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Al Kohutek  
Vilbig Bass Club  
1808 Westshore Ct  
Irving, Texas 75060

Dear Al,

Great to see everyone last Saturday, and see their enthusiasm and interest in Lake Vilbig. It was also fun to see the confidence in your face as the electrofishing survey helped confirm much of what you know about the lake.

It's not easy to compare a lake to itself every five years, especially since a number of things happen over that five year span. Droughts, floods, frigid weather, cormorants, angler harvest, fish stockings...all those factors can lead to changes in the fishery. What we can do is see the current status of a fishery and then draw conclusions as to why it is as it is.

Some of the facts are interesting. Threadfin shad are in the lake. That's great news. Gar were in the best nursery areas, feeding on young of the year fish...as well as any medium-sized fish that venture nearby. That's not so good. They are impacting the fishery. Bass recruitment from year old fish is exceptionally high. That's good. Much of the mid-range sized bass we normally see, especially those in the 10-12" size class were gone, probably due to bird predation. That's good...or maybe not.

But, before further discussion...Here's a table of data of fish collected.

<u>SPECIES</u>	<u>&lt;1"</u>	<u>1-3"</u>	<u>3-5"</u>	<u>5-7"</u>	<u>7-9"</u>	<u>9-12"</u>	<u>&gt;12"</u>
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Largemouth bass	1000's	many	27	28	42	15	55
Bluegill	1000's	>20	>50	>25	>20		
Longear sunfish			>30				
Warmouth			<10				
White Crappie			2	1	2		
Channel catfish							>10
Flathead catfish							1
Threadfin Shad			100's				
Gizzard Shad					some	some	some
Silversides			many				
Drum							2
Carp							too many
Gar							way too many

Table 1: Fish collected and/or observed.

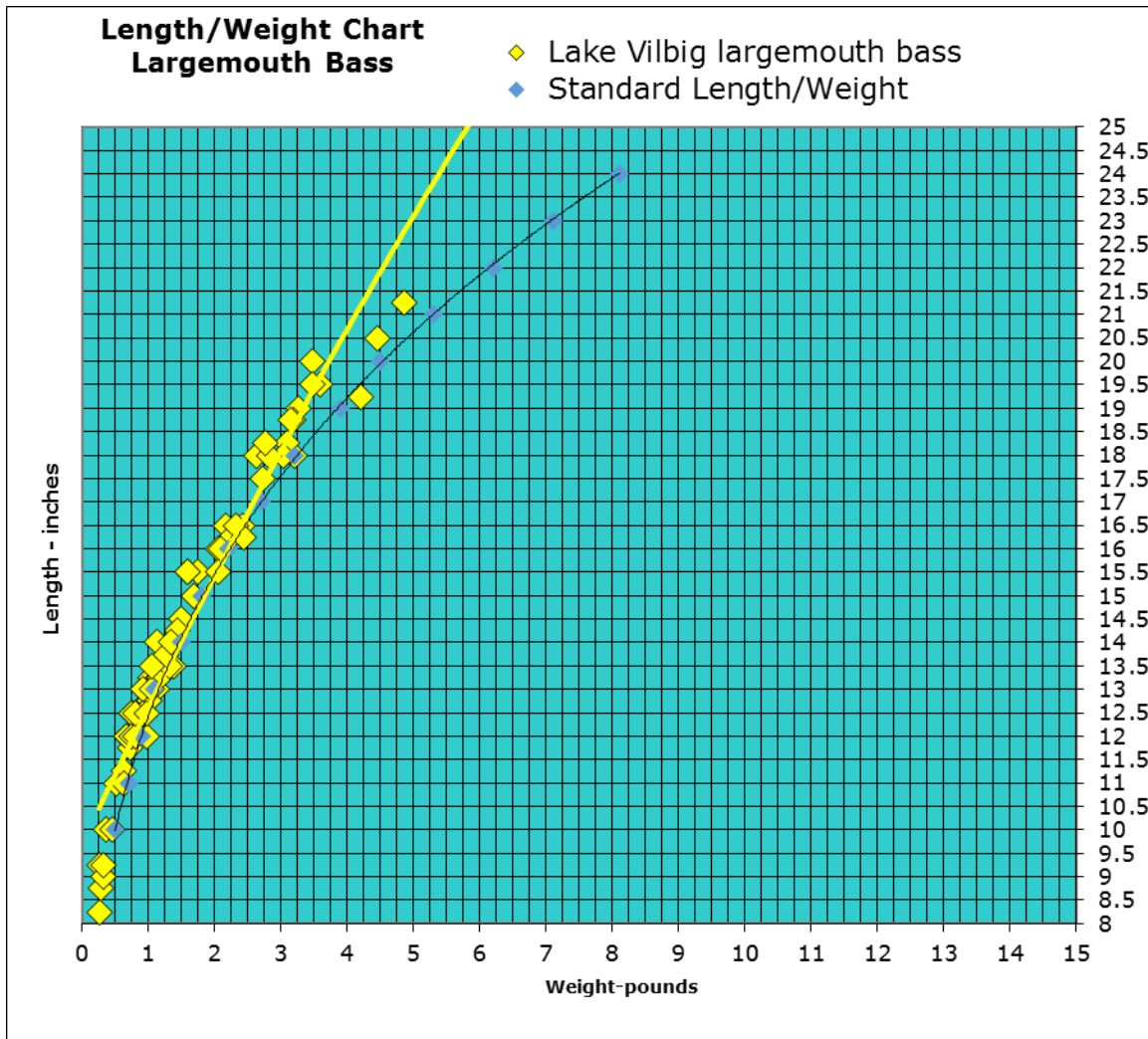
Several observations:

