

# LIZ

# HICKS

## CLASS TRIP #1

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Dr. Steve Ford  
Cynthia Newcombe  
Matt Smith  
Liz Hicks

Note: in back of  
this Notebook are  
slides (pics)

## CLASS TRIP #2

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Aaron Coester  
Rob Dillon  
Richard Haslett  
Steve Kyler  
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Liz Hicks

## OUTSIDE GROUP

Dan Van Leeuwen  
Jack Bohanan  
Marc Macari  
Allisyn Austin  
Andrea Taylor  
Aaron Coester  
Steve Kyler  
Richard Haslett  
Liz Hicks

(the Outside Group seined at three different locations)

THIS NOTEBOOK IS DEDICATED TO THE  
MARTYR OF CRAPPIE : EMILY READ ..... I VERN  
AND BILL  
WHO,  
ME?

**BRIGHT  
TABS™**

1

Phylogenetic  
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of  
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are located.

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SLIDES

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## I. Phylogenetic Listing

CLASS: Agnatha

ORDER:

FAMILY: Dasyatidae

*Dasyatis sabina*

CLASS: Osteichthyes

ORDER: Polypteriformes

FAMILY: Polypteridae

*Polypterus ?*

ORDER: Acipenseriformes

FAMILY: Polyodontidae

*Polyodon spathula*

ORDER: Semionotiformes

FAMILY: Lepisosteidae

*Lepisosteus oculatus*

*Lepisosteus platostomus*

ORDER: Clupeiformes

FAMILY: Clupeidae

*Brevoortia patronus*

*Dorosoma cepedianum*

*Sardinella anchovia*

FAMILY: Engraulidae

*Anchoa cubana*

*Anchoa mitchelli*

ORDER: Salmoniformes

FAMILY: Esocidae

*Esox americanus americanus*

ORDER: Cypriniformes

FAMILY: Cyprinidae

*Camptostoma anomalum*

*Camptostoma oligolepis*

*Carassius auratus*

*Dionda episcopa*

*Dionda nubil*

*Nocomis asper*

*Notemigonus crysoleucas*

*Opsopoeodus* *Notropis emiliae*

*Cyprinella* *Notropis lutrensis*

*Notropis rubellus*

*Notropis simus*

*Notropis stramineus*

*Luxilus cardinalis*

*Lythrurus* *Notropis umbratilis*

*Cyprinella* *Notropis venustus venusta*

*Phenacobius mirabilis*  
*Pimephales notatus*  
*Pimephales promelas*  
*Pimephales vigilax*

FAMILY: Catostomidae

*Carpiodes carpio*  
*Erimyzon oblongus*  
*Ictiobus bubalus*  
*Ictiobus cyprinellus*

ORDER: Siluriformes

FAMILY: Ictaluridae

*Ameiurus melas*  
*Ameiurus Ictalurus natalis*  
*Ictalurus punctatus*  
*Noturus exilis*  
*Noturus nocturnus*

FAMILY: Ariidae

*Arius felis*

ORDER: Lophiiformes

FAMILY: Antennariidae

*Histrio histrio*

ORDER: Gadiformes

FAMILY: Gadidae

*Urophycis floridanus*

ORDER: Atheriniformes *floridana*

FAMILY: Cyprinodontidae

*Cyprinodon variegatus*  
*Fundulus grandis*  
*Fundulus notatus*  
*Fundulus olivaceus*  
*Fundulus similis*

FAMILY: Poeciliidae

*Gambusia affinis*  
*Xiphophorus helleri*  
*Xiphophorus maculatus*

FAMILY: Atherinidae

*Labidesthes sicculus*  
*Membras martinica*  
*Menidia beryllina*

ORDER: Gasterosteiformes

FAMILY: Syngnathidae

*Hippocampus erectus*  
*Hippocampus zosterae*  
*Syngnathus floridae*  
*Syngnathus louisianae*  
*Syngnathus scovelli*

cyprinodontiformes,  
according to Moyle

ORDER: Perciformes

FAMILY: Centrarchidae

*Lepomis cyanellus*  
*Lepomis gulosus*  
*Lepomis humilis*  
*Lepomis macrochirus*  
*Lepomis marginatus*  
*Lepomis megalotis*  
*Lepomis microlophus*  
*Lepomis punctatus*  
*Micropterus salmoides*  
*Pomoxis annularis*  
*Pomoxis nigromaculatus*

