

REUNION

North and South Lakes

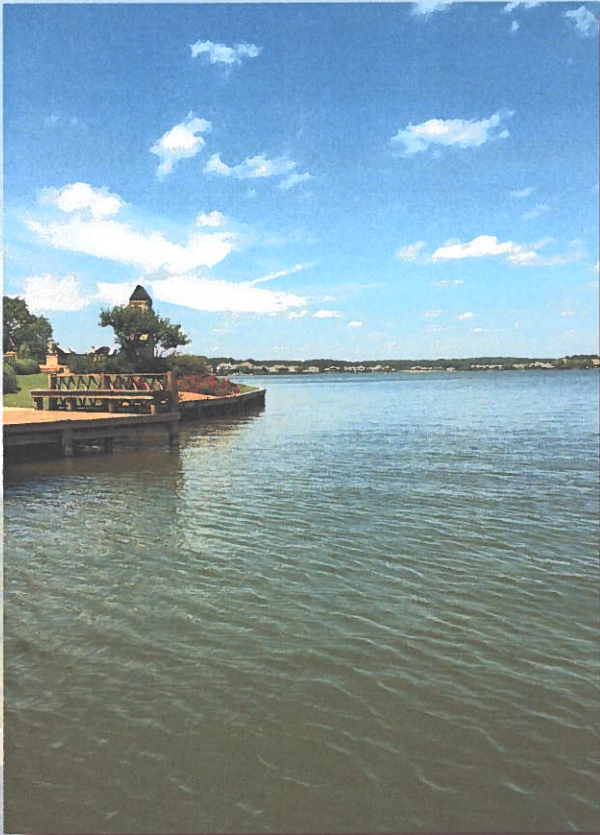
FISHERIES STATUS REPORT 2017

**PREPARED FOR
REUNION PROPERTY OWNER ASSOCIATION**

**BY
SUSTAINABLE RESOURCE MANAGERS, LLC
P.O. BOX 820186
820 SOUTH ST., 4TH FLOOR
VICKSBURG, MS 39182
OFFICE: 601-661-8555
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Management Objectives



- **PROMOTE A HIGH LEVEL OF WATER QUALITY IN ORDER TO PROVIDE FOR HEALTHY FISH POPULATIONS AND AN AESTHETIC ENVIRONMENT FOR REUNION PROPERTY OWNERS.**

- **PROMOTE CONDITIONS FAVORABLE FOR THE PRODUCTION OF A QUALITY LARGEMOUTH BASS AND BLUEGILL/REDEAR BREAM FISHERY.**

- **USE MANAGEMENT PRACTICES WHICH WILL TAKE ADVANTAGE OF THE LAKES NATURAL PRODUCTIVE CAPACITY WHILE ALLOWING FOR FISHERY ENHANCEMENT. INCLUDING MAINTENANCE OF DESIRABLE WATER CHEMISTRY, CONTROL OF INVASIVE AQUATICS, AND REGULATION OF FISH POPULATIONS.**



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**FISH POPULATIONS WERE
ASSESSED VIA ELECTROFISHING
ON MAY 16, 2017.
PERTINENT OBSERVATIONS
REGARDING THESE SURVEYS
FOLLOW WITHIN THIS REPORT
FOR BOTH
NORTH AND SOUTH LAKE.**



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OVERVIEW

IN THE ELECTROFISHING
SAMPLE TAKEN ON

MAY 16, 2017

LARGEMOUTH BASS,

BLUE-GILL,

REDEAR {SHELL CRACKER}

WERE MEASURED AS

PER LENGTH AND WEIGHT

OF EACH FISH. GENERAL

HEALTH OF EACH FISH/

SPECIES WERE MEASURED

AGAINST STANDARD WEIGHTS/

MEASUREMENTS OF FISH IN

IDEAL CONDITION.

ADDITIONALLY, HYBRID

STRIPED BASS, 4,000 OF

WHICH WERE RELEASED

IN REUNION LAKES ON

APRIL 10, 2017

WERE ASSESSED

AS PER GROWTH, VIGOR AND

RELATIVE DISTRIBUTION.



HYBRID STRIPED BASS BEING RELEASED
ON APRIL 10, 2017



ONE OF THE 26 HYBRID STRIPED BASS
PICKED UP IN THE MAY ELECTRO FISHING
SAMPLE SHOWING IMPRESSIVE GROWTH
AND VIGOR.



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2017 Aerial of North and South Lake

NORTH LAKE

SOUTH LAKE



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Reunion North

Date: 5/16/2017

Method: Electrofishing

Alkalinity: 44 ppm

1st Run

2nd Run

3rd Run

724

638

737



LARGEMOUTH BASS

Length Inches	Weight lbs.
15.0	1.5
15.7	1.8
12.2	0.9
10.6	0.6
10.3	0.6
14.2	1.4
17.8	3.2
16.2	2.6
13.9	1.3
15.4	2.0
12.2	1.0
14.5	1.7
17.0	2.3
14.4	1.4
17.4	3.5
20.0	4.8
19.7	4.8
18.8	3.8
14.0	1.5



BLUEGILL

Length Inches	Weight lbs.
6.4	0.2
7.6	0.3
6.5	0.2
7.3	0.2
7.0	0.2
7.4	0.3
6.4	0.1
7.1	0.3
5.7	0.1
5.6	0.1
5.4	0.1
4.9	0.1
4.6	0.1
4.8	0.1
5.8	0.1
7.3	0.3
6.6	0.2
7.5	0.3
6.2	0.2
6.5	0.2

Bluegill Cont.
Next Pg.



REDEAR

Length Inches	Weight lbs.
9.1	0.4
7.4	0.2
8.0	0.3
7.3	0.2
6.9	0.2
8.3	0.3
7.2	0.3
6.2	0.2
8.9	0.4
7.9	0.3
8.3	0.3
6.6	0.2
8.7	0.4
8.1	0.4
9.0	0.5
8.7	0.4
7.3	0.2
7.4	0.3
8.9	0.4
7.3	0.2
8.5	0.4
7.7	0.3
7.2	0.3
7.8	0.3
8.0	0.3
8.2	0.4
7.8	0.3



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BLUEGILL {CONT.}

Length Inches	Weight lbs.
6.2	0.2
6.8	0.2
4.7	0.1
4.6	0.1
7.9	0.3
6.3	0.1
6.3	0.2
7.3	0.3
7.1	0.2
6.3	0.1
4.6	0.0
7.9	0.3
6.6	0.2
5.0	0.1
5.9	0.2
7.5	0.3
6.4	0.2
8.3	0.3
8.3	0.3
6.9	0.3
6.9	0.2
7.5	0.3
7.2	0.2
5.3	0.1
7.8	0.3
5.4	0.1
6.3	0.2

