

# Wisconsin Fishes found in lake habitats: Distinguishing Features, Maps

Drawings: Justin T. Sipiorski  
(Unless otherwise noted)

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Maps: © WisDNR, U.S. Geological Survey (John Lyons)

# Gamefishes & Panfishes

- Gamefishes
  - Muskellunge
  - Northern Pike
  - Walleye
  - Largemouth Bass
  - Smallmouth Bass
  - Brook Trout
  - Brown Trout
  - Rainbow Trout
  - Lake Sturgeon
  - Cisco
  - White Bass
- Yellow Bass
- Channel Catfish
- Panfishes
  - Black Crappie
  - White Crappie
  - Bluegill
  - Pumpkinseed
  - Green Sunfish
  - Yellow Perch
- Usually fishes that are commonly eaten

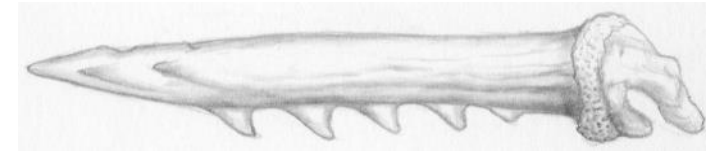
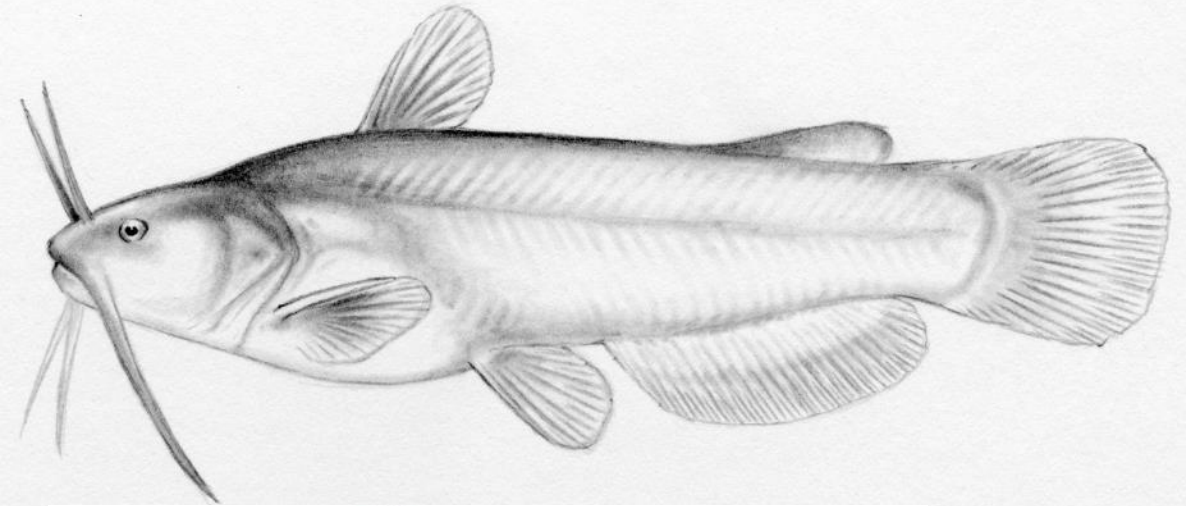
# Reason for this presentation

- Non-game
  - Rough fishes
  - Baitfishes
- Lake users multifaceted group
- Professionals in DNR and private sector
- Diversity as an indicator of lake health
- Sustainable options for fisheries mgmt.
- Information on general ecology and vulnerability
- Lyons et al. (several papers), Becker (1983), Littlejohn et al. (1985)

Family Ictaluridae

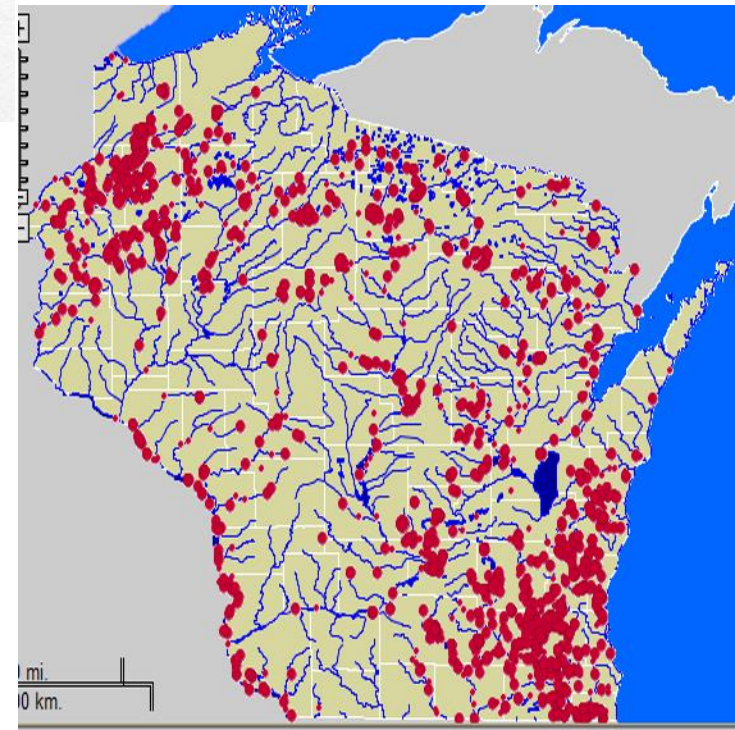
# Yellow Bullhead

*Ameiurus natalis*



- Rounded caudal fin
- Light to dusky chin barbels
- Serrations on pectoral spines
- 24-27 anal fin rays
- 13-15 gill rakers

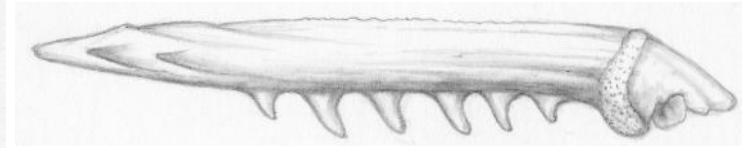
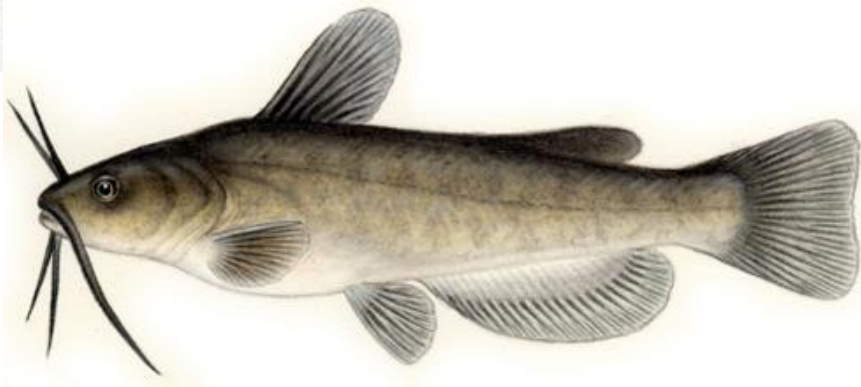
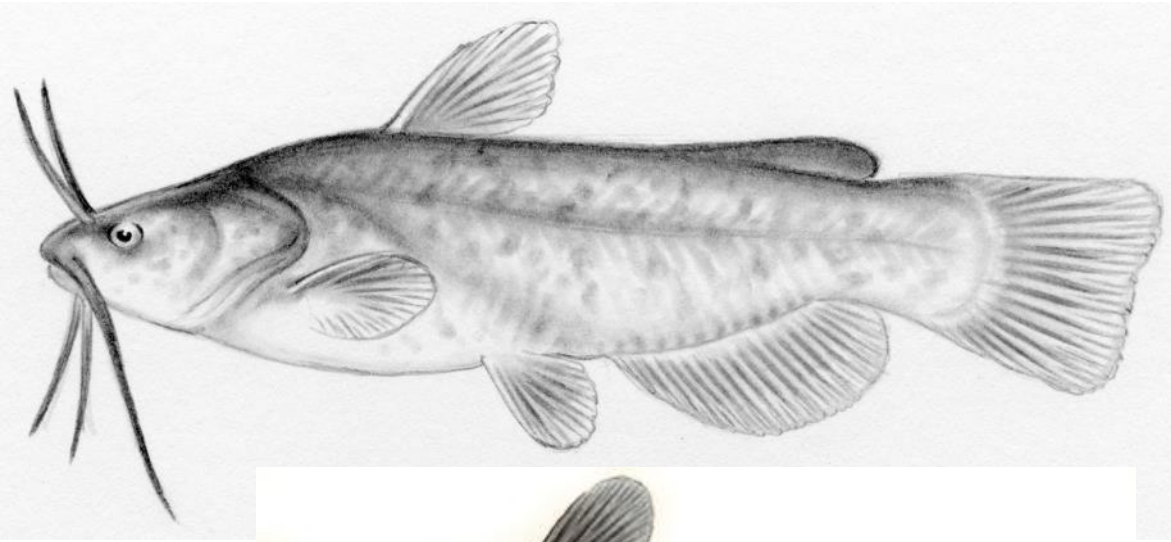
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Family Ictaluridae

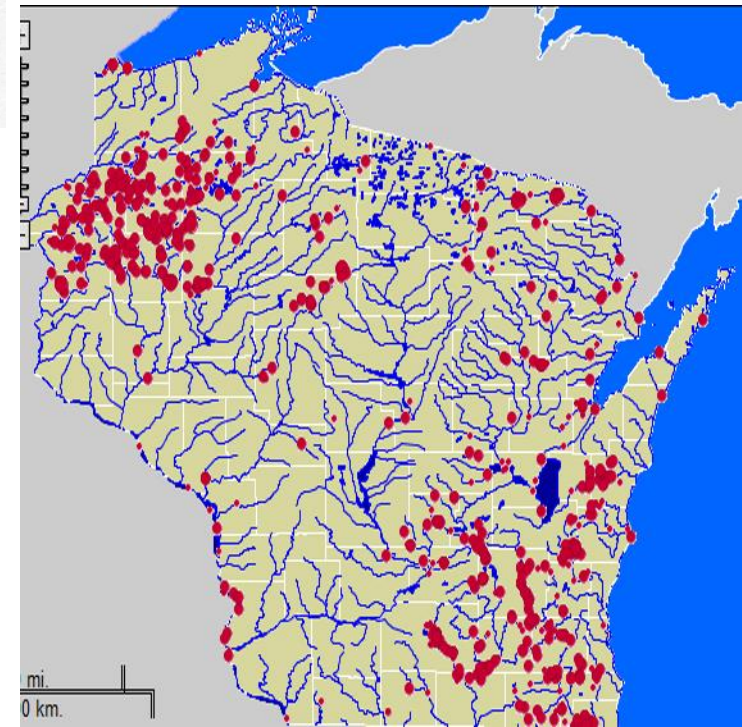
# Brown Bullhead

*Ameiurus nebulosus*



- Emarginate caudal fin
- Dusky to black chin barbels
- Serrations on pectoral spines
- 19-23 anal fin rays
- 11-15 gill rakers

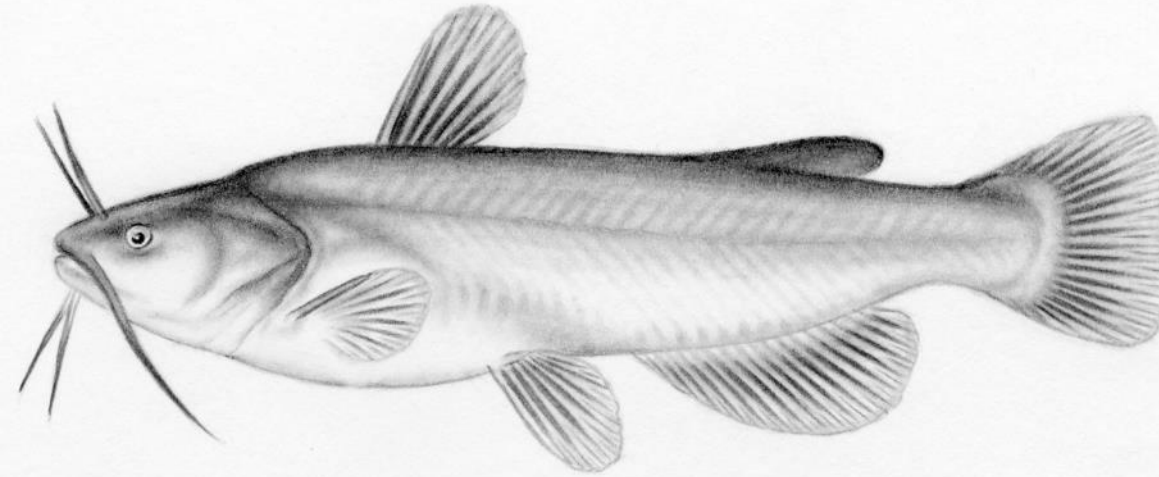
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Family Ictaluridae