FAMILY: Percidae

*Etheostoma caeruleum*  
*Etheostoma chlorosomum*  
*Etheostoma cragini*  
*Etheostoma spectabile*  
*Percina caprodes*  
*Percina sciera*

FAMILY: Sparidae

*Lagodon rhomboides*

FAMILY: Sciaenidae

*Cynoscion nebulosus*  
*Pogonias cromis*  
*Sciaenops ocellatus*  
*Stellifer lanceolatus*

FAMILY: Cichlidae

*Cichlasoma octofasciatum*  
*Tilapia mariae*

FAMILY: Mugilidae

*Mugil cephalus*

FAMILY: Polynemidae

*Polydactylus octonemus*

FAMILY: Clinidae

*Labrisomas <sup>n</sup>muchipinnis*

FAMILY: Blenniidae

*-Blennius cristatus*

*scorpaenopsis cristata*

FAMILY: Gobiidae

*Bathygobius soporator*  
*Gobionellus shufeldti*  
*Gobiosoma bosci*

FAMILY: Stromateidae

*Peprilus triacanthus*

ORDER: Pleuronectiformes

FAMILY: Bothidae

*Ancylopsetta quadrocellata*

*Paralichthys albigutta*

FAMILY: Cynoglossidae

*Symphurus plagiusa* *plagusia*



## II. Chronological Listing

19 MARCH 1994 SITE #1

SULPHUR RIVER

HWY Jct. 19 & 24, 19.2 km South of Paris, TX

Delta Co., TX

Habitat: River

Species Collected:

*Lepomis macrochirus*

*Cyprinella lutrensis*

*Lepomis macrochirus*

*Pimephales vigilax*

<sup>Bluegill is *macrochirus*</sup>  
(Dollar Sunfish) (2)

(Red Shiner) (40)

(Bluegill) (1)

(Bullhead Minnow) (34)

Collectors: Class Trip #1

19 MARCH 1994 SITE #2

South Sulphur River

HWY Jct. 19 & 154, 25.6 km North of Sulphur Springs, TX

Hopkins Co., TX

Habitat: Stream

Species Collected:

*Gambusia affinis*

*Lepisosteus oculatus*

*Lepomis cyanellus*

*Lepomis gulosus*

*Elassoma zonatum*

*Lepomis macrochirus*

*Lepomis microlophus*

*Lepomis marginatus*

*Pomoxis annularis*

(Mosquitofish) (12)

(Spotted Gar) (1)

(Green Sunfish) (2)

(Warmouth) (1)

(Banded Pygmy Sunfish) (1)

(Bluegill) (7)

(Redear Sunfish) (7)

(Dollar Sunfish) (10)

(White Crappie) (1)

Collectors: Class Trip #1

19 MARCH 1994 SITE #3

Sabine River

Northside, HWY 31, 4.8 km South of Minniola, TX

Wood Co., TX

Habitat: Stream

Species Collected:

*Cyprinella lutrensis*

*Cyprinella venusta*

*Pimephales vigilax*

*Elassoma zonatum*

*Erimyzon oblongus*

*Notropis amabilis*

*Notropis brazosensis*

*Etheostoma fusiformes*

(Red Shiner) (4)

(Blacktail Shiner) (1)

(Bullhead Minnow) (3)

(Banded Pygmy Sunfish) (2)

(Creek chubsucker) (1)

(Texas Shiner)

(Brazos River Shiner) (10)

(Swamp Darter) (1)

*Lepomis marginatus* (Dollar Sunfish) (2)

*Esox americanus americanus* (Redfin Pickerel)

Collectors: Class Trip #1

20 MARCH 1994 SITE #4

Navasota River (North side of bank)

HWY 79 South 8 km South of Marquez, TX

Leon Co., TX

Habitat: Stream

Species Collected:

*Pimphales vigilax* (Bullhead Minnow) (5)

*Cyprinella lutrensis* (Red Shiner) (16)

*Percina sciera* (Dusky Darter) (1)

*Gambusia affinis* (Mosquitofish) (2)

*Labidesthes sicculus* (Brook Silverside) (2)