BLUEGILL {CONT.}

Length Inches	Weight lbs.
6.2	0.2
8.2	0.4
5.8	0.2
6.6	0.2
6.5	0.2
7.4	0.3
7.5	0.3
7.3	0.3
6.1	0.1
5.8	0.1
7.2	0.2
7.4	0.3
6.9	0.2
5.0	0.1
6.5	0.2
5.0	0.1
7.9	0.3
5.5	0.1
7.6	0.3
6.4	0.2
8.6	0.5
6.5	0.2
7.5	0.3
7.4	0.3
6.6	0.2
7.2	0.3
6.9	0.2
9.3	0.5
8.0	0.4

BLUEGILL {CONT.}

Length Inches	Weight lbs.
5.6	0.1
7.2	0.3
6.1	0.2
7.6	0.3
6.5	0.2
4.7	0.1
5.6	0.1
6.4	0.2
7.2	0.2
6.3	0.2
9.1	0.6
8.1	0.4
6.8	0.2
6.4	0.2
8.1	0.3
8.5	0.4
6.9	0.2
8.2	0.4
6.9	0.2
7.6	0.3
8.3	0.4
7.9	0.3
6.9	0.2
6.9	0.2
7.3	0.3
6.5	0.2
8.0	0.3
6.1	0.1
6.8	0.2
6.9	0.2

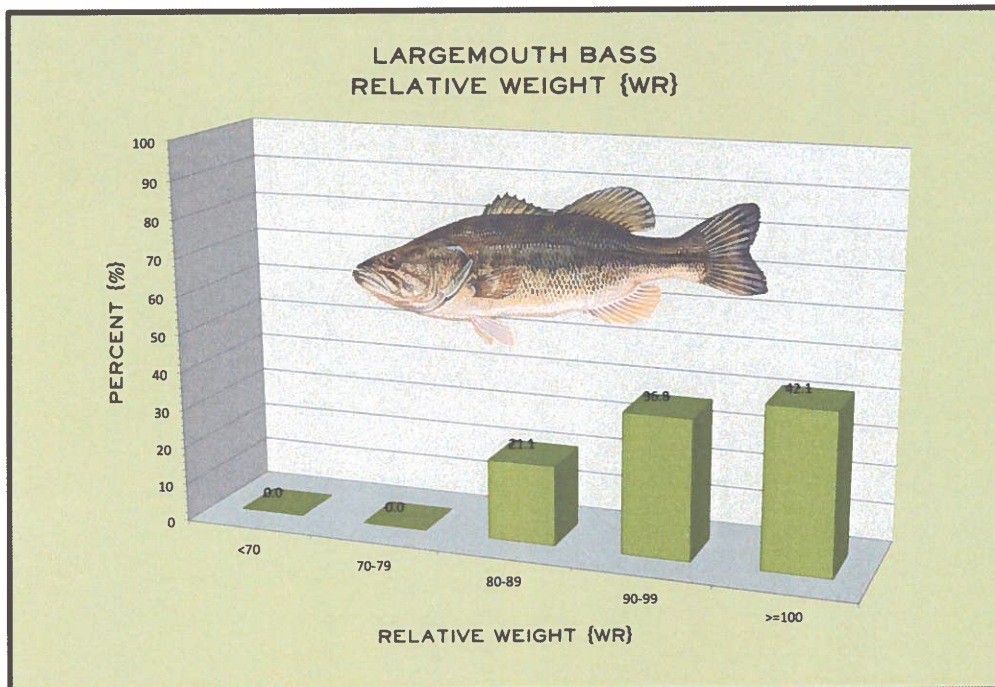
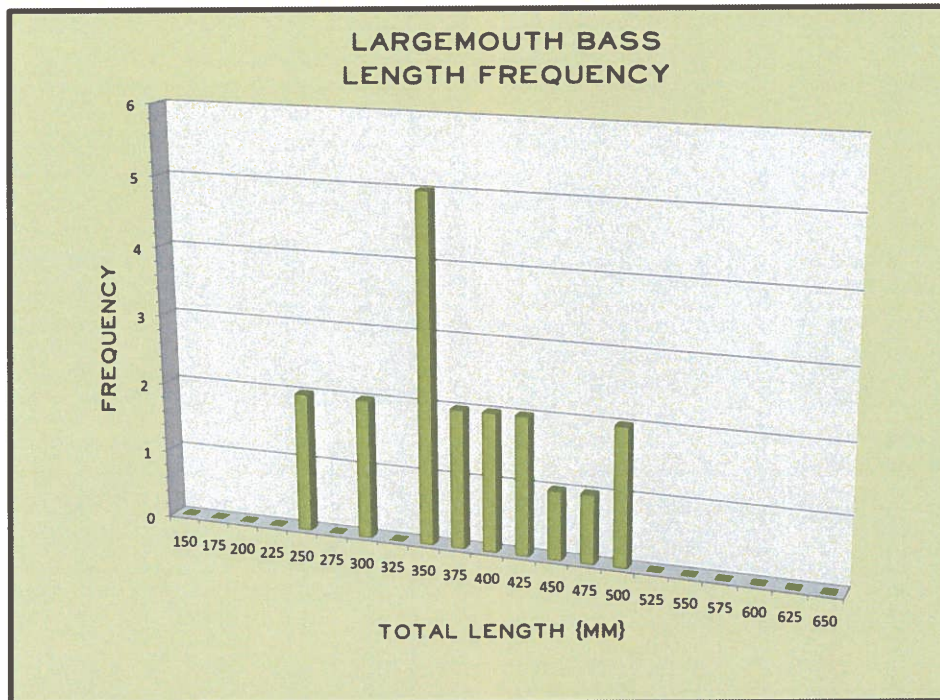
BLUEGILL {CONT.}

Length Inches	Weight lbs.
6.6	0.2
8.4	0.5
7.5	0.3
6.3	0.2
7.8	0.3
6.4	0.2
6.0	0.1
5.6	0.1
6.7	0.2
6.0	0.1
4.9	0.1
6.8	0.2
6.4	0.2
8.6	0.4
8.5	0.4
7.7	0.3
8.0	0.3
6.9	0.2
6.9	0.2
5.7	0.1
5.7	0.1
5.4	0.1
8.8	0.5
6.0	0.1
6.2	0.1
7.9	0.3