# Black Bullhead

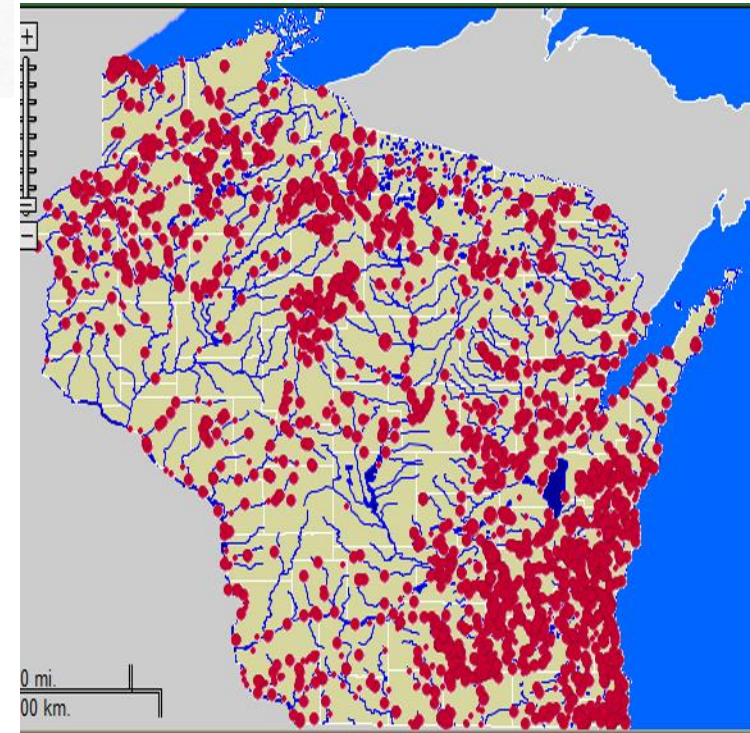
*Ameiurus melas*



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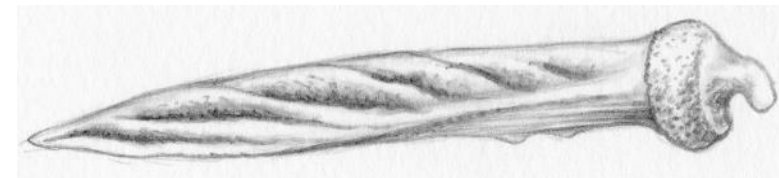
- Emarginate caudal fin
- Dusky to black chin barbels
- 19-23 anal fin rays
- 15-21 gill rakers
- Small to ABSENT serrations on pectoral spines



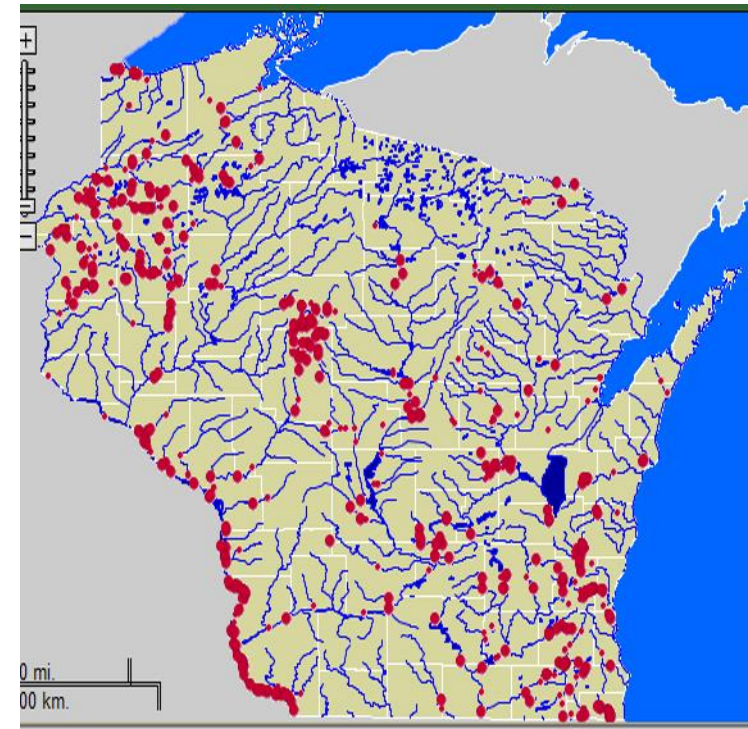
Family Ictarulidae

# Tadpole Madtom

## *Noturus gyrinus*



- Rounded/squared caudal fin
- Low, long adipose fin
- Median fins WITHOUT dark fringe
- Smooth pectoral spines
- Even upper and lower jaw
- Upper jaw tooth patch with backward pointing extensions
- Chubby

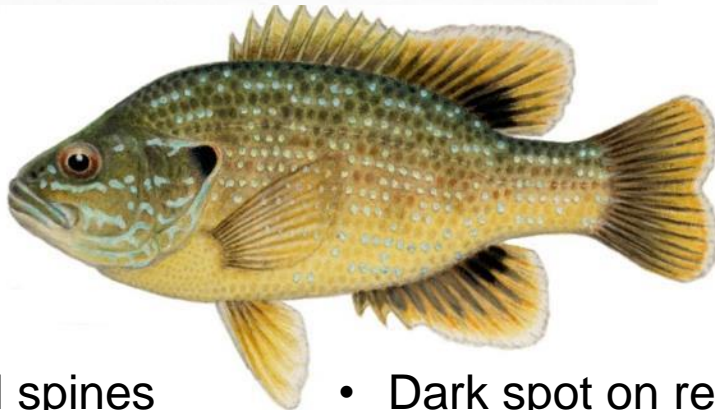
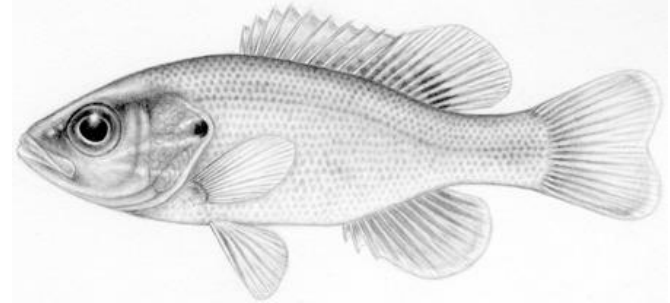
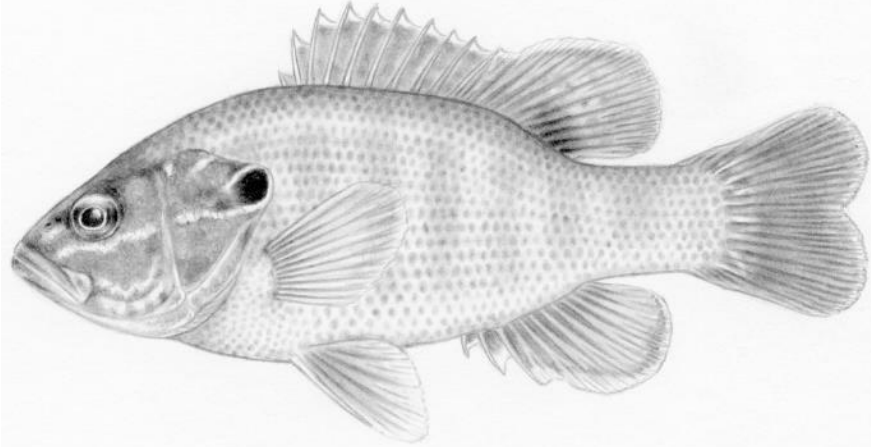


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Family Centrarchidae

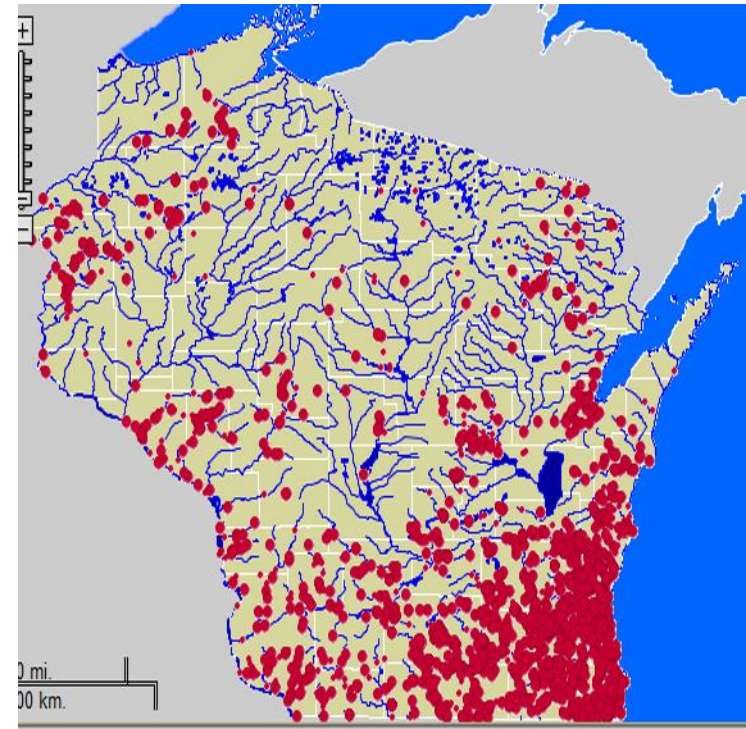
# Green Sunfish

*Lepomis cyanellus*



- 10 Dorsal spines
- 3 Anal spines
- Dark “ear flap” with light fringe (white to orange)
- 41-53 Lateral scales
- Dark spot on rear dorsal fin (sometimes rear anal too)
- Corner of mouth below pupil

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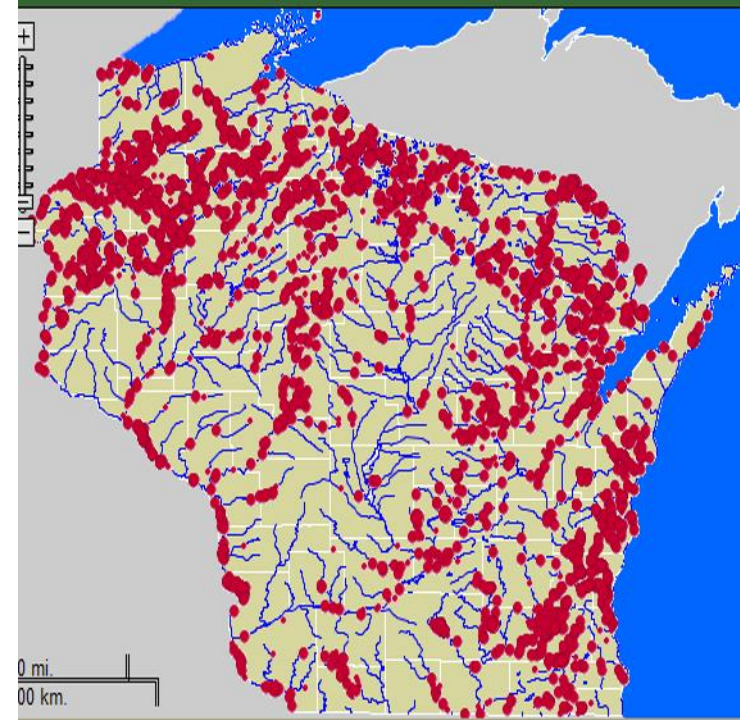
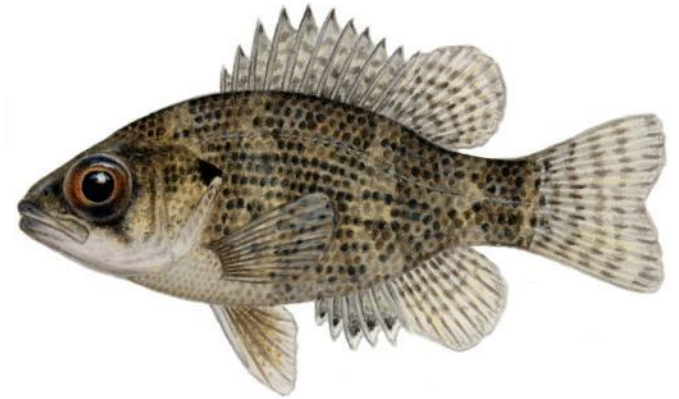
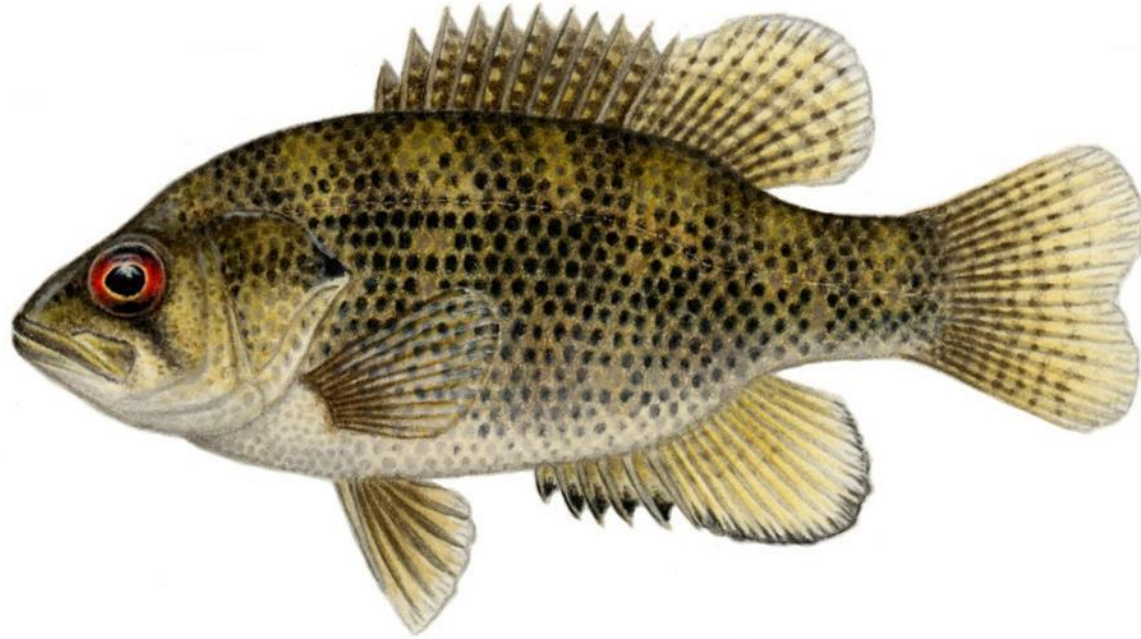