Collectors: Class Trip #1

20 MARCH 1994 SITE #5

Little Brazos River

HWY 21 South 9.6 km Southwest of Bryan, TX

Brazos Co., TX

Habitat: Stream

Species Collected:

*Cyprinella lutrensis* (Red Shiner) (12)

*Cyprinella venusta* (Blacktail Shiner) (16)

*Notropis oxyrhynchus* (Sharpnose Shiner) (2)

*Notropis brazosensis* (Brazos River Shiner) (12)

*Ictalurus punctatus* (Channel Catfish) (2)

*Fundulus notatus* (Blackstripe Minnow) (1)

*Dionda episcopa* (Roundnose Minnow) (8)

*Pimephales vigilax* (Bullhead Minnow) (6)

*Lepomis macrochirus* (Bluegill) (1)

*Lepomis punctatus* (Spotted Sunfish) (1)

*Lepomis microlophus* (Redear Sunfish) (1)

*Carpoides carpio* (River Carpsucker) (1)

Collectors: Class Trip #1

21 MARCH 1994 SITE #6

Hopper's Landing

HWY 239 6.4 km North of Aransas National Wildlife Refuge, TX

Refugio Co., TX

Habitat: Saltwater Bay

Species Collected:

*Stellifer lanceolatus* (Star Drum) (32)

*Lagodon rhomboides* (Pinfish) (7)

*Pogonias cromis* (Black Drum) (35)



<i>Membras martinica</i>	(Rough Silverside) (13)
<i>Mugil curema</i>	(White Mullet) (8)
<i>Mugil cephalus</i>	(Striped Mullet) (1)
<i>Anchoa hepsetus</i>	(Striped Anchovy) (25)
<i>Anchoa mitchilli</i>	(Bay Anchovy) (9)
<i>Gobiosoma bosc</i>	(Naked Goby) (3)
<i>Bathygobius soporator</i>	(Frillfin Goby) (1)
<i>Fundulus heteroclitus</i>	(Gulf Killifish) (1)
<i>Brevoortia patronus</i>	(Gulf Menhaden) (1)
<i>Cyprinodon variegatus</i>	(Sheepshead Minnow) (4)
<i>Paralichthys albigutta</i>	(Gulf Flounder) (8)
<i>Cynoscion nebulosus</i>	(Spotted Sea Trout) (9)

Collectors: Class Trip #1

21 MARCH 1994 SITE #7

Aransas Bay (Southeast side of overpass)  
HWY 35 South 3.2 km North of Fulton, TX  
Aransas Co., TX

Habitat: Saltwater

Species Collected:

<i>Fundulus heteroclitus</i>	(Gulf Killifish) (9)
<i>Fundulus similis</i>	(Longnose Killifish) (2)
<i>Pogonias cromis</i>	(Black Drum) (2)
<i>Stellifer lanceolatus</i>	(Star Drum) (7)
<i>Anchoa mitchilli</i>	(Bay Anchovy) (7)
<i>Cyprinodon variegatus</i>	(Sheepshead Minnow) (1)
<i>Brevoortia patronus</i>	(Gulf Menhaden) (3)
<i>Labrisomus nuchipinnus</i>	(Hairy Blenny) (2)
<i>Cynoscion nebulosus</i>	(Spotted Sea Trout) (7)
<i>Menidia peninsulae</i>	(Tidewater Silverside) (4)
<i>Symphurus plagiatus</i>	(Blackcheek Tongue) (1)
<i>Syngnathus scovelli</i>	(Gulf Pipefish) (14)
<i>Paralichthys albigutta</i>	(Gulf Flounder) (2)
<i>Lagodon rhomboides</i>	(Pinfish) (1)

Collectors: Class Trip #1

22 MARCH 1994 SITE #8

Mustang Island Seashore (North Beach)--(Gulf of Mexico)  
Off of Road P22 .16 km North of Padre Island, TX  
Nueces Co., TX

Habitat: Saltwater

Species Collected:

<i>Ancyllopsetta quadrocellata</i>	(Ocellated Flounder) (1)
<i>Mentidarrhus americanus</i>	(Southern Kingfish) (1)
<i>Membras martinica</i>	(Rough Silverside) (5)
<i>Brevoortia patronus</i>	(Gulf Menhaden) (1)

