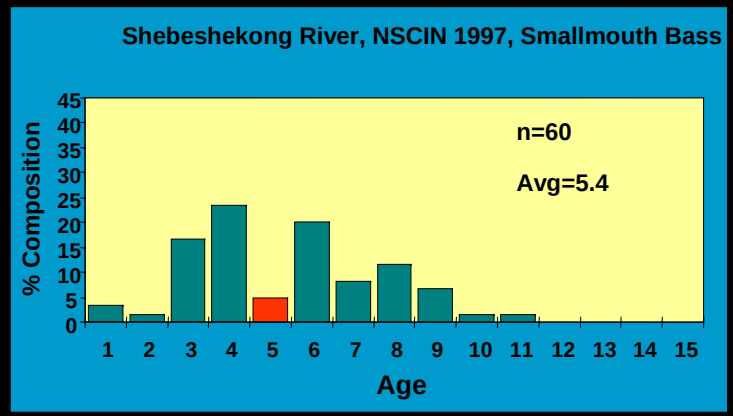

Smallmouth Bass Size at Age
Total Length (mm)
600
500
400
300
200
100
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
Age
St. Marys R.
Georgian Bay

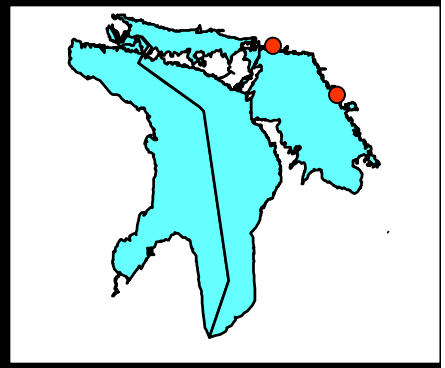

French River, NSCIN 1996, Smallmouth Bass
% Composition
Age
n=97
avg=4.1

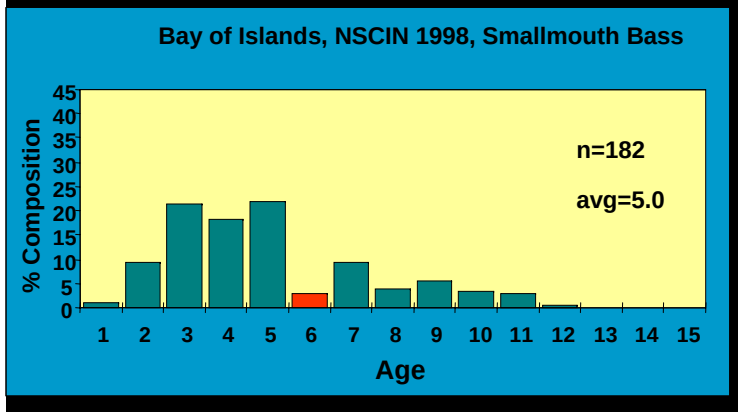