Family Centrarchidae

Rock Bass

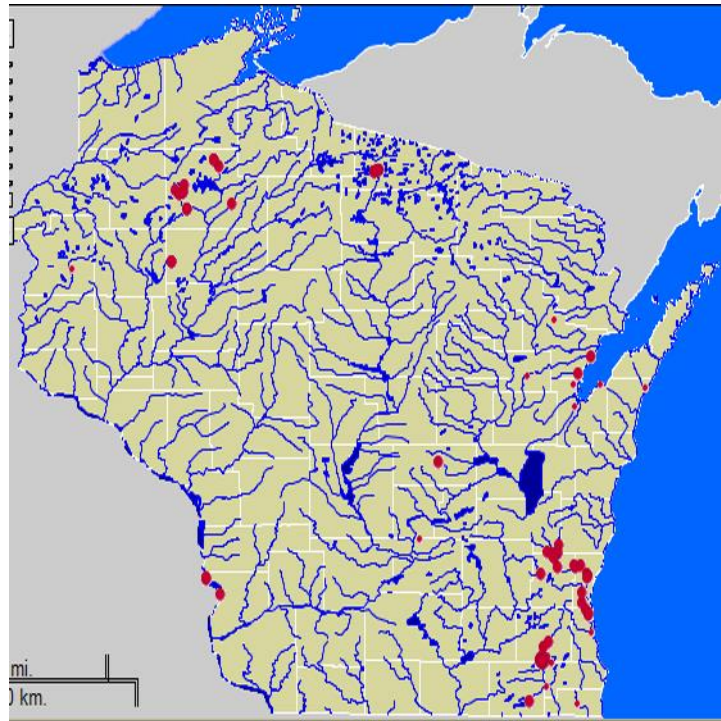
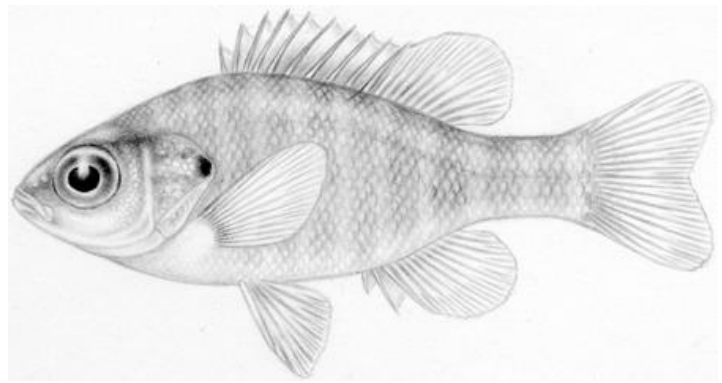
*Ambloplites rupestris*



Family Centrarchidae

Northern Sunfish

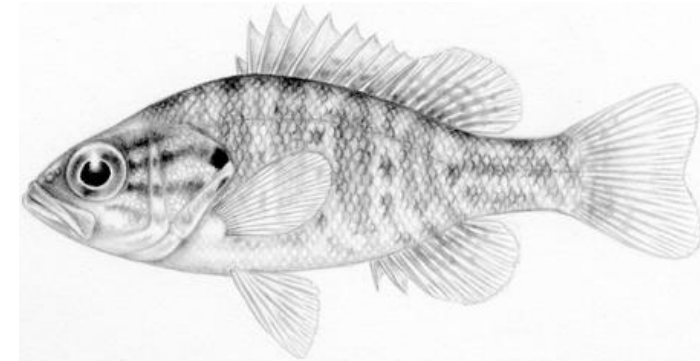
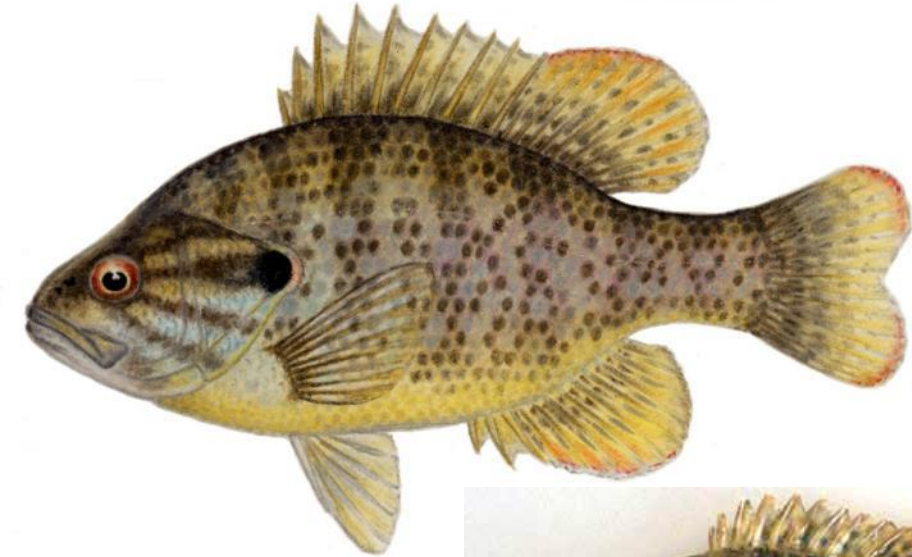
*Lepomis peltastes*



Family Centrarchidae

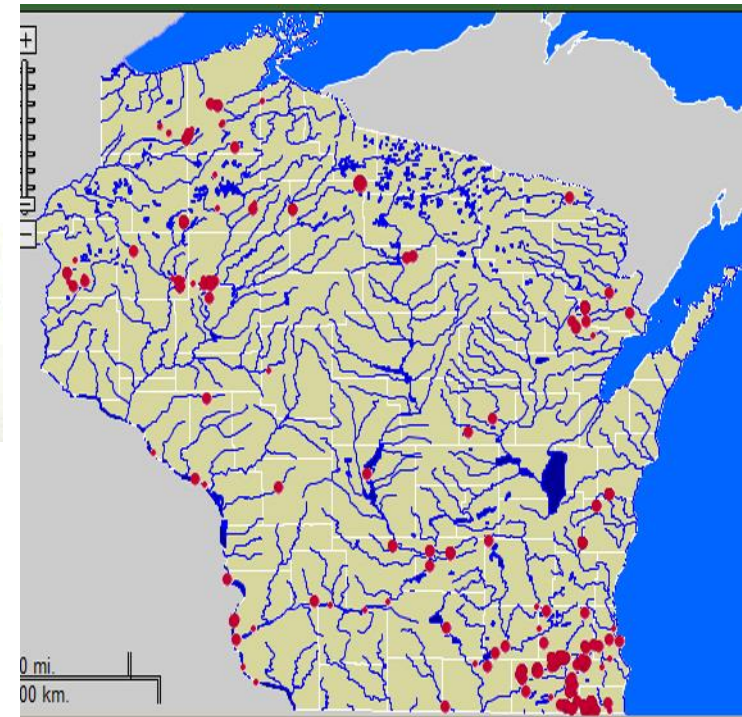
# Warmouth

*Lepomis gulosus*



- 10 Dorsal spines
- 3 Anal spines
- Dark “ear flap” with light fringe (white to orange)
- 36-44 Lateral scales
- Chainlike bars interrupted into blotches
- Corner of mouth below pupil

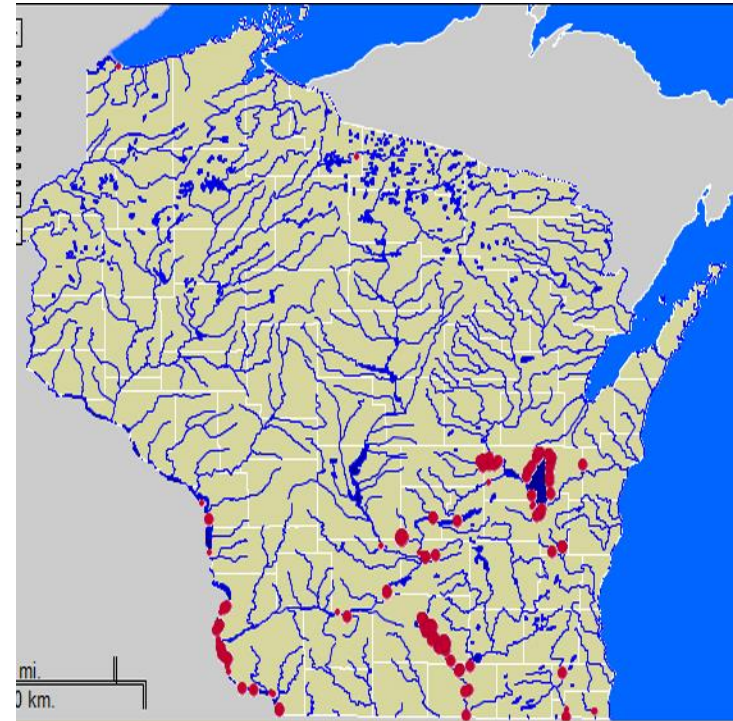
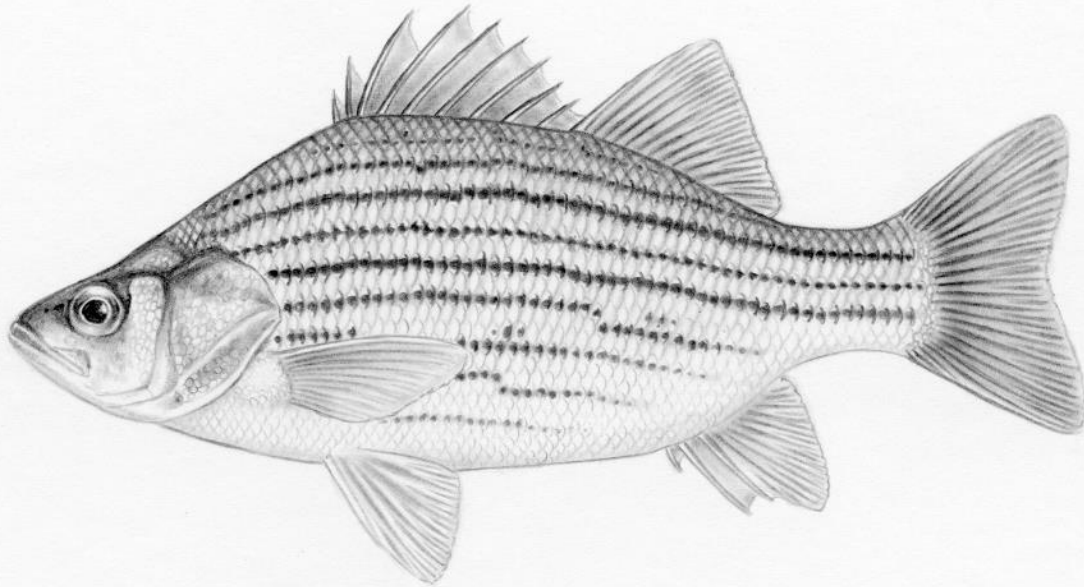
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Family Moronidae

Yellow Bass

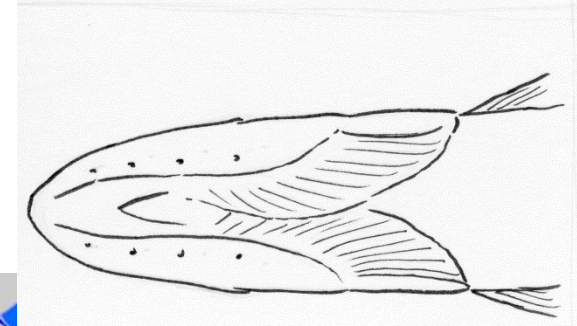
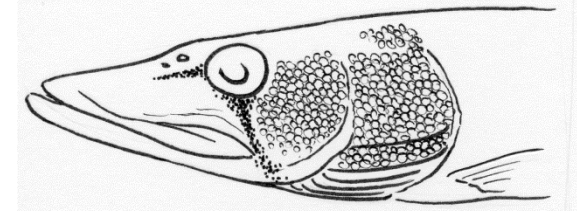
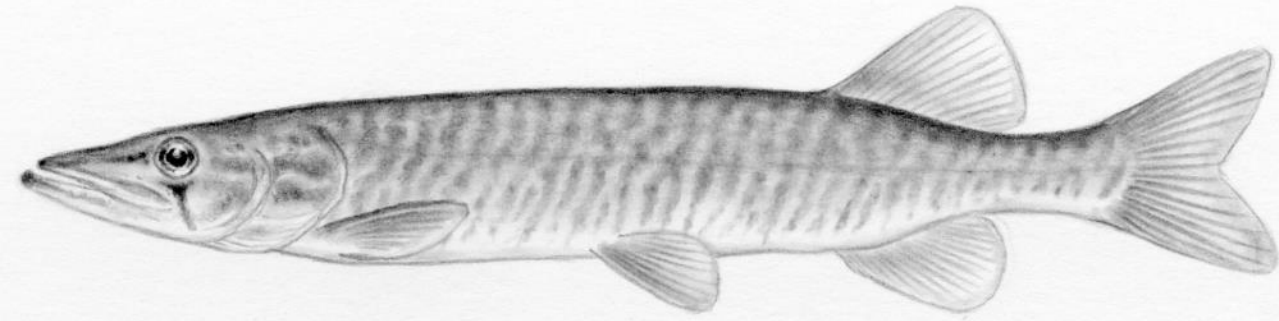
*Morone mississippiensis*