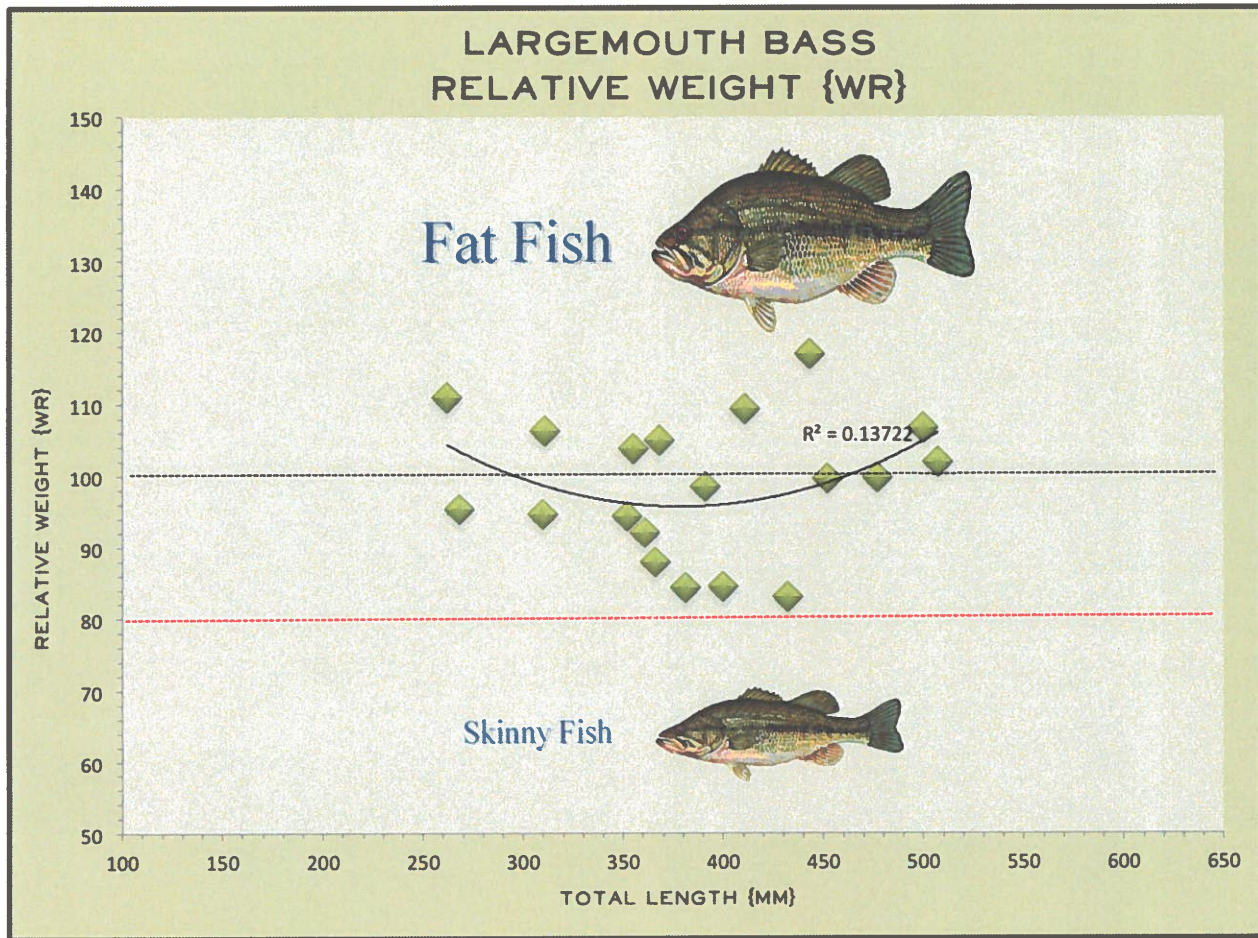
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Reunion North



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Reunion North



RELATIVE WEIGHT {WR} OF LARGEMOUTH BASS

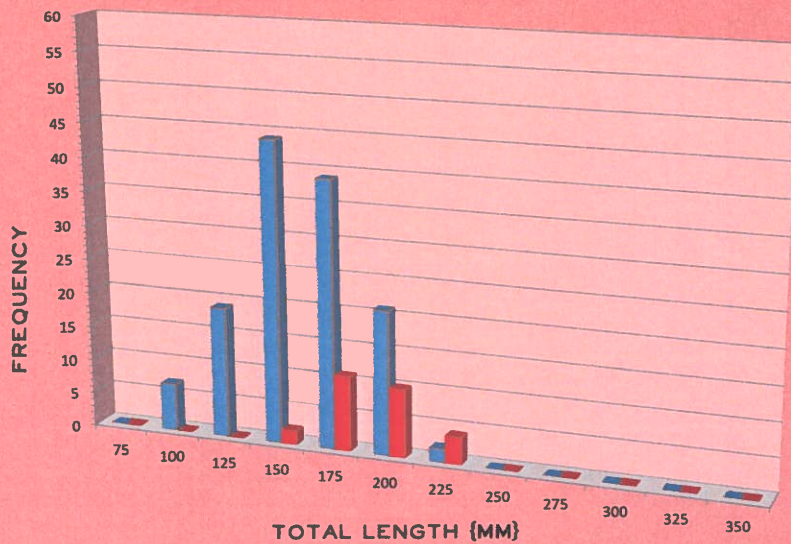
- Relative weight (WR) is the ratio of actual weight of a fish, relative to what a rapidly growing and healthy fish of the same length should typically weigh. By taking length and weight measurements of fish that are sampled, one can determine the relative weight and also assess the respective health of the fish population.
- With a relative weight of 100 being perfect, relative weight values for largemouth bass within Reunion North Lake averaged 98.7. This high score means they are in peak condition with a near perfect length to weight profile.
- The graph above depicts how relative weights correspond with the length of the fish.



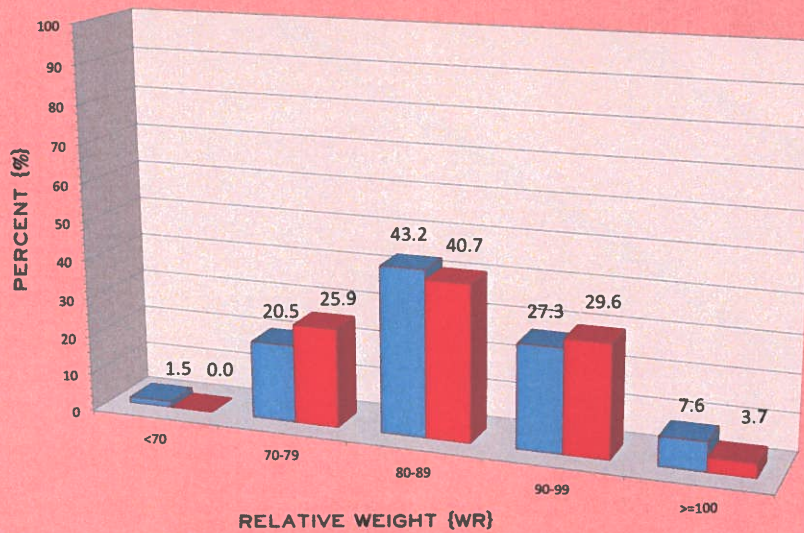
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Reunion North