Moon River, NSCIN 1996, Smallmouth Bass
% Composition
Age
n=199
avg=5.4

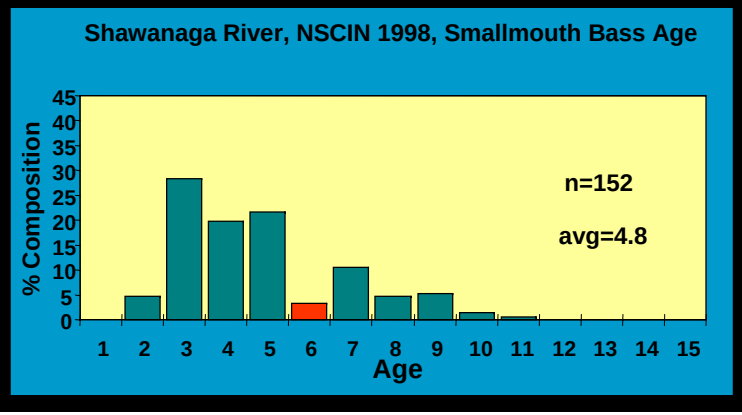


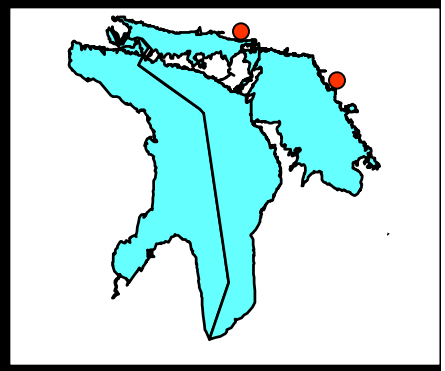

McGregor Bay, NSCIN 1997, Smallmouth Bass
% Composition
Age
n=142
avg=5.0

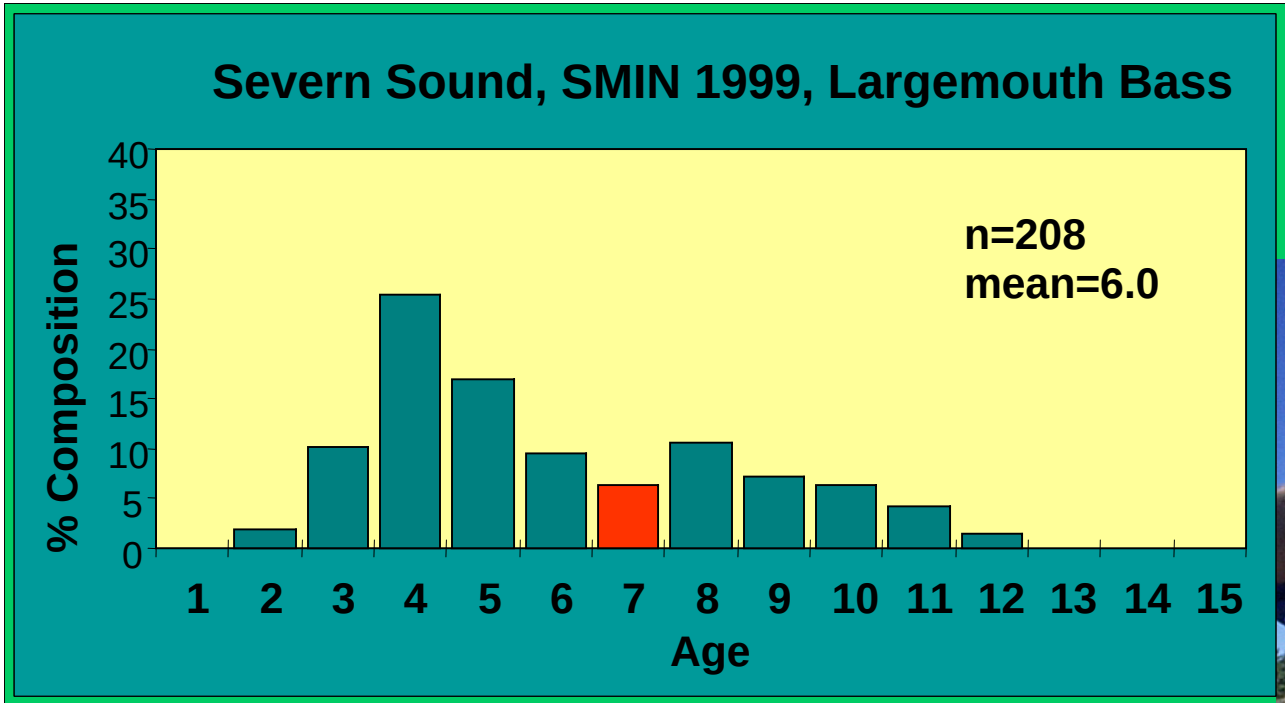

Shebeshekong River, NSCIN 1997, Smallmouth Bass
% Composition
Age
n=60
Avg=5.4