<i>Lagodon rhomboides</i>	(Pinfish) (1)
<i>Syngnathus floridae</i>	(Dusky Pipefish) (2)
<i>Polydactylus octonermus</i>	(Atlantic Threadfin) (11)
<i>Henengula jaguana</i>	(Scaled Sardine) (1)
<i>Stellifer lanceolatus</i>	(Star Drum) (4)

Collectors: Class Trip #1

22 MARCH 1994 SITE #9

Adolf Thomae Jr. County Park

HWY 292 South

Aransas Co., TX

Habitat: Backwater Lagoon

Species Collected:

<i>Arius felis</i>	(Hardhead Catfish) (1)
<i>Lepisosteus spatula</i>	(Alligator Gar) (1)

Collectors: Class Trip #1

24 MARCH 1994 SITE #10

Brazos Island (Gulf of Mexico meets with North Side of Rio Grande)

HWY 4 3.2 km North of Boca Chico, TX

Cameron Co., TX

Habitat: Saltwater shoreline

Species Collected:

<i>Pogonias cromis</i>	(Black Drum) (1)
<i>Syngnathus louisianae</i>	(Chain Pipefish) (1)
<i>Polydactylus octonermus</i>	(Atlantic Threadfin) (7)
<i>Urophycis floridana</i>	(Southern Hake) (3)
<i>Anchoa cubana</i>	(Cuban Anchovy) (1)
<i>Gobionellus shufeldti</i>	(Freshwater Goby) (13)
<i>Anchoa mitchilli</i>	(Bay Anchovy) (2)
<i>Citharichthys spilopterus</i>	(Bay Whiff) (15)
<i>Henengula jaguana</i>	(Scaled Sardine) (1)
<i>Menidia peninsulæ</i>	(Tidewater Silverside) (8)
<i>Sardinella aurita</i>	(Spanish Sardine) (3)

Collectors: Class Trip #1

25 MARCH 1994 SITE #11

Lagoona Madre

West of HWY 100 .16 km North of South Padre, TX

Cameron Co., TX

Habitat: Backwater Lagoon

Species Collected:

<i>Hippocampus erectus</i>	(Lined Seahorse) (2)
<i>Peprilus triacanthus</i>	(Butterfish) (17)
<i>Lucania parva</i>	(Rainwater Killifish) (9)
<i>Bathygobius soporator</i>	(Frillfin Goby) (3)

<i>Cynoscion nebulosus</i>	(Spotted Sea Trout) (4)
<i>Menidia peninsulae</i>	(Tidewater Silverside) (2)
<i>Hippocampus zosterae</i>	(Dwarf Seahorse) (1)
<i>Fundulus similis</i>	(Longnose Killifish) (3)
<i>Mugil cephalus</i>	(Striped Mullet) (1)
<i>Gobiosoma bosc</i>	(Naked Goby) (1)
<i>Gobiosoma robustum</i>	(Code Goby) (3)

Collectors: Class Trip #1

25 MARCH 1994 SITE #12

South Padre Island (Gulf of Mexico)

East of HWY 100 4.8 km North of South Padre City, TX

Cameron Co., TX

Habitat: Saltwater shoreline

Species Collected:

<i>Hippocampus erectus</i>	(Lined Seahorse) (1)
<i>Histrio histrio</i>	(Sargassumfish) (3)
<i>Urophycis floridana</i>	(Southern Hake) (24)

Collectors: Class Trip #1

25 MARCH 1994 SITE #13

South Padre Island (Southern end of South Padre City, TX)

HWY 100 West .16 km at park

Cameron Co., TX

Habitat: Jetty

Species Collected:

<i>Dasyatis sabina</i>	(Atlantic Stingray) (1)
<i>Scartella cristata</i>	(Molly Miller) (4)

Collectors: Class Trip #1

16 APRIL 1994 SITE#14

Van Leeuwen Property

HWY Jct. 59 & 47 3.2 km South of Erie, KS

Neosho Co., KS

T29S R19E S12

Habitat: ponds and small lake

Species Collected:

<i>Notemigonus crysoleucas</i>	(Golden Shiner) (2)
<i>Dorosoma cepedianum</i>	(Gizzard Shad) (2)
<i>Micropterus salmoides</i>	(Largemouth Bass) (3)
<i>Lepomis macrochirus</i>	(Bluegill) (3)
<i>Lepomis humilis</i>	(Oranepotted Sunfish) (2)
<i>Lepomis cyanellus</i>	(Green Sunfish) (1)
<i>Lepomis microlophus</i>	(Redear Sunfish) (2)
<i>Pimephales promelas</i>	(Fathead Minnow) (4)
<i>Pomoxis annularis</i>	(White Crappie) (1)



*Pomoxis nigromaculatus*  
Collectors: OUTSIDE GROUP

(Black Crappie) (1)

22 APRIL 1994 SITE #15  
3.2 km North & 1.4 km East of Catholic Church in St. Paul, KS  
Neosho, KS  
T29S R19E S6  
Habitat: Stream  
Species Collected:

<i>Campostoma anomalum</i>	(Central Stoneroller) (3)
<i>Campostoma oligolepis</i>	(Largescale Stoneroller) (3)
<i>Percina caprodes</i>	(Logperch) (1)
<i>Etheostoma spectabile</i>	(Orangethroat Darter) (2)
<i>Etheostoma caeruleum</i>	(Rainbow Darter) (2)
<i>Ameiurus melas</i>	(Black Bullhead) (2)
<i>Labidesthes sicculus</i>	(Brook Silverside) (10)
<i>Notropis stramineus</i>	(Sand Shiner) (3)
<i>Phenacobius mirabilis</i>	(Suckermouth Minnow) (2)
<i>Notemigonus crysoleucas</i>	(Golden Shiner) (4)
<i>Lythrurus</i> <i>Notropis umbratilis</i>	(Redfin Shiner) (5)
<i>Noturus nocturnus</i>	(Freckled Madtom) (1)

Collectors: OUTSIDE GROUP

25 APRIL 1994 SITE #16  
Bo's 1 Stop  
At HWY Jct. 69 & 126 West of Pittsburg, KS  
Crawford Co., KS  
Habitat: Smelly gas station  
Species Collected:

<i>Notropis atherinoides</i>	(Emerald Shiner)
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Collector: Allysin Austin

26 APRIL 1994 SITE #17  
Schimmerhorn Park  
One mile South of Galena, KS  
Cherokee Co., KS  
T34S R25E S35  
Habitat: Fast-moving Stream  
Species Collected:

<i>Noturus exilis</i>	(Slender Madtom) (1)
<i>Gambusia affinis</i>	(Mosquitofish) (1)
<i>Notropis rubellus</i>	(Rosyface Shiner) (7)
<i>Etheostoma spectabile</i>	(Orangethroat Darter) (2)
<i>Notropis nubilus</i>	(Ozark Minnow) (10)
<i>Luxilus cardinalis</i>	(Cardinal Shiner) (8)

\*caught & thrown back!!!:



*Nocomis asper* (Red Spot Chub) (1)  
*Etheostoma cragini* (Arkansas Darter) (1)

Collectors: Class Trip #2

6 MAY 1994 SITE #18

(Stream under bridge near farmland)

South 170th Street Between Craig and East 520 Avenue

About 6.5 miles West of HWY 69 South

Crawford Co., KS

Habitat: na (fish was probably dumped--habitat not appropriate)

Species Collected:

*Polydon spathula* (Paddlefish) (1)

Collector: Liz Hicks

6 MAY 1994 SITE #19

Fish & Critters (Jill's Pet Store)

115 North Broadway Pittsburg, KS

Crawford Co., KS

Habitat: Aquaria

Species Collected:

*Polypterus ???* (Bichir) (1)

*Xiphophorus helleri* (Green Swordtail) (2)

*Xiphophorus maculatus* (Southern Platyfish) (2)

*Percina sciera* (Jack Dempsey) (1) → how about *Cichlasoma octos fasciatum*

*Tilapia mariae* (Spotted Tilapia) (1)

Collectors: Liz Hicks and Allysin Austin

1994 SITE #20

Neosho Waterfowl Refuge

Neosho Co., KS

T29S R21E S29

Habitat: Lake

Species Collected:

*Ictiobus cyprinellus* (Bigmouth Buffalo) (2)

*Ictiobus bubalus* (Smallmouth Buffalo) (1)

*Ictalurus punctatus* (Channel Catfish) (1)