BLUEGILL AND REDEAR SUNFISH
LENGTH FREQUENCY

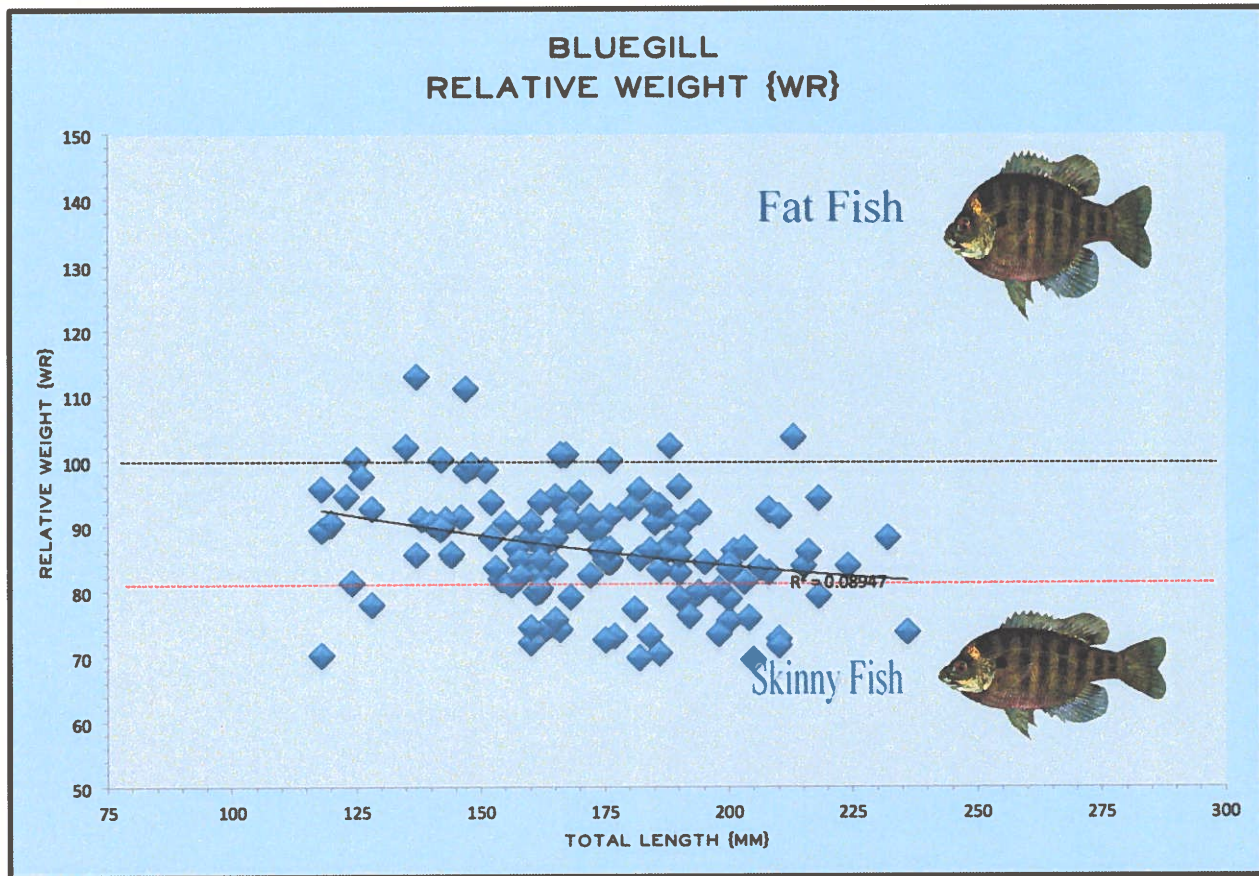


BLUEGILL REDEAR SUNFISH
RELATIVE WEIGHT {WR}



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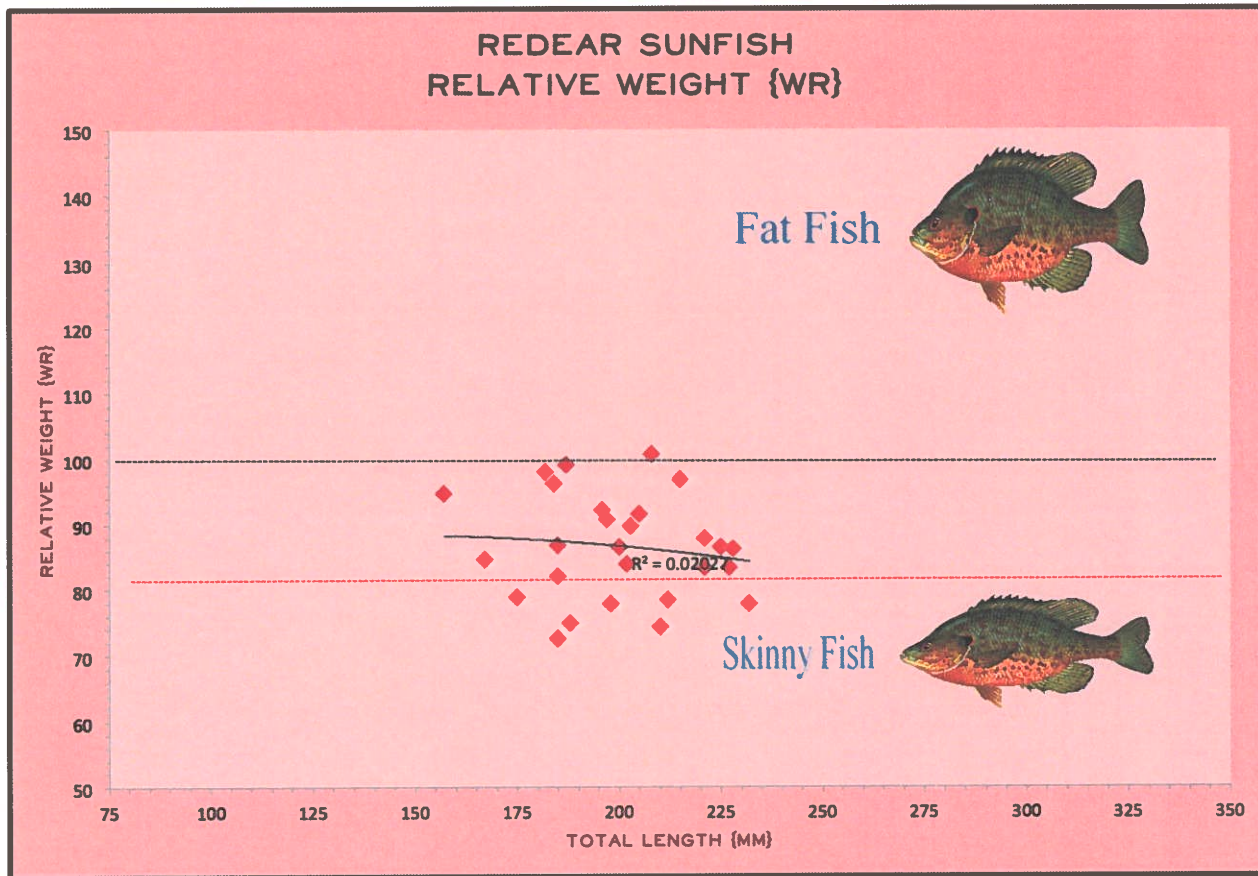
RELATIVE WEIGHT {WR} OF BLUEGILL

- Relative weight (WR) is the ratio of actual weight of a fish, relative to what a rapidly growing and healthy fish of the same length should typically weigh. By taking length and weight measurements of fish that are sampled, one can determine the relative weight and also assess the respective health of the fish population.
- Relative weight values for bluegill within Reunion North Lake averaged 87.
- The graph above depicts how relative weights correspond with the length of the fish.