- 1) Excellent recruitment of young bass into the fishery.
  - a. This year's hatch shows two size classes: recently spawned fish roughly ½" long, and six week-old fish that are 3-4" long with deep girth.
  - b. Last year's hatch of 7-9" fish indicating high survival rates.
  - c. Two year old fish, those at least 11-13" long, low in number, suggesting poor spawn from last year or high mortality of Age 1 bass from predators, mainly cormorants. I'd suggest the birds have eaten lots of those mid-sized bass that are missing from the size and age classes.
  - d. We basically observed 9 different size classes of bass, which is an indicator of a fishery trying to achieve 'balance'. That's healthy.
- 2) Bluegill sunfish had six size classes.
  - a. That's good...it tells us that your fish are spawning well.
  - b. Of those six size classes, we observed 4 age classes. The largest fish are probably 4-5 years old, while the two youngest size classes are this year's fish, two spawns into the season.

- c. The number of 3-5" fish are quite low, suggesting heavy predation, most likely from small bass and the over-abundant gar in the lake.
- 3) Longear and Warmouth are present, but not abundant. They are native fish, cause no harm and are fun to see from time to time.
  - 4) Crappie numbers appear very low. However, knowing you stocked black crappie last year is reassuring that you have a good grasp on proper recruitment for that species.
  - 5) Carp numbers are high, but you already know that. They are not necessarily having a negative impact on the fishery, except they compete at the bottom of the food chain and take up space that other fish could use.
  - 6) Gar numbers are way too high. These fish are competing in the food chain with your target species, especially largemouth bass and crappie. I perceive them to be a problem, especially since their preferred habitat is the primary nursery areas for your small fish, the water willow islands. Every one of those zones had numerous gar. 7) The other fish are indicative of a normal lake of the type as Lake Vilbig. Near sources of native and wild fish, large volume, diverse habitat, etc.

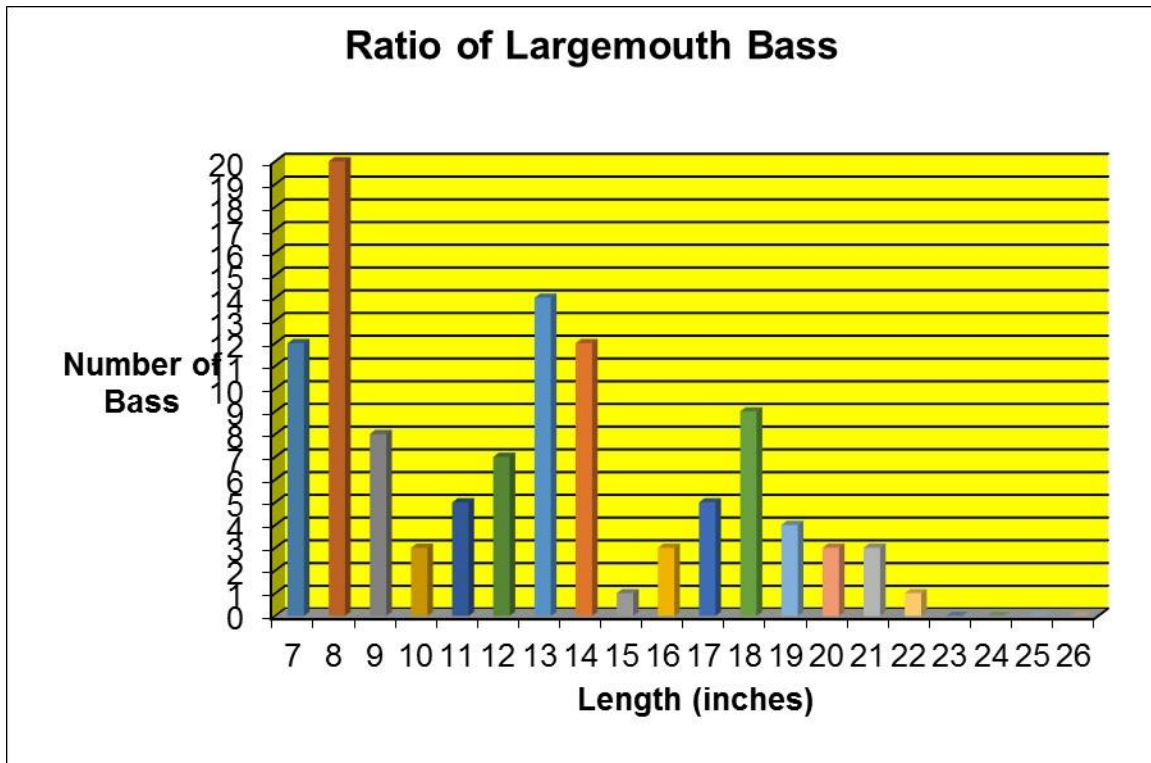
Next, a discussion about the largemouth bass population. Take a look at Graph 1. The blue curve is the *standard* curve for largemouth bass length, compared to weight. As long as your bass are within about 10% of that curve, they are considered *normal*.