Family Esocidae

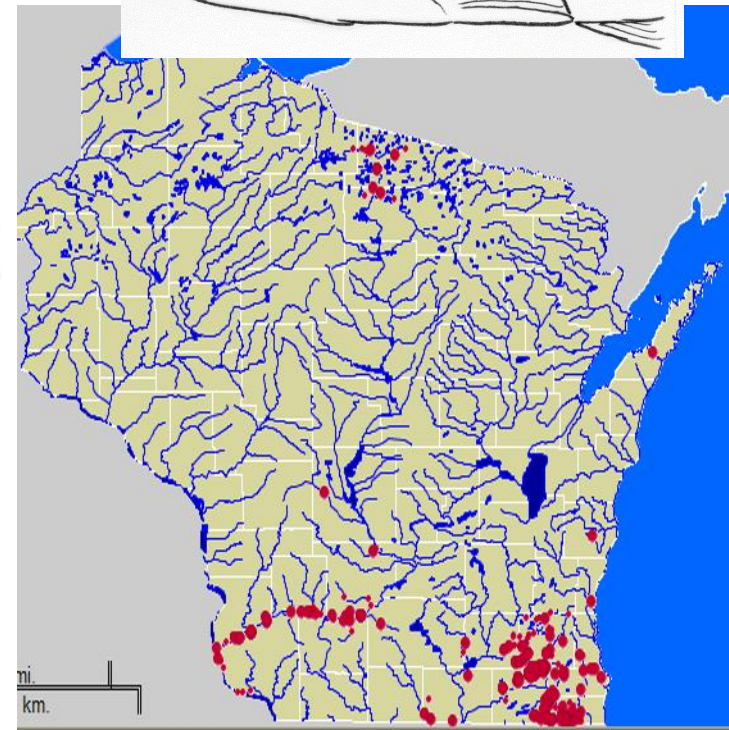
# Grass Pickerel

*Esox americanus vermiculatus*



- Dorsal and anal fin far back on body
- Four jaw pores on each side
- Fully scaled cheek and operculum
- Dark vertical bars on light background
- Heavy tear mark
- MAX SIZE 15 INCHES

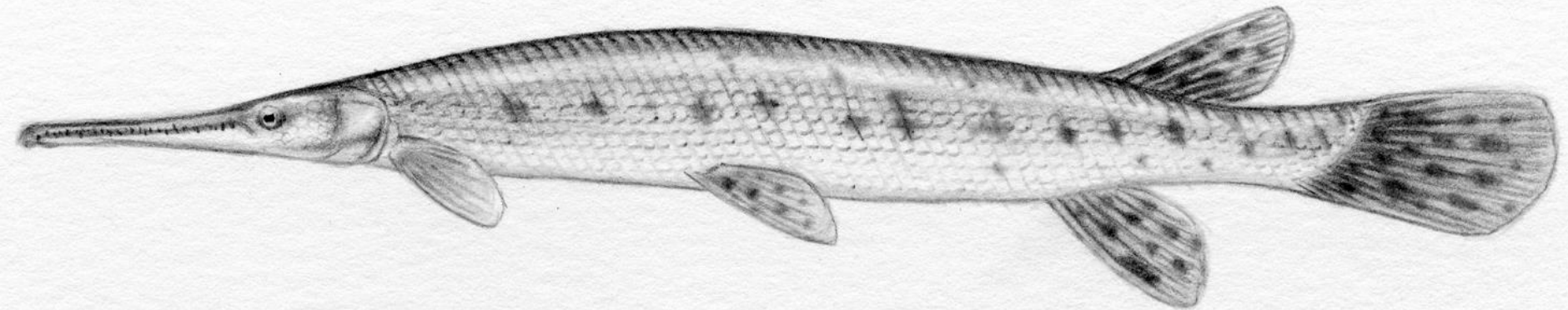
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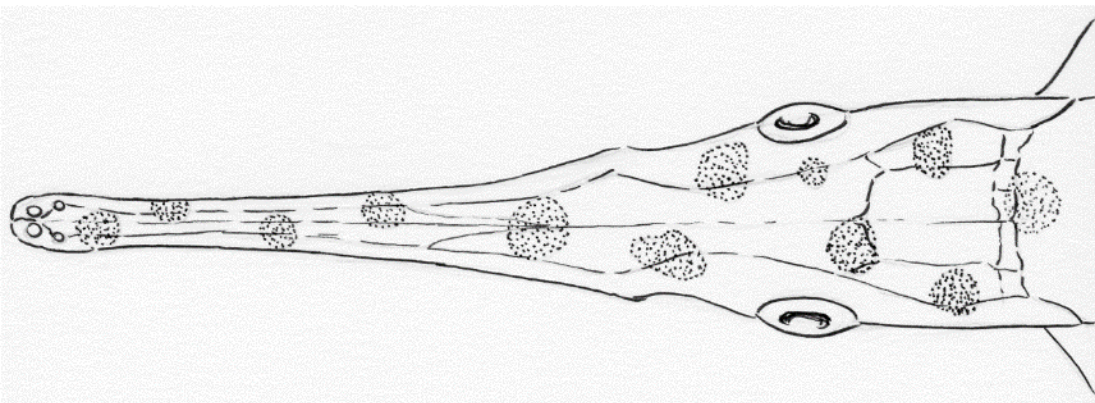
Family Lepisosteidae

# Longnose Gar

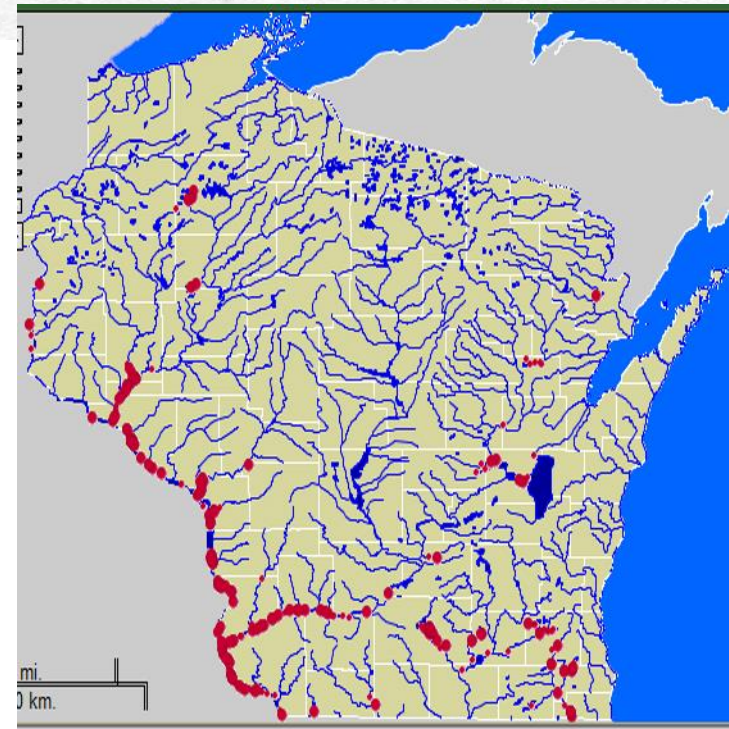
*Lepisosteus osseus*



- Elongate, pointed snout
- Ganoid scales
- Some with heavy pigmentation



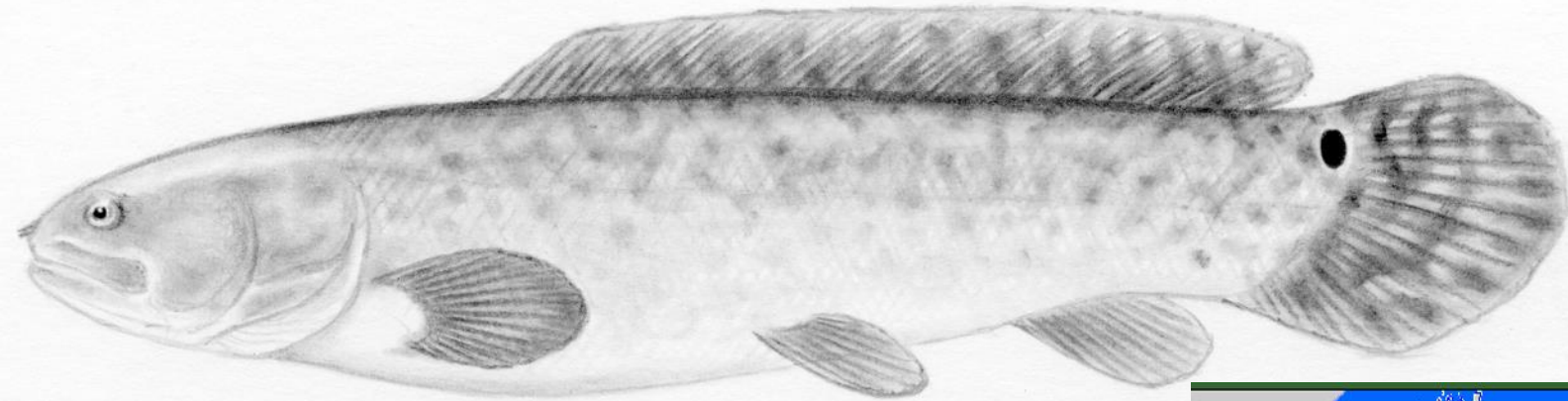
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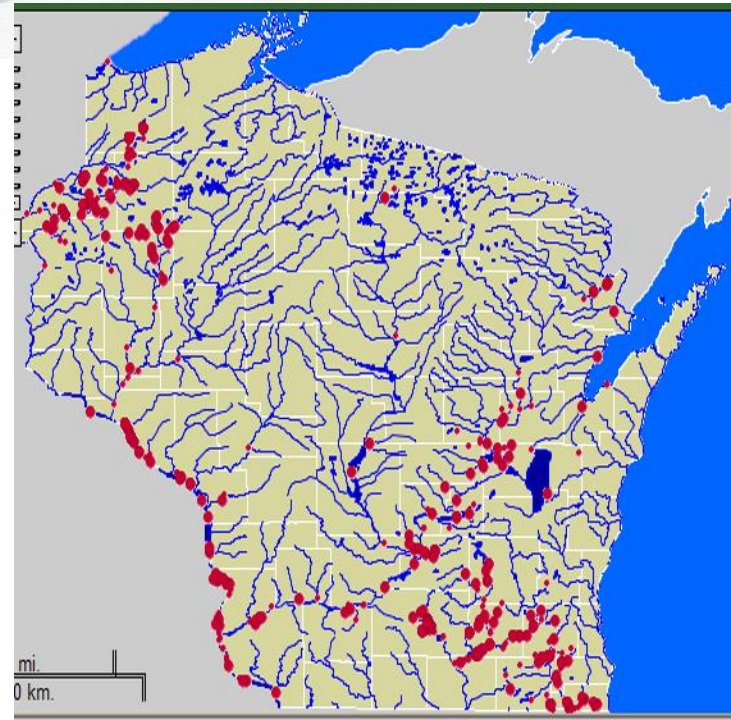
Family Amiidae

# Bowfin

*Amia calva*



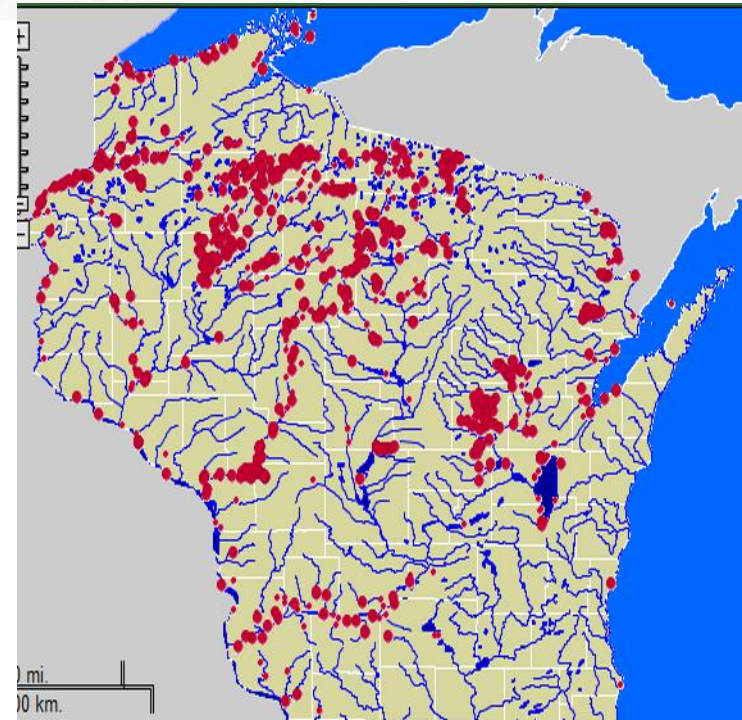
- Elongate dorsal fin
- Ocellus (eye-spot)
- Abbreviate heterocercal caudal fin