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RELATIVE WEIGHT {WR} OF REDEAR

- Relative weight (WR) is the ratio of actual weight of a fish, relative to what a rapidly growing and healthy fish of the same length should typically weigh. By taking length and weight measurements of fish that are sampled, one can determine the relative weight and also assess the respective health of the fish population.
- As with the bluegill, relative weight values for redear within Reunion North Lake averaged 87.
- The graph above depicts how relative weights correspond with the length of the fish.



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Reunion South

Date: 5/16/2017

Method: Electrofishing

Alkalinity: 45 ppm

1st Run

2nd Run

3rd Run

640

640

640



LARGEMOUTH BASS

Length Inches	Weight lbs.
9.2	0.3
17.2	2.3
12.4	0.8
14.6	1.5
8.0	0.2
12.5	0.9
10.4	0.5
11.3	0.6
11.2	0.7
12.2	0.8
11.7	0.7
17.4	2.6
14.4	1.4
14.7	1.7
11.7	0.7
10.3	0.5
9.5	0.4
10.4	0.6
9.8	0.4
10.9	0.7
12.9	1.0
7.0	0.1
12.0	0.8
7.5	0.1
8.8	0.2
10.0	0.5
10.2	0.5
13.7	1.5
7.6	0.1



BLUEGILL

Length Inches	Weight lbs.
5.3	0.1
6.0	0.1
7.0	0.2
6.4	0.2
7.4	0.3
7.0	0.2
5.8	0.1
5.3	0.1
6.9	0.2
5.6	0.1
4.1	0.0
5.3	0.1
7.2	0.2
7.2	0.3
7.3	0.2
6.6	0.2
7.3	0.3
6.6	0.2
6.8	0.2
6.5	0.2
5.6	0.1
6.1	0.1
5.0	0.1
5.4	0.1
6.3	0.1
6.8	0.2
8.2	0.4



REDEAR

Length Inches	Weight lbs.
5.9	0.1
5.3	0.1
5.2	0.1
7.6	0.3
7.8	0.3
6.6	0.2
7.1	0.2
6.0	0.2
5.3	0.1
6.4	0.2
5.0	0.1
6.7	0.2
7.3	0.3
5.7	0.1
5.9	0.1
8.7	0.4
9.1	0.4
7.6	0.3
9.1	0.4
5.9	0.1

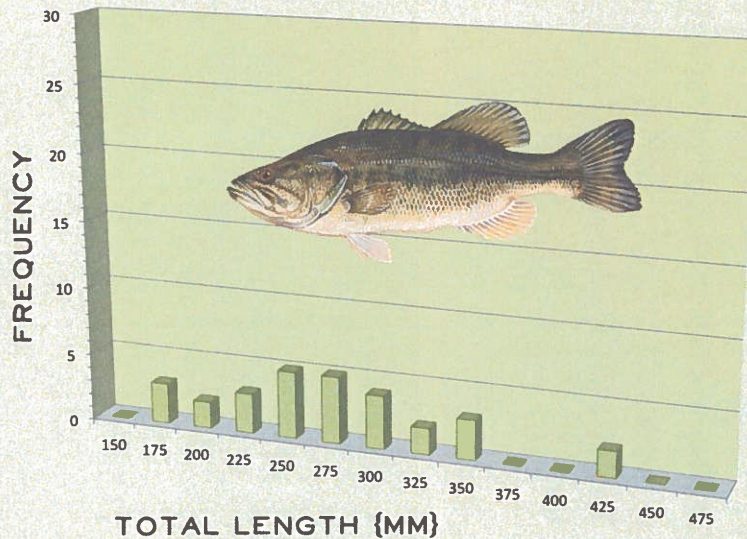


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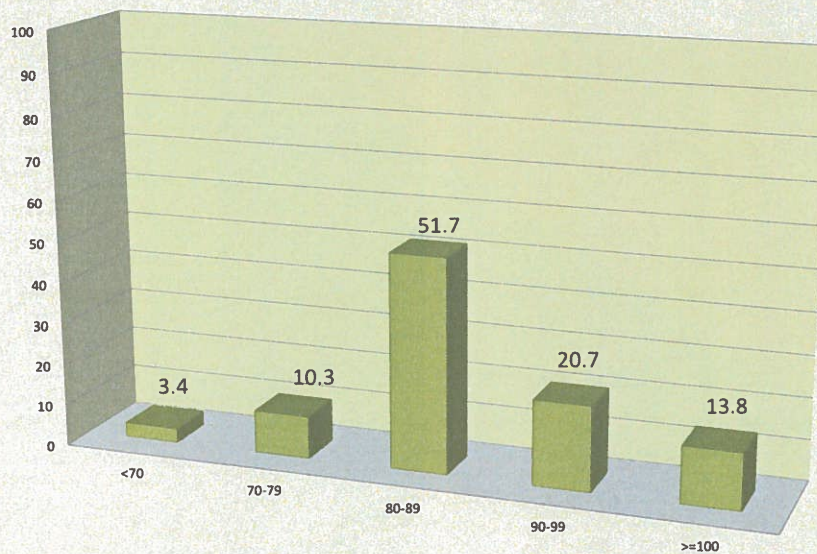
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Reunion South