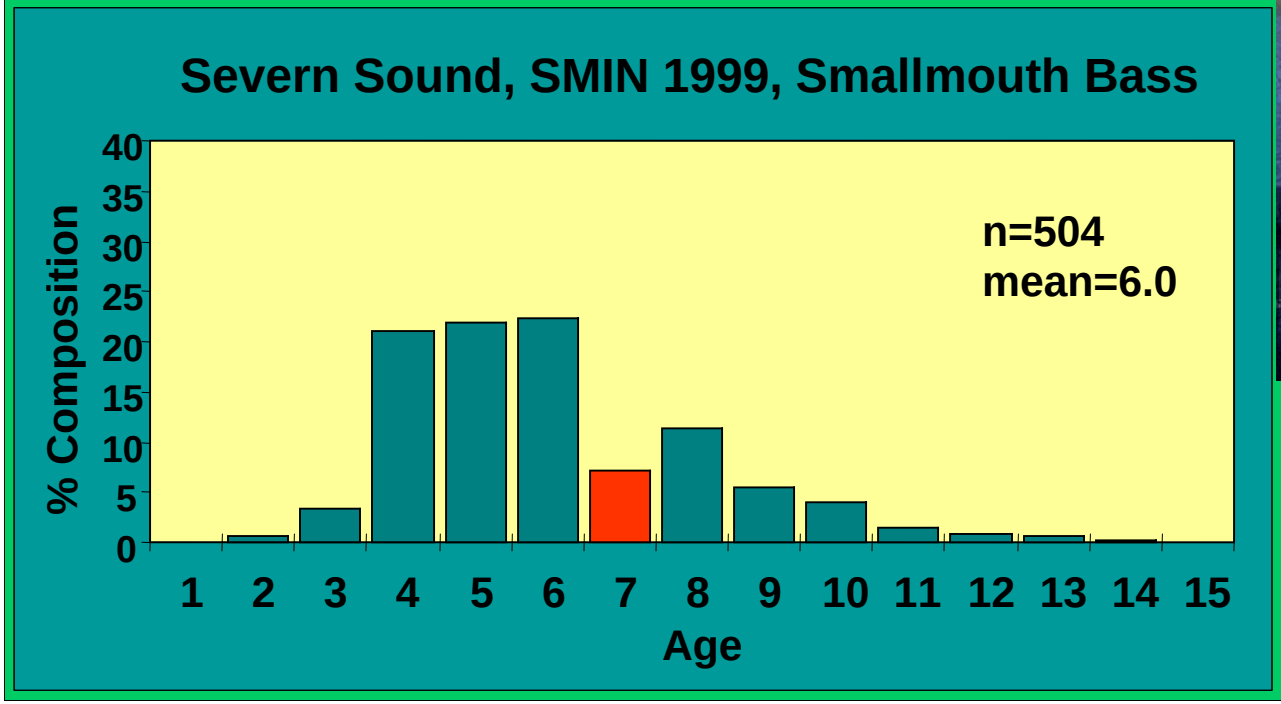


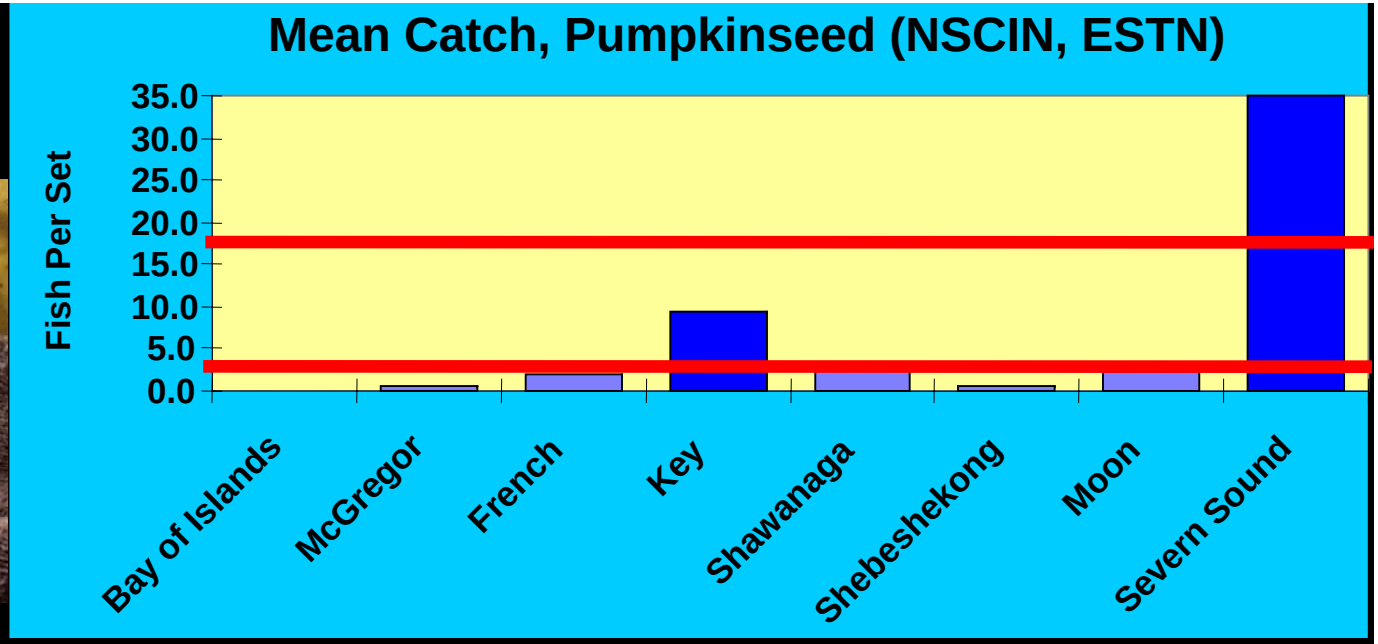

Bay of Islands, NSCIN 1998, Smallmouth Bass
% Composition
Age
n=182
avg=5.0

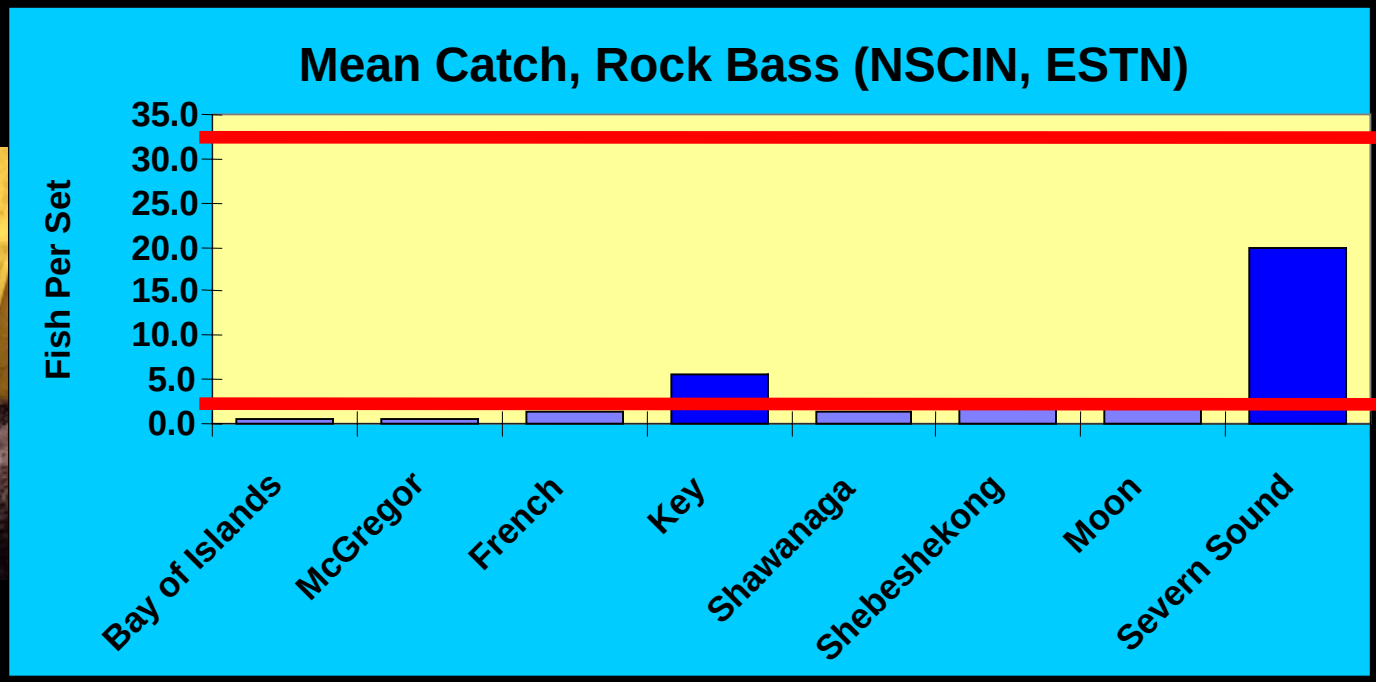

Shawanaga River, NSCIN 1998, Smallmouth Bass Age
% Composition
Age
n=152
avg=4.8

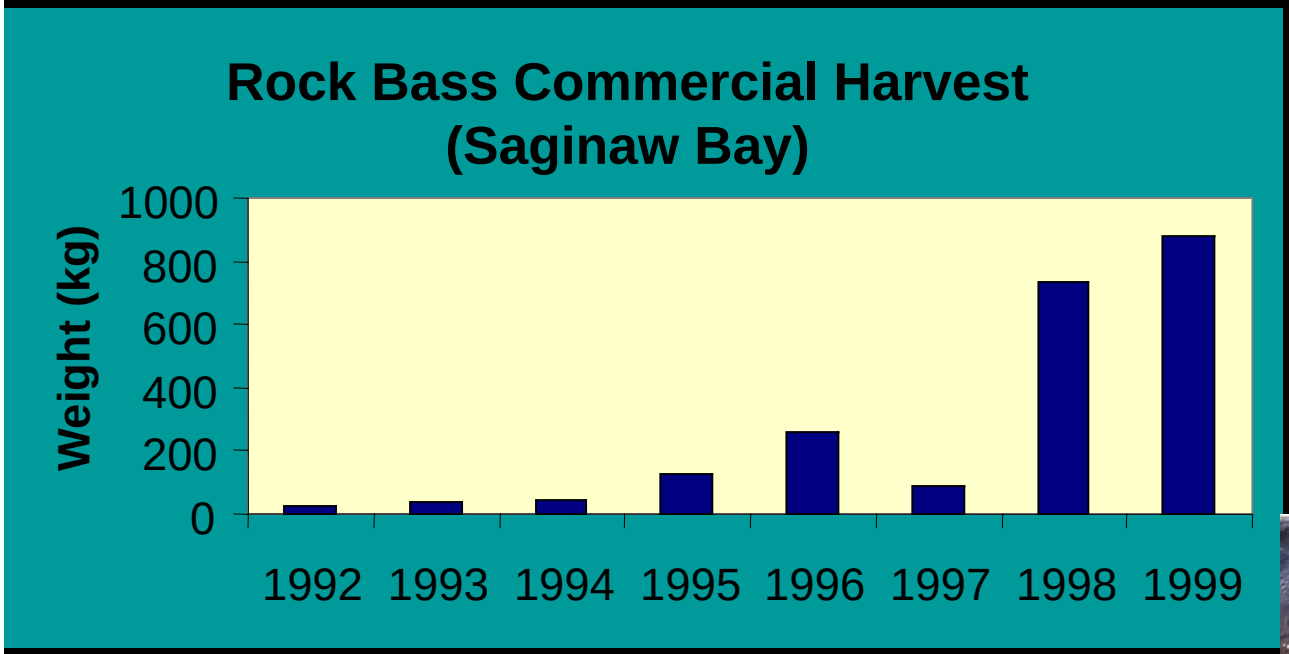


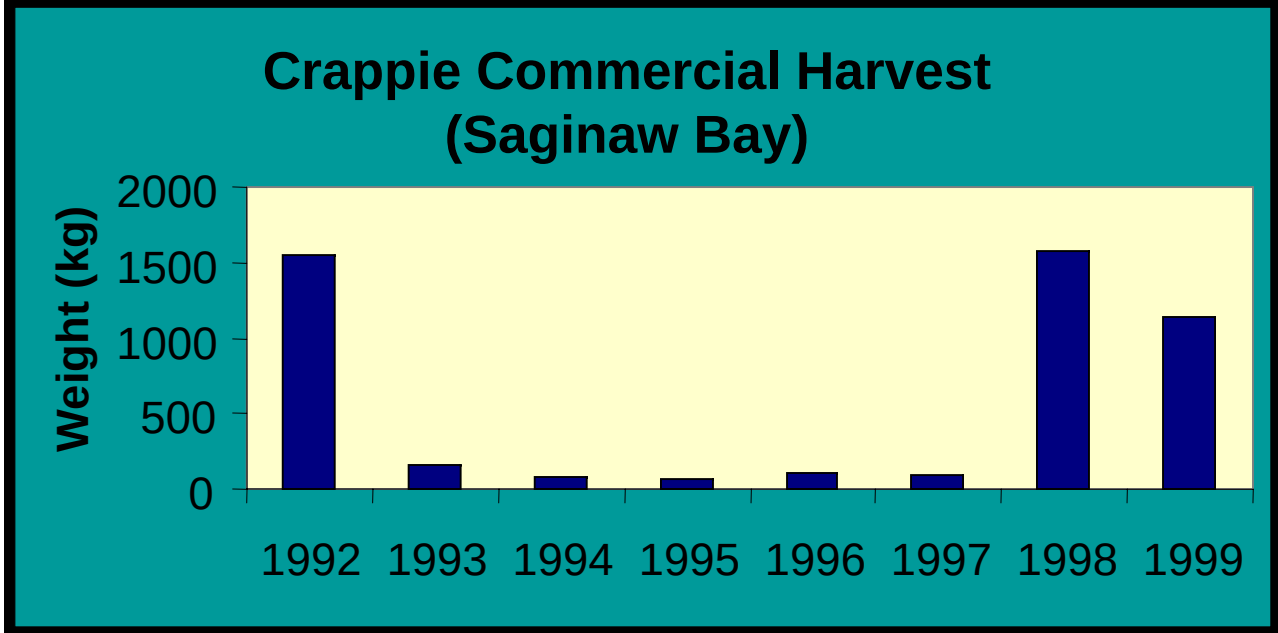