Family Gadidae

Burbot

*Lota lota*





Family Sciaenidae  
Freshwater Drum  
*Aplodinotus grunniens*

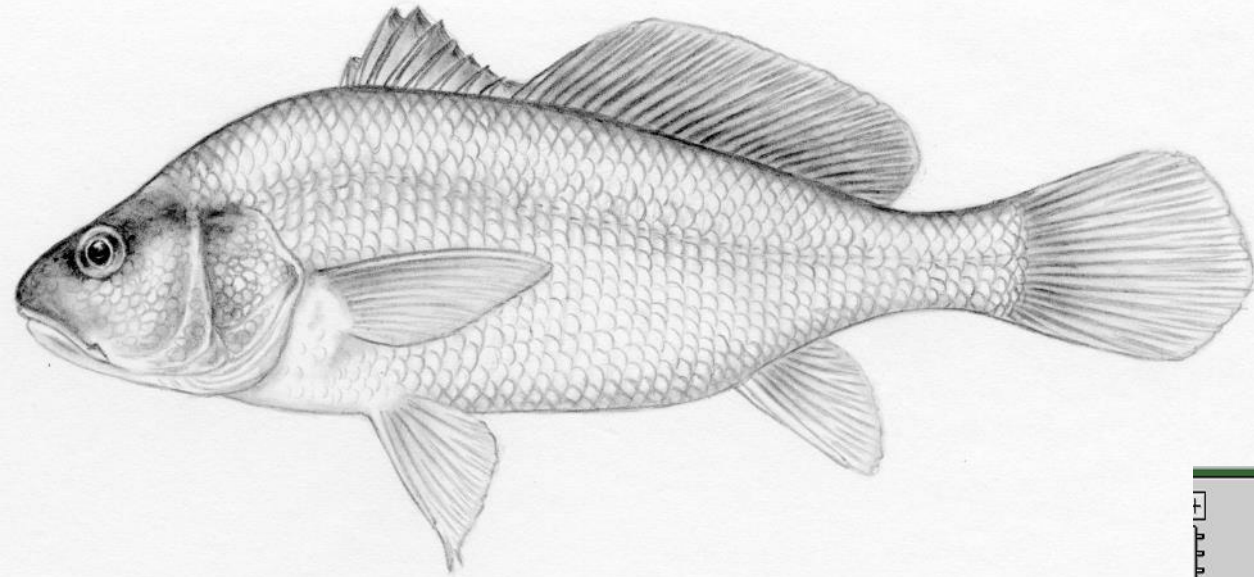
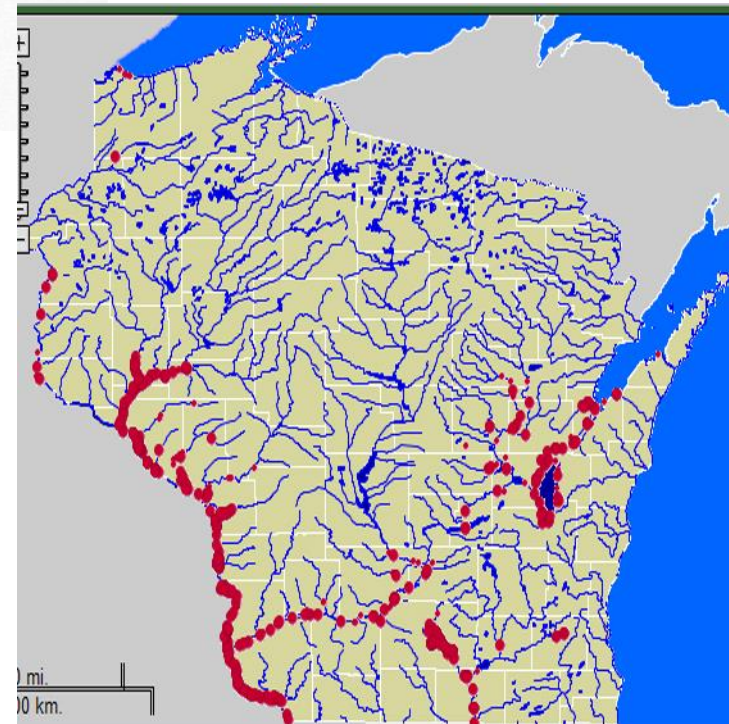


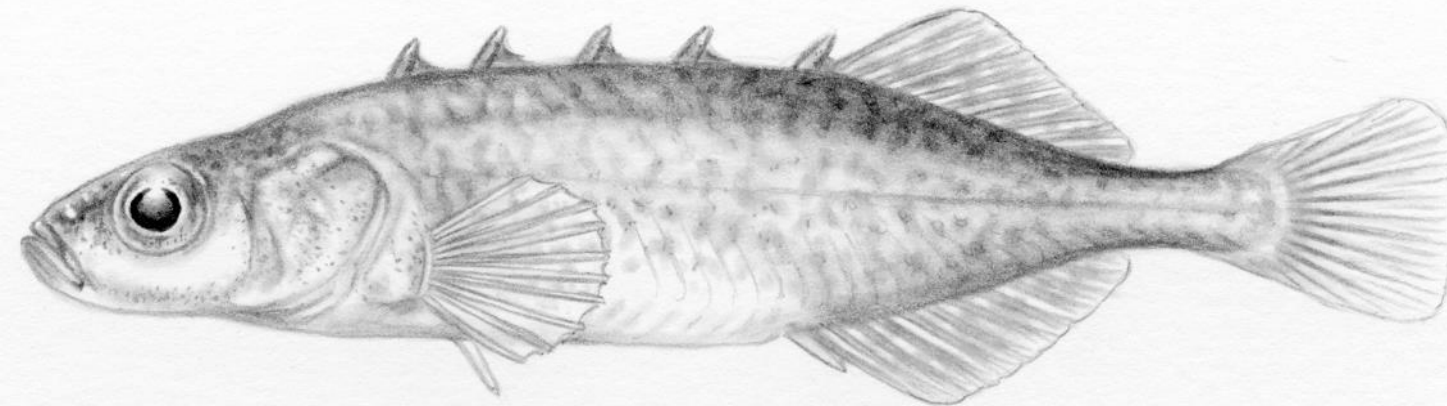
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Family Gasterosteidae

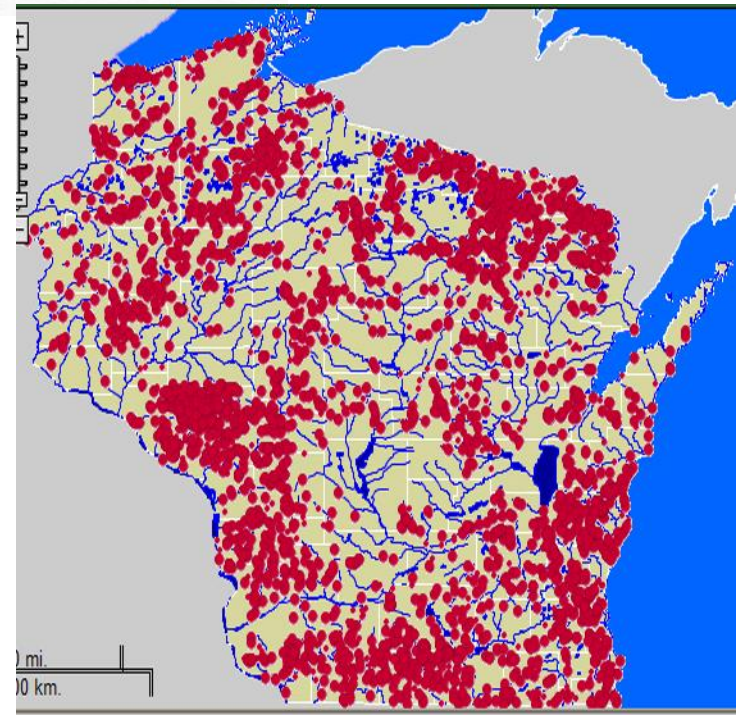
# Brook Stickleback

*Culaea inconstans*



- 4-6 Dorsal spines prominent and separate
- Pelvic fin reduced to spine
- Narrow caudal peduncle
- Tube-like snout

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Family Umbridae

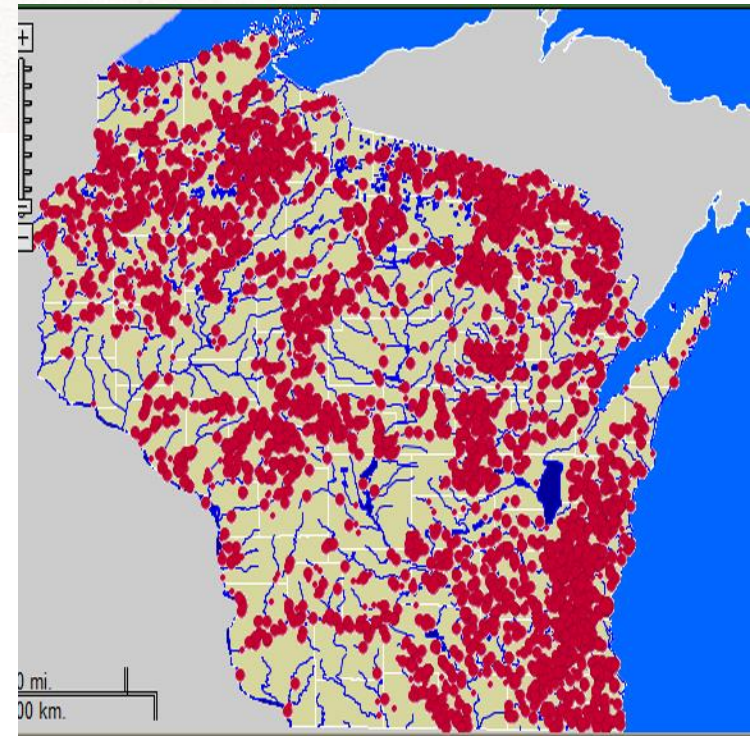
# Central Mudminnow

*Umbra limi*



- Dorsal and anal fin farther back on body
- All fins rounded
- Dark vertical bars on light background
- Heavy, dark vertical bar at base of caudal fin
- Purplish iridescence

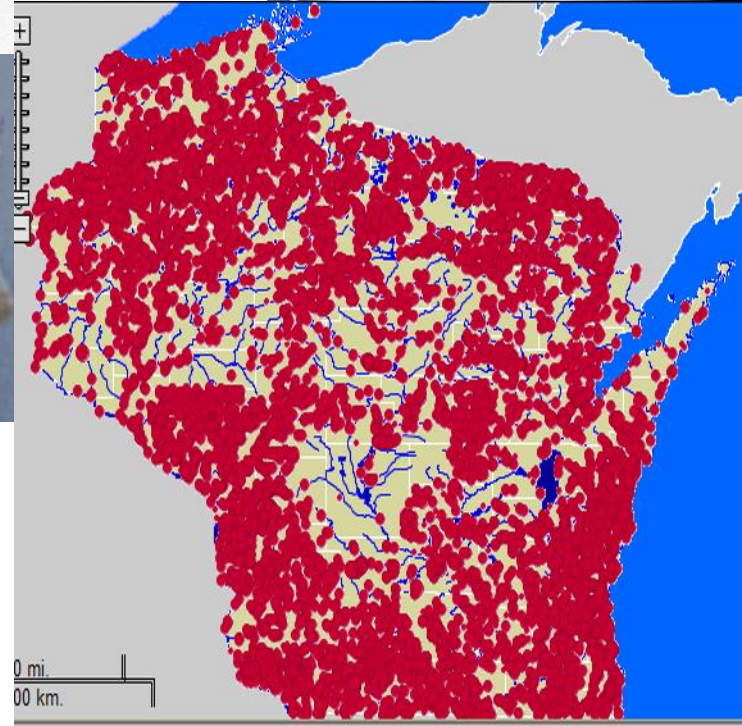
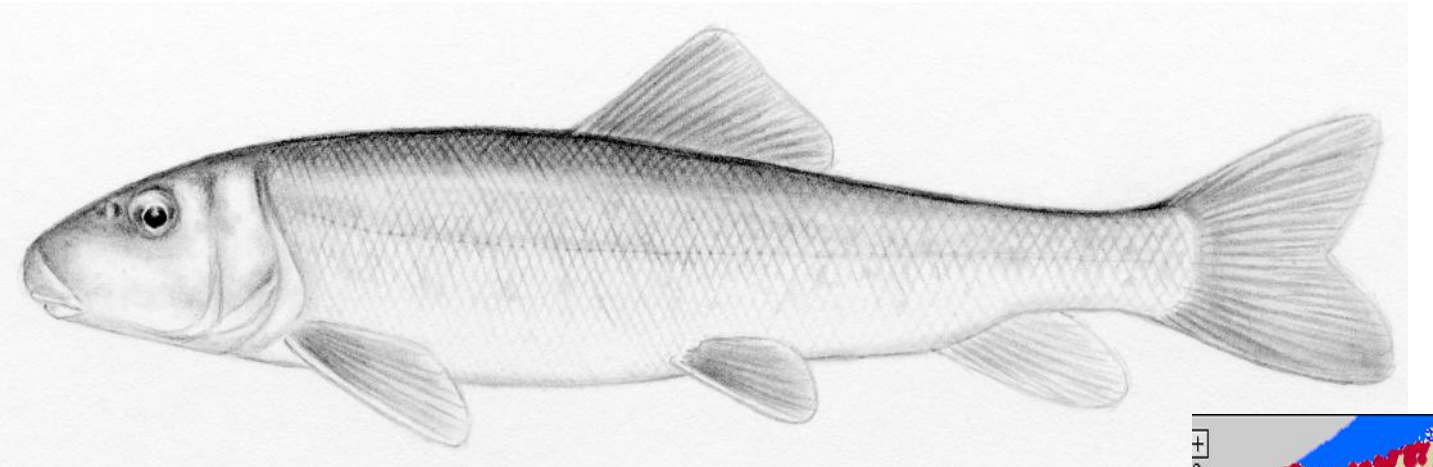
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Family Catostomidae