LARGEMOUTH BASS
LENGTH FREQUENCY

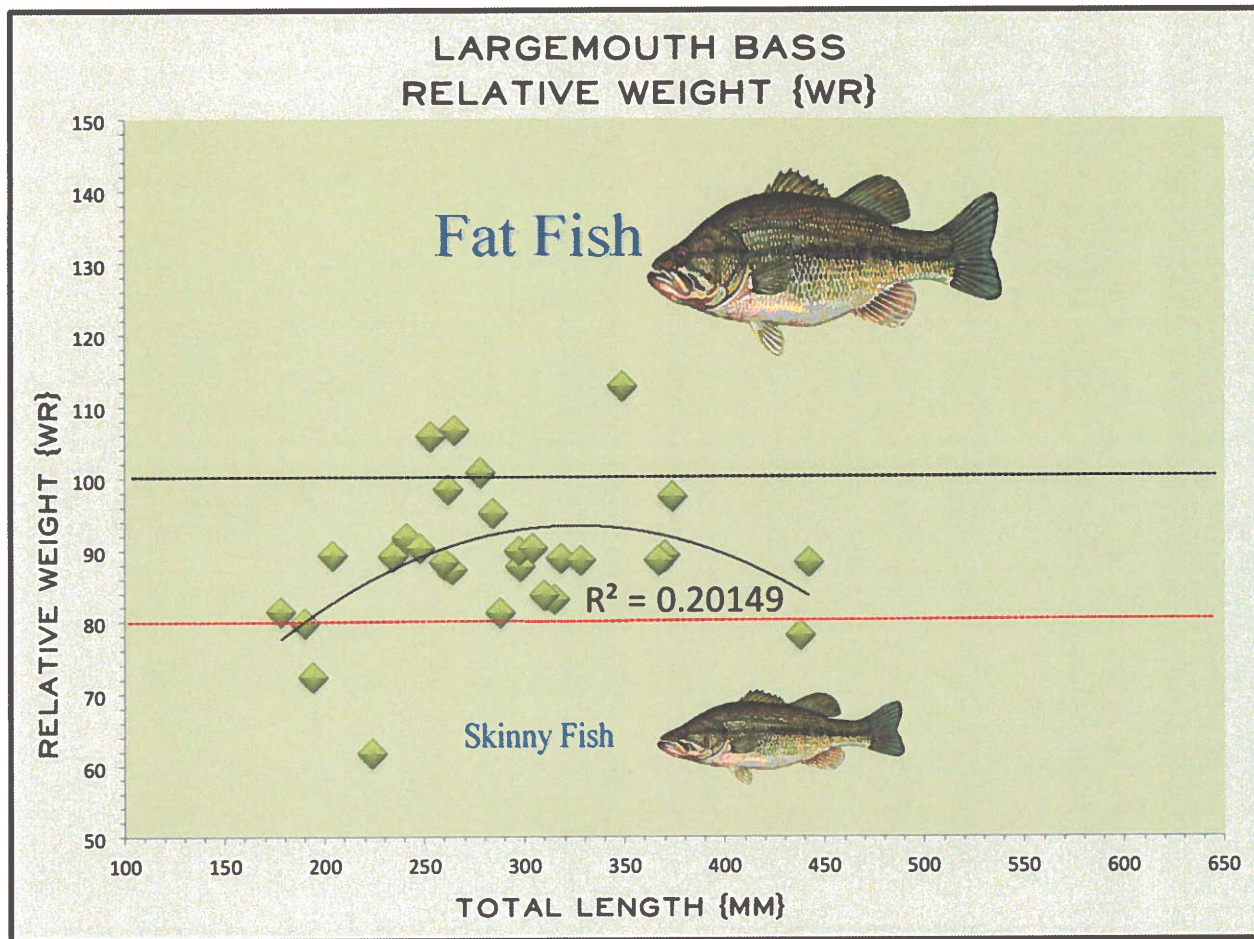


LARGEMOUTH BASS
RELATIVE WEIGHT {WR}



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Reunion South



RELATIVE WEIGHT {WR} OF LARGEMOUTH BASS

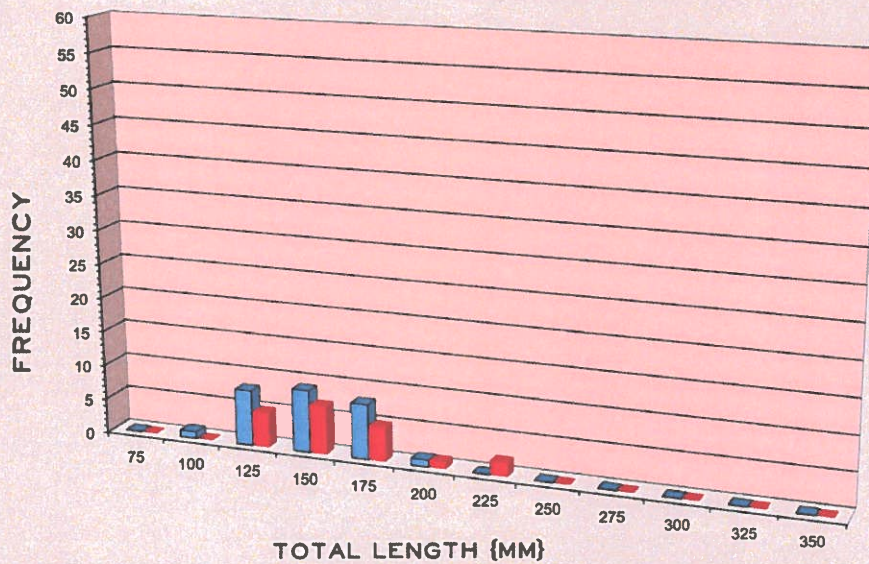
- Relative weight (WR) is the ratio of actual weight of a fish, relative to what a rapidly growing and healthy fish of the same length should typically weigh. By taking length and weight measurements of fish that are sampled, one can determine the relative weight and also assess the respective health of the fish population.
- Relative weight values for largemouth bass within Reunion South Lake averaged 89.
- The graph above depicts how relative weights correspond with the length of the fish.



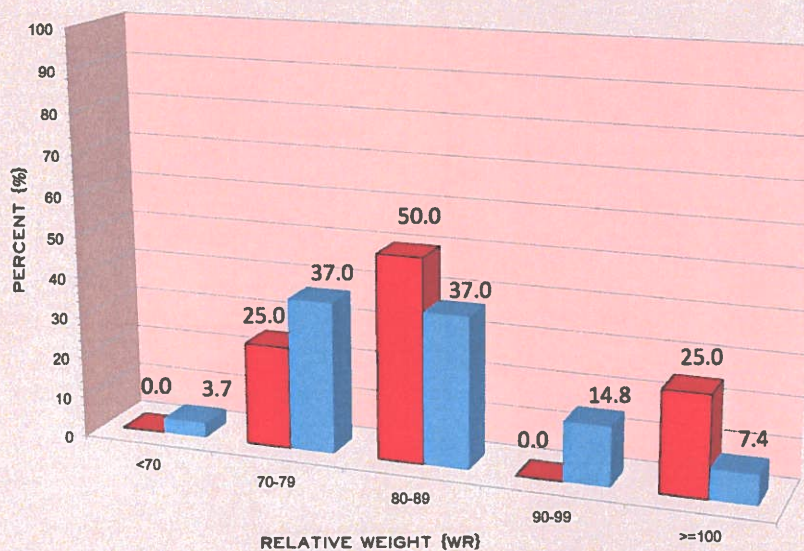
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BLUEGILL AND REDEAR SUNFISH
LENGTH FREQUENCY