*Fundulus notatus* (Blackstripe Topminnow) (1)

Collector: ER (aka LEO or the 'Almighty Crappie Queen')

### III. Species by State

#### TEXAS

1. *Lepomis macrochirus* (15)
2. *Cyprinella lutrensis* (72)
3. *Lepomis macrochirus* (9)
4. *Pimephales vigilax* (48)
5. *Gambusia affinis* (14)
6. *Lepisosteus oculatus* (1)
7. *Lepomis cyanellus* (2)
8. *Lepomis gulosus* (1)
9. *Elassoma zonatum* (3)
10. *Pomoxis annularis* (1)
11. *Cyprinella venusta* (17)
12. *Erimyzon oblongus* (1)
13. *Notropis amabilis* (3)
14. *Notropis brazosensis* (22)
15. *Etheostoma fusiformes* (1)
16. *Esox americanus americanus* (1)
17. *Percina sciera* (1)
18. *Labidesthes sicculus* (2)
19. *Notropis oxyrhynchus* (2)
20. *Ictalurus punctatus* (2)
21. *Fundulus notatus* (1)
22. *Dionda episcopa* (8)
23. *Lepomis punctatus* (2)
24. *Lepomis microlophus* (1)
25. *Carpiodes carpio* (1)
26. *Stellifer lanceolatus* (43)
27. *Lagodon rhomboides* (9)
28. *Pogonias cromis* (38)
29. *Membras martinica* (18)
30. *Mugil curema* (8)
31. *Mugil cephalus* (12)
32. *Anchoa hepsetus* (25)
33. *Anchoa mitchilli* (25)
34. *Gobiosoma bosc* (4)
35. *Bathygobius soporator* (4)
36. *Fundulus heteroclitus* (10)
37. *Brevoortia patronus* (5)
38. *Cyprinodon variegatus* (5)
39. *Paralichthys albigutta* (10)
40. *Cynoscion nebulosus* (16)
41. *Fundulus similis* (5)
42. *Labrisomus nuchipinnus* (2)

43. *Menidra peninsulae* (14)
44. *Symphurus plagiusa* (1)
45. *Syngnathus scovelli* (14)
46. *Ancylopsetta quadrocellata* (1)
47. *Menticrurus americanus* (1)
48. *Syngnathus floridae* (2)
49. *Polydactylus octonemus* (18)
50. *Henengula jaguana* (2)
51. *Arius felis* (1)
52. *Lepisosteus spatula* (1)
53. *Syngnathus louisianae* (1)
54. *Urophycis floridana* (27)
55. *Anchoa cubana* (1)
56. *Gobionellus shufeldti* (13)
57. *Citharichthys spilopterus* (15)
58. *Sardinella aurita* (3)
59. *Hippocampus erectus* (3)
60. *Peprilus triacanthus* (17)
61. *Lucania parva* (9)
62. *Hippocampus zosterae* (1)
63. *Gobiosoma robustum* (3)
64. *Histrio histrio* (3)
65. *Dasyatis sabinas* (1)
66. *Scartella crista* (4)

## KANSAS

1. *Notemigonus crysoleucas* (6)
2. *Dorasoma cepedianum* (2)
3. *Micropterus salmoides* (3)
4. *Lepomis macrochirus* (3)
5. *Lepomis humilis* (2)
6. *Lepomis cyanellus* (1)
7. *Lepomis microlopus* (2)
8. *Pimephales promelas* (4)
9. *Pomoxis annularis* (1)
10. *Camptostoma anomalum* (3)
11. *Camptostoma oligolepis* (3)
12. *Percina caprodes* (1)
13. *Etheostoma spectabile* (4)
14. *Etheostoma caeruleum* (2)
15. *Ameiurus melas* (2)
16. *Labidesthes sicculus* (10)