# White Sucker

*Catostomus commersoni*



- Fusiform body
- Short dorsal fin
- Short snout

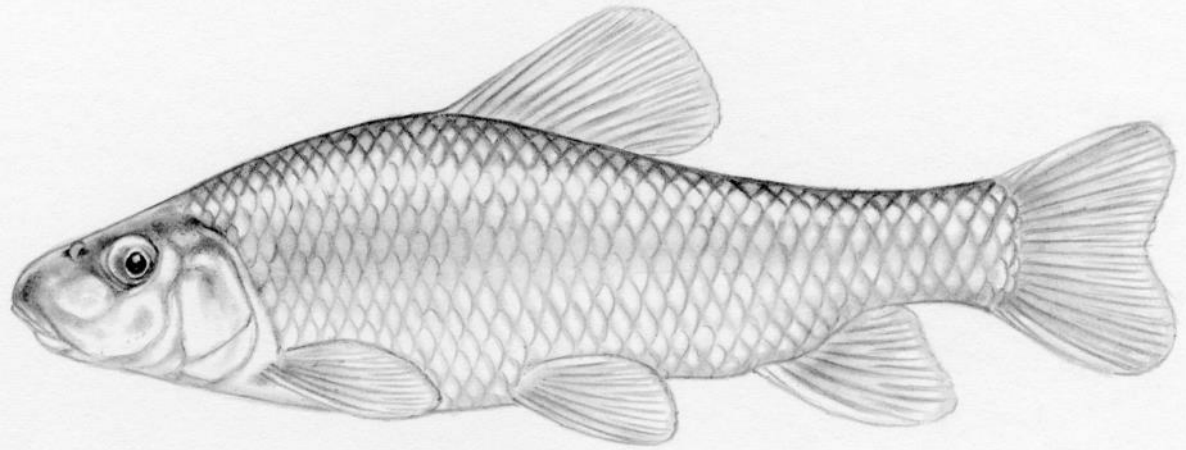
- Pappilose lips
- 53-74 lateral scales
- Mottling in young

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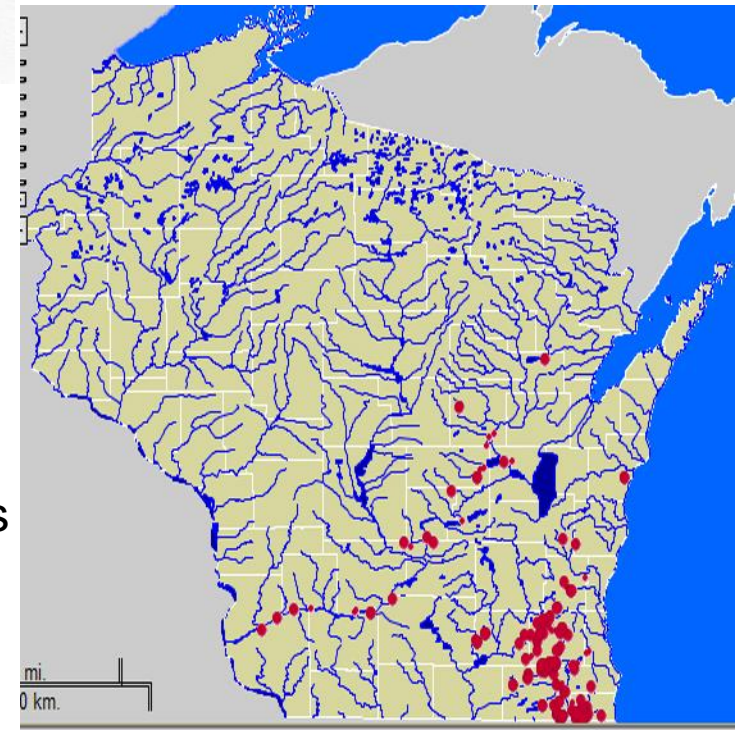
Family Catostomidae

# Lake Chubsucker

*Erimyzon sucetta*



- Convex dorsal fin
- No lateral line
- Silvery appearance
- Usually 11-12 dorsal rays
- Young with strong lateral stripe

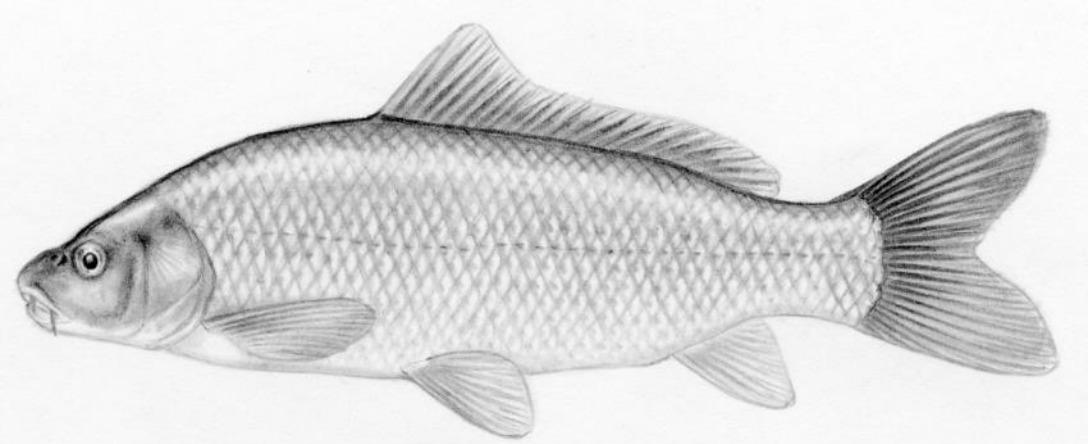


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Family Cyprinidae

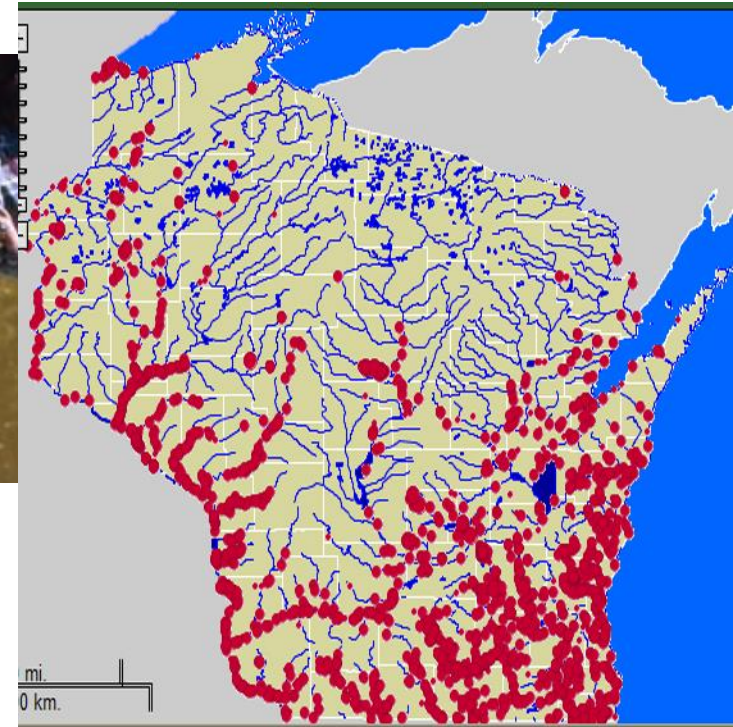
# Common Carp

*Cyprinus carpio*



- Elongate dorsal fin with 1 spine
- 1 anal spine
- Barbels
- Subterminal mouth
- Yellow to tan cast

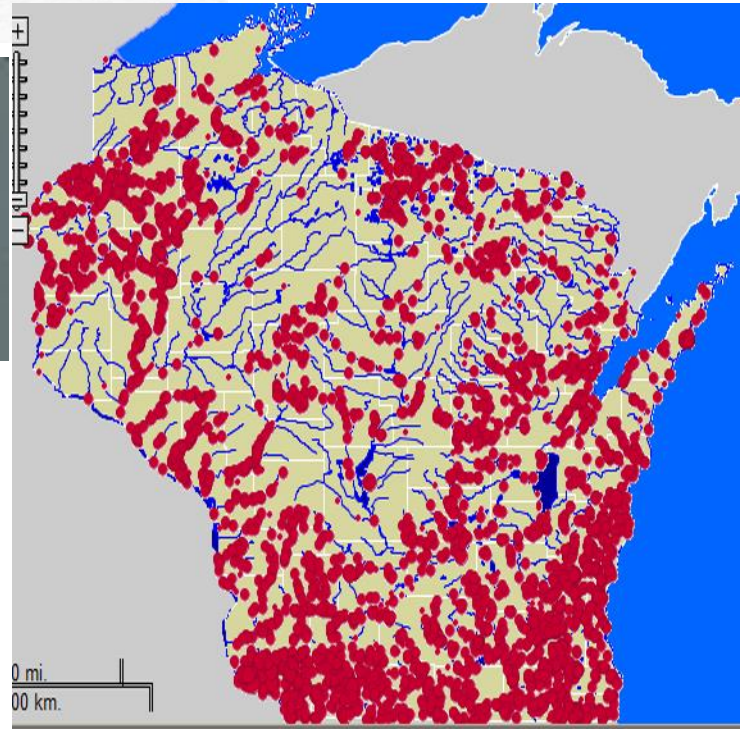
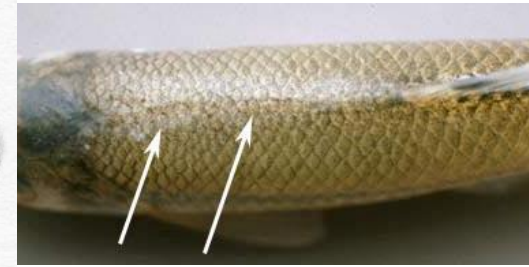
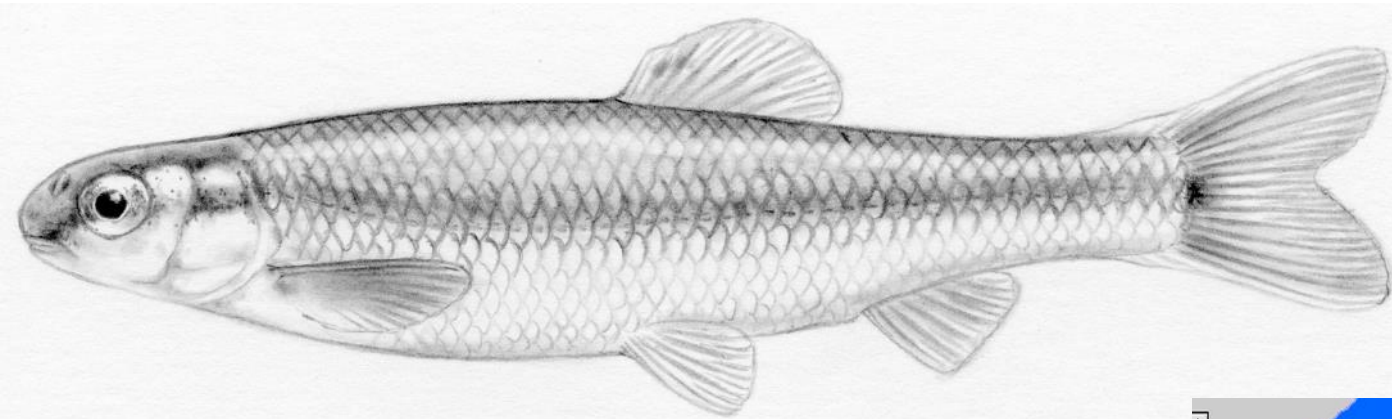
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Family Cyprinidae

# Bluntnose Minnow

*Pimephales notatus*



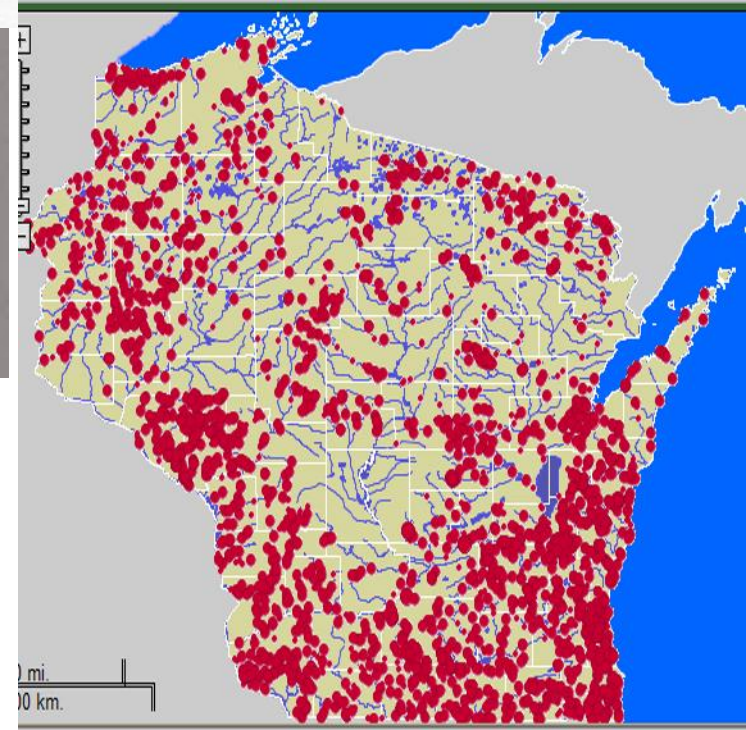
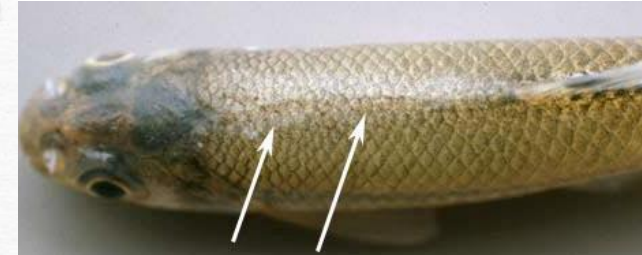
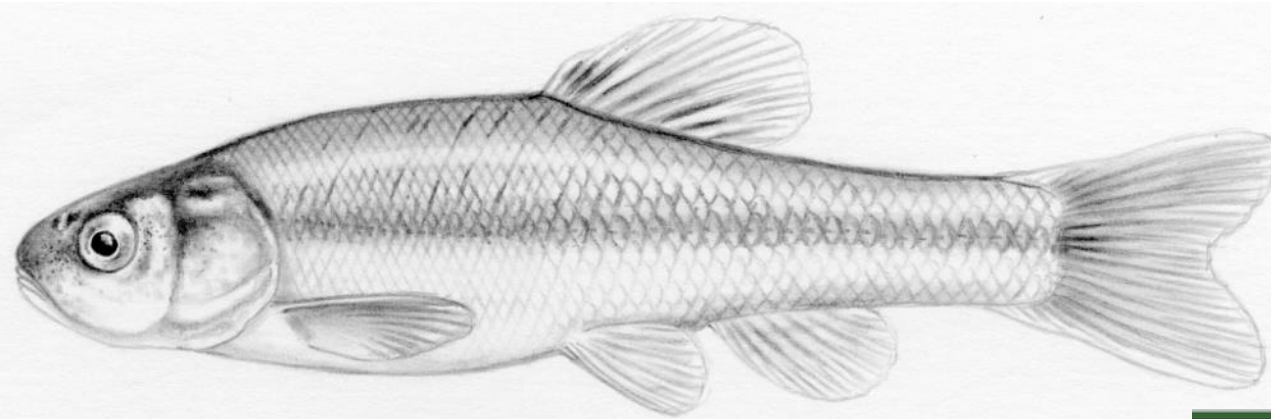
- Crowded nape scales
- First dorsal ray shorter than 2<sup>nd</sup> 3<sup>rd</sup>
- Subterminal mouth
- Dusky lateral stripe
- Prominent caudal spot

illustrations © J.T. Sipiorski

Family Cyprinidae

# Fathead Minnow

*Pimephales promelas*



- Crowded nape scales
- First dorsal ray shorter than 2<sup>nd</sup> 3<sup>rd</sup>
- Terminal mouth
- Faint lateral stripe
- Faint caudal spot