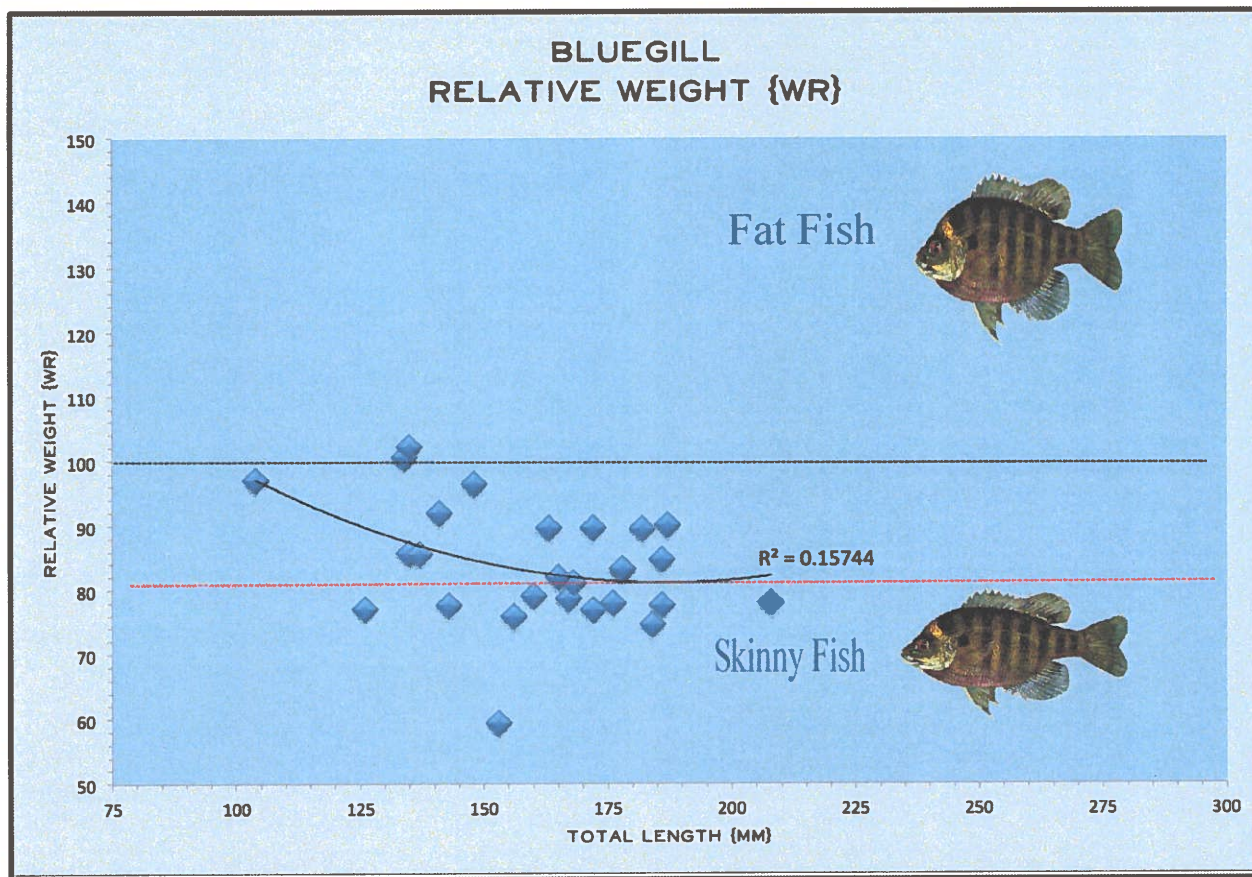
BLUEGILL AND REDEAR SUNFISH
RELATIVE WEIGHT {WR}



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Reunion South



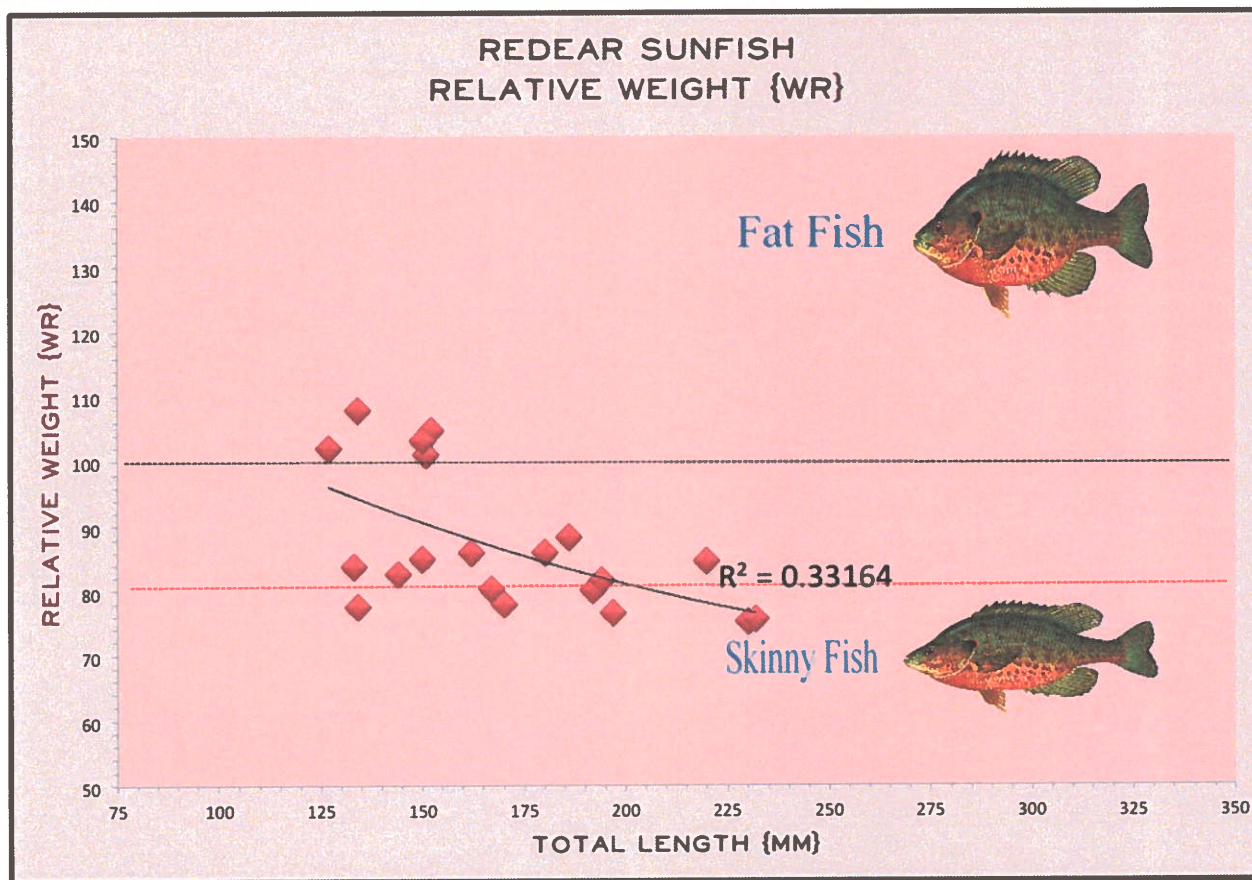
RELATIVE WEIGHT {WR} OF BLUEGILL

- Relative weight (WR) is the ratio of actual weight of a fish, relative to what a rapidly growing and healthy fish of the same length should typically weigh. By taking length and weight measurements of fish that are sampled, one can determine the relative weight and also assess the respective health of the fish population.
- Relative weight values for bluegill within Reunion South Lake averaged 84.
- The graph above depicts how relative weights correspond with the length of the fish.