As you can see, there are quite a few bass scattered along that line...fish from 10-16" long. Many of those are a year old. The fact they are hugging the curve suggests they are not yet overpopulated. Their relative weights are good for this time of year. The larger bass are obviously underweight. That's because those fish are females and we are post-spawn. They're spawned out and will regain that weight. This curve suggests you are very near a *balanced* state. But, it won't stay that way for more than a year or so. It's that way now because water turkeys eliminated fish and set the stage for young fish to fill that slot, which they will do. Now, you've got more young fish, with better growth potential, filling that slot.



Graph 1: Lake Vilbig largemouth bass weights compared to lengths.

Graph 2 shows a different perspective. This graph illustrates the different size classes and length distribution. Ideally, we'd see a wide bell curve on the right and a more narrow one on the left...due to recruitment of young fish. What you basically have is three curves, with lower numbers of Age 1 bass than we'd consider normal. This graph is representative of a fishery with higher than normal harvest of intermediate-sized bass, specifically those in the 10-14" size class. Those fish which weren't eaten by birds are growing fast and many of them show signs of cormorant predation in the form of scars. We saw quite a few bass with bird scars on them.



Graph 2: Ratios of bass lengths.

My conclusions are:

- 1) Too many gar.
- 2) Bass recruitment is excellent.
- 3) I saw many signs of healthy water through indicator species present, primarily silversides and grass shrimp.
- 4) Bluegill spawning is adequate, but predator pressure is high, resulting in low survival rates.

My recommendations are:

- 1) Continue keeping catch records. Watch relative weights of bass.
- 2) For now, catch and release of largemouth bass is necessary to protect the species after over-harvest by birds. However, as relative weights begin to drop, then change harvest regulations. I think it will take a year, unless cormorants do what they did to you last year. If/when relative weights drop below 90%, re-introduce your harvest rules from years past...harvest all bass smaller than 14".
- 3) In years past I suggested stocking more Florida strain largemouth bass. I'm confident they've become established in Lake Vilbig. I don't

see a need to stock any more. If you decide to stock more, it does no harm.

- 4) You mentioned that one reason Lake Vilbig evaluates the fishery every five years is to have a reference point in case you ever need it. You should do the same with water chemistry, if you've not done that. I use Texas A&M's Soil Sciences Water Quality Lab. They're inexpensive and very efficient. Quarterly water samples are a good idea.

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## **Notes from Al Kohutek**

One week before the shock survey Al Kohutek and Jim Sutton performed a seine net survey. The results have been posted on this facebook album in this link.

<https://www.facebook.com/media/set/?set=a.1091173840898616.1073741836.356707677678573&type=1>

Pictures of the shock survey with Bob Lusk.

[http://s257.photobucket.com/user/lake\\_vilbig1/library/Lake%20Surveys/2015%20Lake%20Survey?sort=6&page=1](http://s257.photobucket.com/user/lake_vilbig1/library/Lake%20Surveys/2015%20Lake%20Survey?sort=6&page=1)

Also on facebook

<https://www.facebook.com/media/set/?set=a.1094680613881272.1073741837.356707677678573&type=1>

## Raw Data

Largemouth Bass	
Length	Weight
8.25	0.26
8.75	0.28
9	0.33
9.25	0.26
9.25	0.33
10	0.37
10	0.46
11	0.52
11	0.63
11	48
11.25	0.63
11.25	0.66
11.5	0.7
11.75	0.72
12	0.66
12	0.66
12	0.72
12	0.74
12	0.81
12	0.97
12.5	0.74
12.5	0.74
12.5	0.77
12.5	0.81
12.5	0.9
12.5	0.92
12.5	0.92
12.5	0.97
12.75	0.99
12.75	1.01
13	0.92
13	1.05
13	1.12
13.25	1.03
13.25	1.14
13.25	1.16
13.5	1.05
13.5	1.16
13.5	1.32
13.5	1.38
13.75	1.27

Largemouth Bass	
Length	Weight
14	1.12
14	1.34
14	1.41
14.25	1.43
14.5	1.49
15	1.69
15.5	1.6
15.5	1.6
15.5	1.74
15.5	2.05
16	2.05
16	2.09
16.25	2.24
16.25	2.44
16.5	2.16
16.5	2.33
16.5	2.42
17	2.29
17.25	2.77
17.5	2.73
17.75	2.68
17.75	2.77
18	2.62
18	2.82
18	3.04
18	3.04
18	3.21
18.25	2.77
18.25	3.1
18.75	3.15
18.75	3.19
19	3.26
19.25	4.21
19.5	3.48
19.5	3.59
20	3.48
20.5	4.38
20.5	4.45
21.25	4.85
21.25	4.85