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Family Cyprinidae

# Golden Shiner

*Notemigonus crysoleucas*

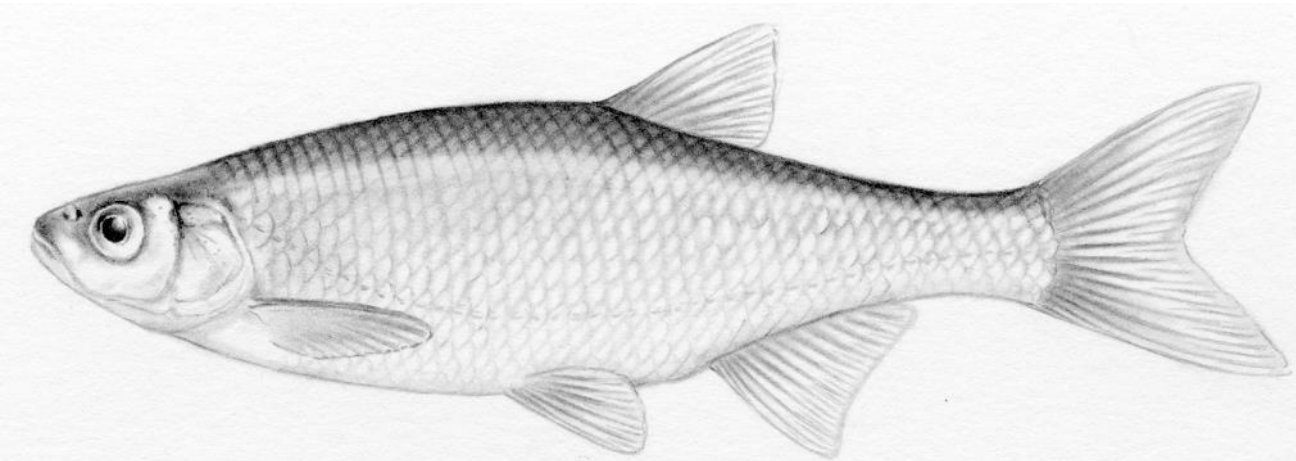
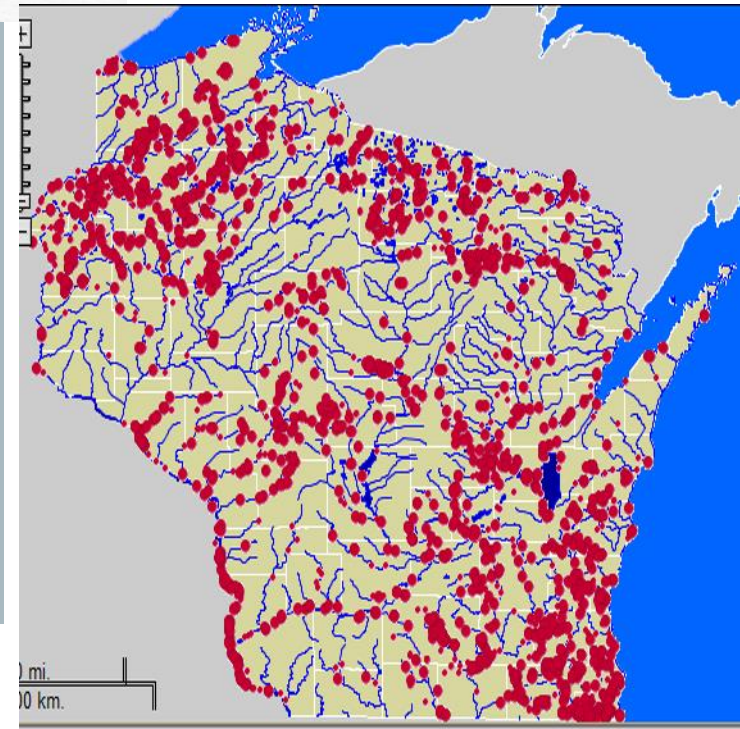


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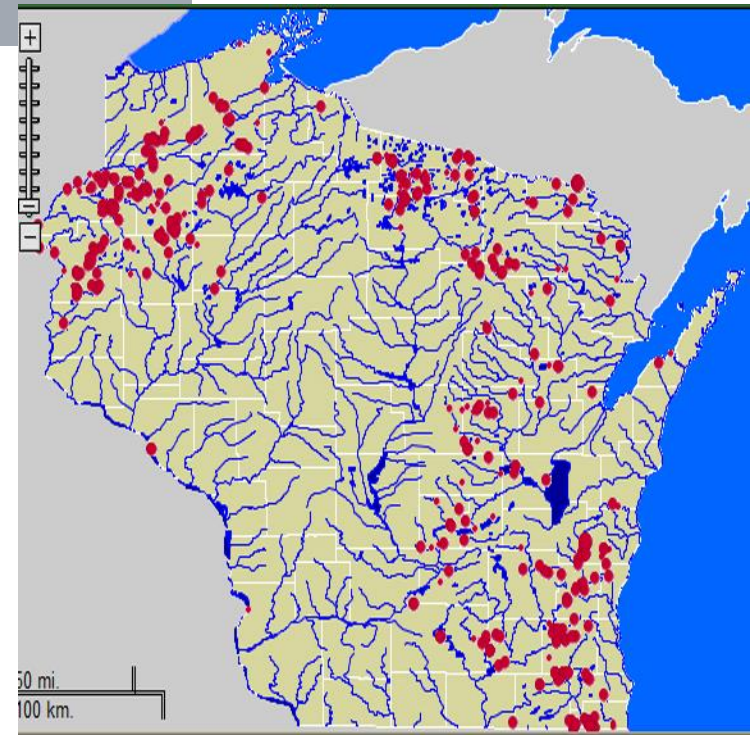
Family Cyprinidae

# Blackchin Shiner

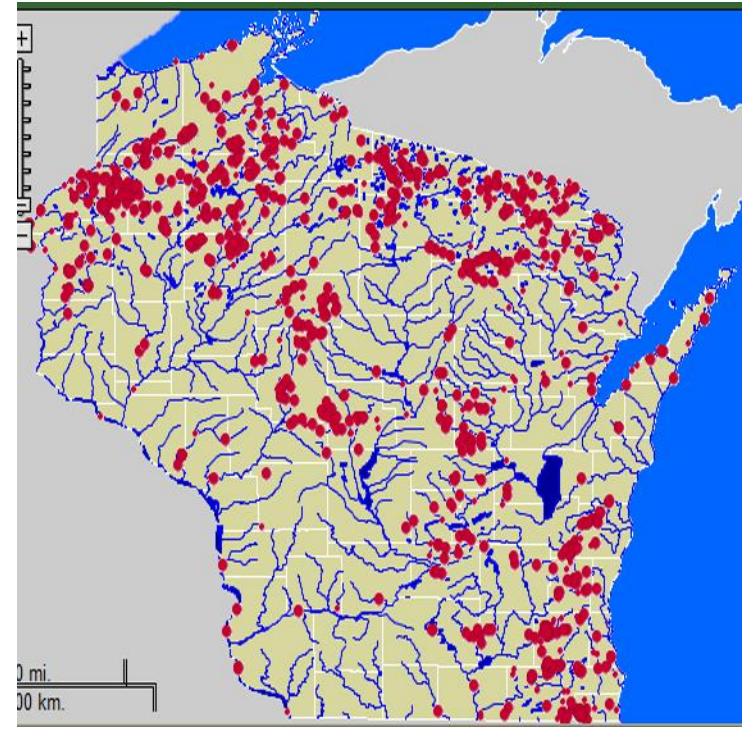
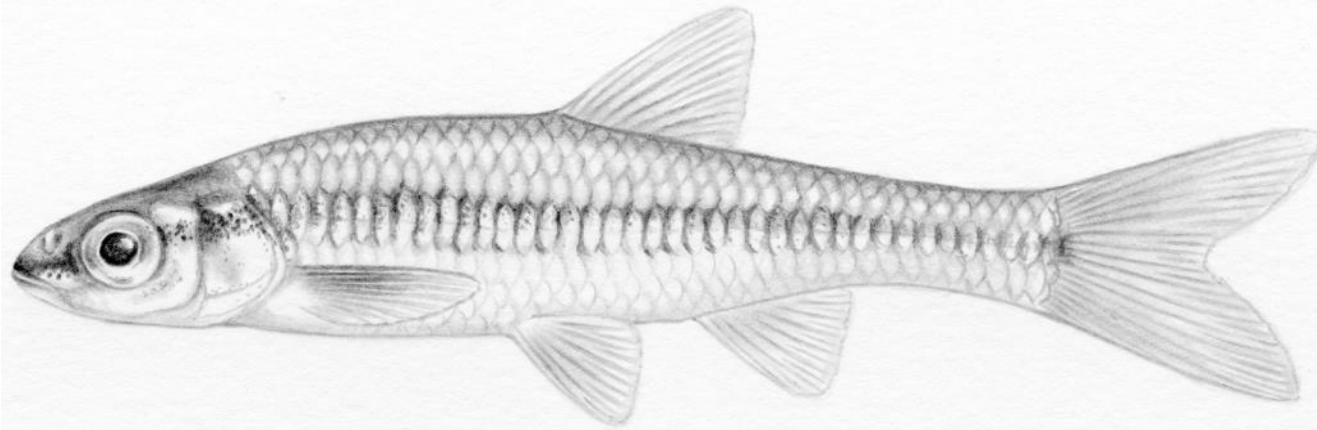
*Notropis heterodon*



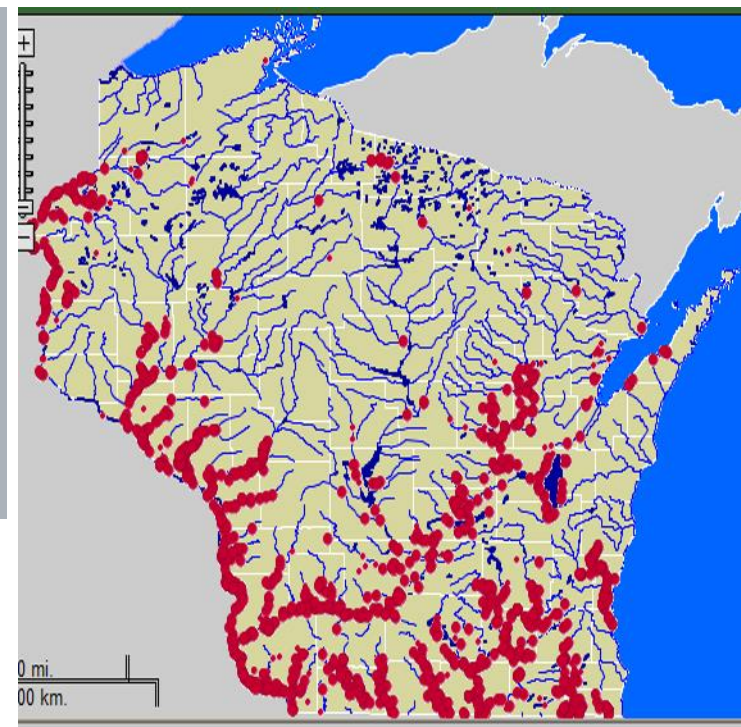
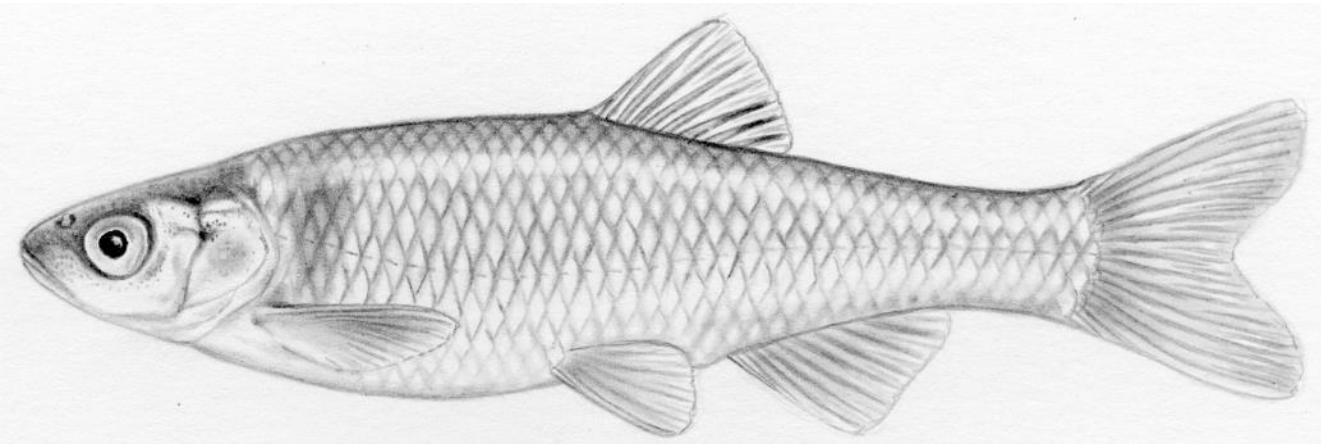
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Family Cyprinidae  
**Blacknose Shiner**  
*Notropis heterolepis*