Severn Sound, SMIN 1999, Largemouth Bass
% Composition
40
35
30
25
20
15
10
5
0
n=208
mean=6.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
Age


Severn Sound, SMIN 1999, Smallmouth Bass
% Composition
40
35
30
25
20
15
10
5
0
n=504
mean=6.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
Age


Mean Catch, Pumpkinseed (NSCIN, ESTN)
Fish Per Set
35.0
30.0
25.0
20.0
15.0
10.0
5.0
0.0
Bay of Islands
McGregor
French
Key
Shawanaga
Shebeshekong
Moon
Severn Sound


Mean Catch, Rock Bass (NSCIN, ESTN)
Fish Per Set
35.0
30.0
25.0
20.0
15.0
10.0
5.0
0.0
Bay of Islands
McGregor
French
Key
Shawanaga
Shebeshekong
Moon
Severn Sound


Rock Bass Commercial Harvest
(Saginaw Bay)
Weight (kg)
1000
800
600
400
200
0
1992
1993
1994
1995
1996
1997
1998
1999


Crappie Commercial Harvest
(Saginaw Bay)
Weight (kg)
2000
1500
1000
500
0
1992
1993
1994
1995
1996
1997
1998
1999

Management Initiatives

- Eastern Georgian Bay/North Channel Fisheries Stewardship Council
- Muskellunge Regulation Changes for 2001
- St. Marys River Fisheries Task Group
- Lake Huron Initiative (Saginaw Bay Activities)