17. *Notropis stramineus* (3)
18. *Phenacobius mirabilis* (2)
19. *Notropis umbratilis* (5)
20. *Noturus nocturnus* (1)
21. *Notropis atherinoides* (1)
22. *Noturus exilis* (1)
23. *Notropis rubellus* (7)
24. *Notropis nubilis* (10)
25. *Luxilus cardinalis* (8)
26. *Nocomis asper* (tossed back) (1)
27. *Etheostoma cragini* (tossed back) (1)
28. *Polydon Spathula* (1)
29. *Xiphophorus helleri* (2)
30. *Xiphophorus maculatus* (7)
31. *Percina sciera* (1)
32. *Tilapia mariae* (1)
33. *Ictobius cyprinellus* (2)
34. *Ictobius bubalus* (1)
35. *Ictalurus punctatus* (1)
36. *Fundulus notatus* (1)
37. *Pomoxis nigromaculatus* (1)



## IV. Specimen Location

### TEXAS SPECIMENS

#### JAR #1

*Cyprinella lutrensis*  
*Pimephales vigilax*

#### JAR #2

*Gambusia affinis*  
*Lepomis gulosus*  
*Lepomis marginatus*  
*Elassoma zonatum*

#### JAR #3

*Esox americanus americanus*  
*Erimyzon oblongus*

#### JAR #4

*Percina sciera*

#### JAR #5

*Fundulus notatus*  
*Cyprinella venusta*  
*Ictalurus punctatus*  
*Lepomis punctatus*

#### JAR #6

*Anchoa hepsetus*  
*Anchoa mitchilli*  
*Bathygobius soporator*  
*Cyprinodon variegatus*  
*Fundulus heteroclitus*  
*Gobiosoma bosc*  
*Lagodon rhomboides*  
*Mugil curema*  
*Mugil cephalus*  
*Paralichthys albigutta*  
*Stellifer lanceolatus*  
*Pogonias cromis*

#### JAR #7

*Cynoscion nebulosus*  
*Fundulus similis*  
*Labrisomus nuchipinnus*  
*Symphurus plagiusa*

*Syngnathus scovelli*

JAR #8

*Ancylopsetta quadrocellata*  
*Brevoortia patronus*  
*Harengula jaguana*  
*Membras martinica*  
*Menticirrhus americanus*  
*Syngnathus floridae*  
*Polydactylus octonemus*

JAR #9

*Anchoa cubana*  
*Cithoarichthys spilopterus*  
*Syngnathus louisianae*  
*Menidia peninsulae*  
*Gobionella shufeldti*  
*Sardinella aurita*

JAR #10

*Gobiosoma robustum*  
*Hippocampus zosterae*  
*Hippocampus erectus*  
*Peprilus triacanthus*

JAR #11

*Histrio histrio*

JAR #12

*Dasyatis sabine*  
*Scartella cristata*

✓ SLIDE #1 & #2 (George Thomas' notebook)

*Lepisosteus oculatus*  
*Lepisosteus spatula*

✓ SLIDE #3

*Arius felis*

KANSAS SPECIMENS

JAR #1

*Notropis stramineus*  
*Labidesthes sicculus*

JAR #2

*Pimephales notatus*  
*Percina caprodes*  
*Notemigonus crysoleucus*  
*Notropis umbratilis*  
*Lythrurus*

JAR #3

*Noturus nocturnus*  
*Pomoxis annularis*

JAR #4

*Ameiurus melas*  
*Campostoma anomalum*

JAR #5

*Campostoma oligolepis*  
*Phenacobius mirabilis*  
*Etheostoma caeruleum*  
*Etheostoma spectabile*

JAR #6

*Notemigonus crysoleucus*  
*Dorosoma cepedianum*  
*Micropterus salmoides*  
*Lepomis macrochirus*  
*Lepomis humilis*  
*Lepomis cyanellus* *microlophus* - note long pectoral, sm. mouth  
*Lepomis microlophus*  
*Pimephales promelas*

JAR #7

*Notropis atherinoides*  
*Ictiobus bubalus*  
*Ictiobus cyprinellus*  
*Ictalurus punctatus*  
*Fundulus notatus*

JAR #1 (Schimmerhorn Park Location, KS)

*Noturus exilis*  
*Gambusia affinis*  
*Etheostoma spectabile*  
*Dionda nubil*  
*Luxilus cardinalis*

*Pomoxis nigromaculatus*

SLIDE #2

*Polyodon spathula*

SLIDE #3

*Cichlasoma octofasciantum*

SLIDE #4

*Tilapia mariae*

SLIDE #5

*Xiphophorus helleri*

SLIDE #6

*Xiphophorus maculatus*

(SLIDE #7 --- Bichir)