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RELATIVE WEIGHT {WR} OF REDEAR

- Relative weight (WR) is the ratio of actual weight of a fish, relative to what a rapidly growing and healthy fish of the same length should typically weigh. By taking length and weight measurements of fish that are sampled, one can determine the relative weight and also assess the respective health of the fish population.
- Relative weight values for redear within Reunion South Lake averaged 87.
- The graph above depicts how relative weights correspond with the length of the fish.



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Reunion North and South Lakes

MANAGEMENT OBSERVATIONS AND RECOMMENDATIONS

- REUNION NORTH AND SOUTH LAKES CONTINUE TO FUNCTION AS AN EXCELLENT FRESHWATER FISHERY. ALKALINITY LEVELS REMAIN HIGH AND ABOVE LEVELS REQUIRED FOR OPTIMUM FISHERY HEALTH AND PRODUCTION.
- WATER COLUMN VISIBILITY PREDOMINATELY ATTRIBUTED TO THE PLANKTON/PHYTOPLANKTON BLOOM APPROXIMATED THIRTY-TWO INCHES FOR BOTH LAKES.
- REUNION SOUTH LAKE RETURNED THE BEST OVERALL WATER QUALITY AND FISHERY STATUS RESULT OF RECORD; LARGELY THE RESULT OF SILT CURTAINS INSTALLED BY REUNION MANAGEMENT TO ADDRESS ONGOING WATER QUALITY CONCERNS.
- BECAUSE OF IMPROVEMENTS IN WATER QUALITY, REUNION NORTH AND SOUTH LAKES ARE CURRENTLY FUNCTIONING AS ONE FIRMLY INTER-CONNECTED FISHERY.
- IN EARLY 2017, THE REUNION PROPERTY OWNER ASSOCIATION APPROVED THE PURCHASE AND RELEASE OF 4,000 HYBRID STRIPED BASS {HYBRID STRIPERS} INTO NORTH AND SOUTH LAKES. THE ACTUAL RELEASE TOOK PLACE ON APRIL 10, WITH APPROXIMATELY 2,000 HYBRID STRIPERS RELEASED IN EACH LAKE. IN MAY, OUR ELECTROFISHING SAMPLE TURNED UP APPROXIMATELY 26 OF THESE NEW LAKE RESIDENTS. ALL APPEARED WELL DISTRIBUTED, HEALTHY AND GROWING RAPIDLY. HYBRID STRIPERS ARE EASILY IDENTIFIED BY LATERAL, OFTEN "BROKEN" BLACK STRIPES RUNNING LENGTHWISE AND THEIR CHARACTERISTIC FOOTBALL SHAPE.
- HYBRID STRIPERS, A CROSS BETWEEN WHITE BASS AND STRIPED BASS, HAVE BEEN KNOWN TO PRODUCE VIABLE OFFSPRING. BUT FOR ALL PRACTICAL PURPOSES, THE SPECIES IS FUNCTIONALLY STERILE. THE LIFESPAN OF HYBRID STRIPERS IS RELATIVELY SHORT, GENERALLY REPORTED TO BE FIVE TO SIX YEARS. DUE TO ITS SHORT LIFESPAN AND INABILITY TO REPRODUCE SUCCESSFULLY, POPULATION SUPPLEMENTATION WILL BE NECESSARY TO INSURE THAT HYBRID STRIPERS TAKE A PERMANENT PLACE IN THE ONGOING ECOLOGICAL AND RECREATIONAL DEVELOPMENT OF THE REUNION FISHERY.



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Reunion North and South Lakes

MANAGEMENT OBSERVATIONS AND RECOMMENDATIONS

- HYBRID STRIPERS TYPICALLY PREFER OPEN WATER HABITAT AND OFTEN TRAVEL IN FEEDING GROUPS OR SCHOOLS. GIZZARD SHAD AND THREADFIN SHAD ARE A PREFERRED PREY SPECIES. NEVERTHELESS, THEY WILL READILY FEED ON CRAPPIE, BLUEGILL AND OTHER INDIGENOUS FORAGE FISH. WHILE GROWTH RATES VARY, SOME FISH MAY APPROACH THREE-QUARTER POUND AT ONE YEAR AND TWO TO THREE POUNDS THE SECOND YEAR. THE MOST COMMON SIZE CAUGHT BY RECREATIONAL ANGLERS IS TWO TO FIVE POUNDS. THE LIFE SPAN OF HYBRID STRIPERS IS RELATIVELY SHORT; GENERALLY REPORTED TO BE FIVE TO SIX YEARS.
- HYBRID STRIPERS WERE RELEASED INTO THE REUNION FISHERY TO ASSIST IN BIOLOGICAL CONTROL OF THE GROWING SHAD AND CRAPPIE POPULATIONS. BECAUSE OF ITS SHORT LIFE SPAN AND INABILITY TO REPRODUCE SUCCESSFULLY, POPULATION SUPPLEMENTATION WILL BE NECESSARY TO INSURE THAT HYBRID STRIPERS TAKE A PERMANENT PLACE IN THE ONGOING ECOLOGICAL AND RECREATIONAL DEVELOPMENT OF THE REUNION FISHERY.
- CATCH-AND-RELEASE IS RECOMMENDED FOR ALL HYBRID STRIPERS CAUGHT IN 2017/EARLY 2018. WE WILL REASSESS POPULATION STATUS IN MAY/JUNE 2018.
- CONTINUE TO PLACE HARVEST PRESSURE ON CRAPPIE AND BLUEGILL/REDEAR POPULATIONS.
- ENCOURAGE CATCH-AND-RELEASE TREATMENT FOR LARGEMOUTH BASS; PARTICULARLY IN SOUTH LAKE WHERE BASS PRODUCTION REACHED ITS HIGHEST PRODUCTIVITY LEVEL OF RECORD IN 2017.



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