Family Cyprinidae  
Spotfin Shiner  
*Cyprinella spiloptera*



Family Cyprinidae  
**Brassy Minnow**  
*Hybognathus hankinsoni*

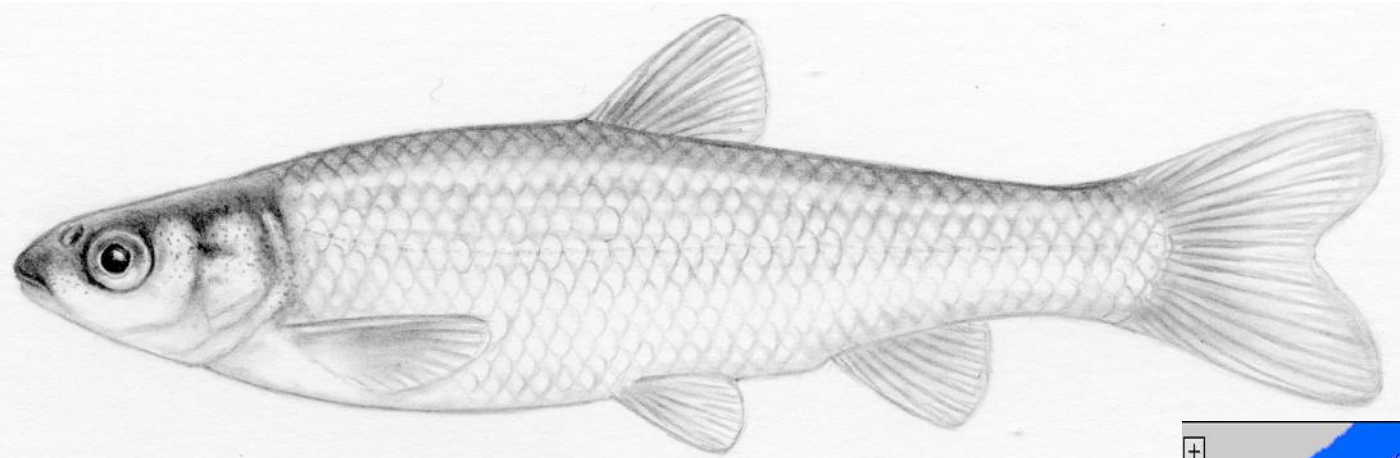
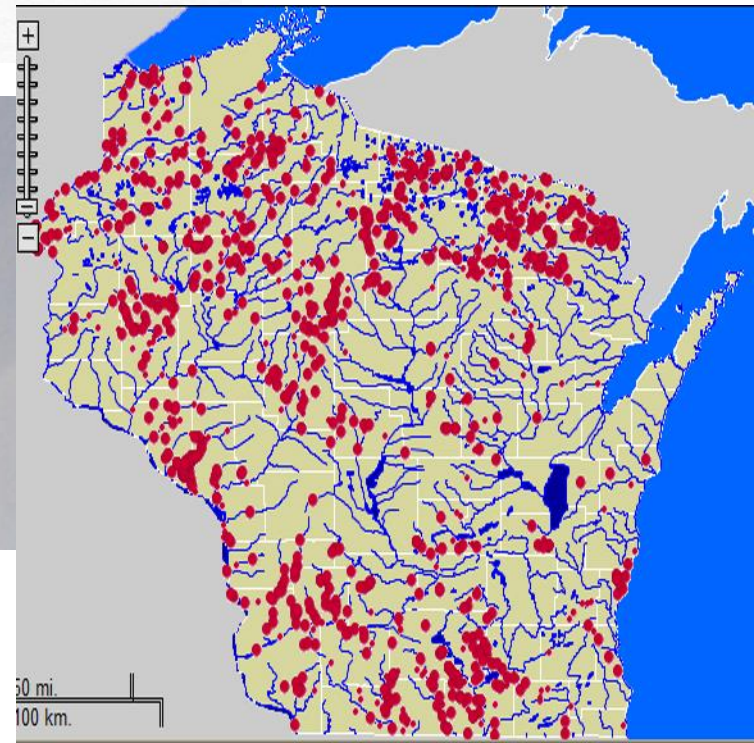
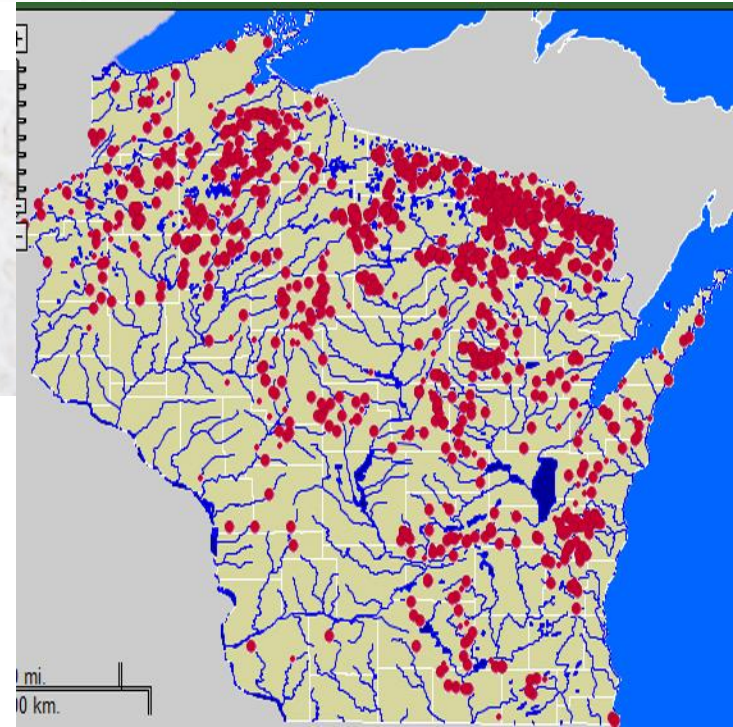
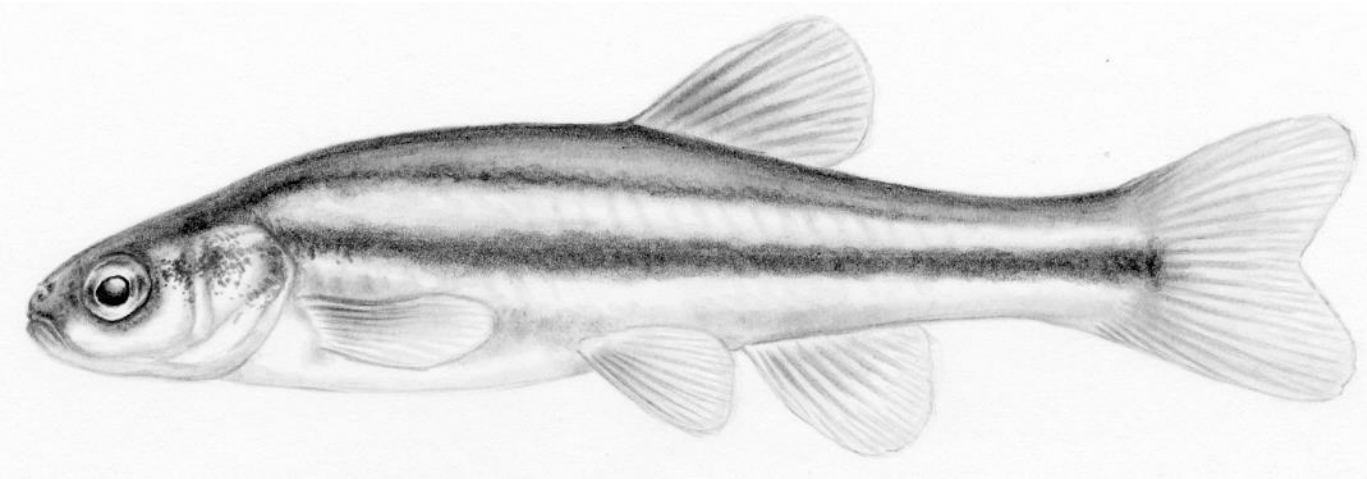


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Family Cyprinidae  
Northern Redbelly Dace  
*Phoxinus eos*



Family Cyprinidae  
Emerald Shiner  
*Notropis atherinoides*

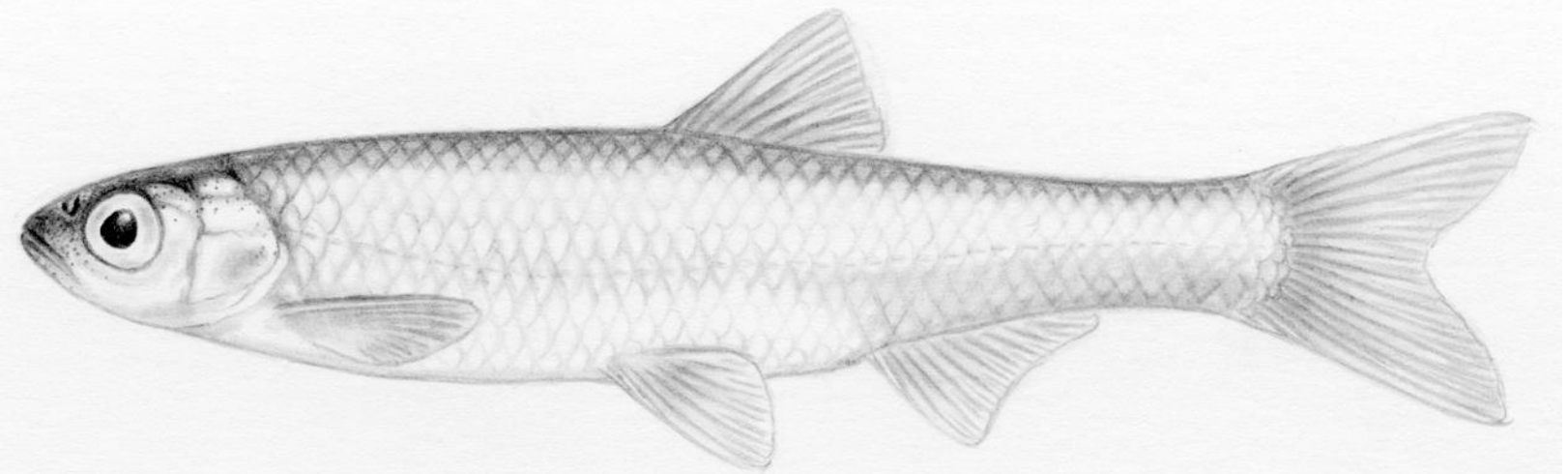
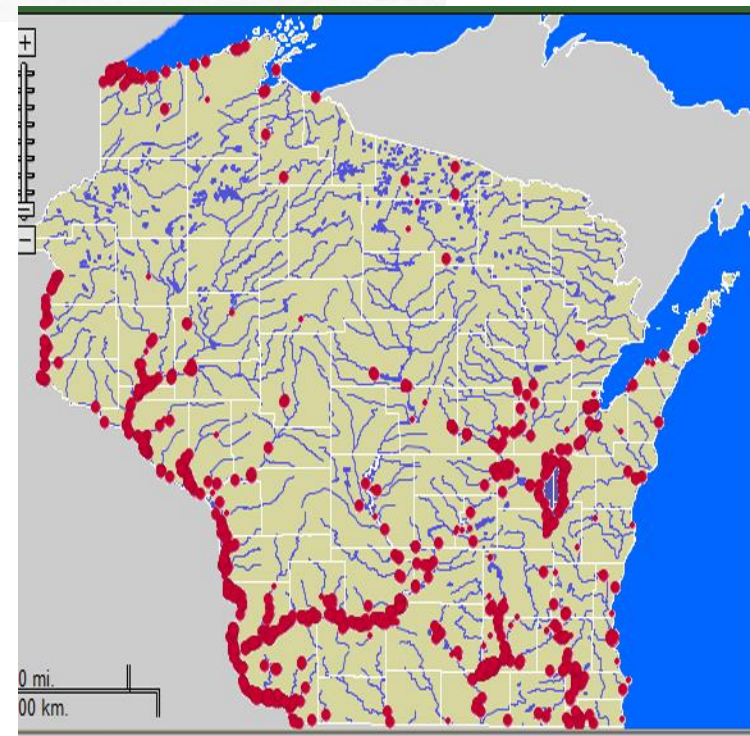


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Family Cyprinidae  
Spottail Shiner  
*Notropis hudsonius*

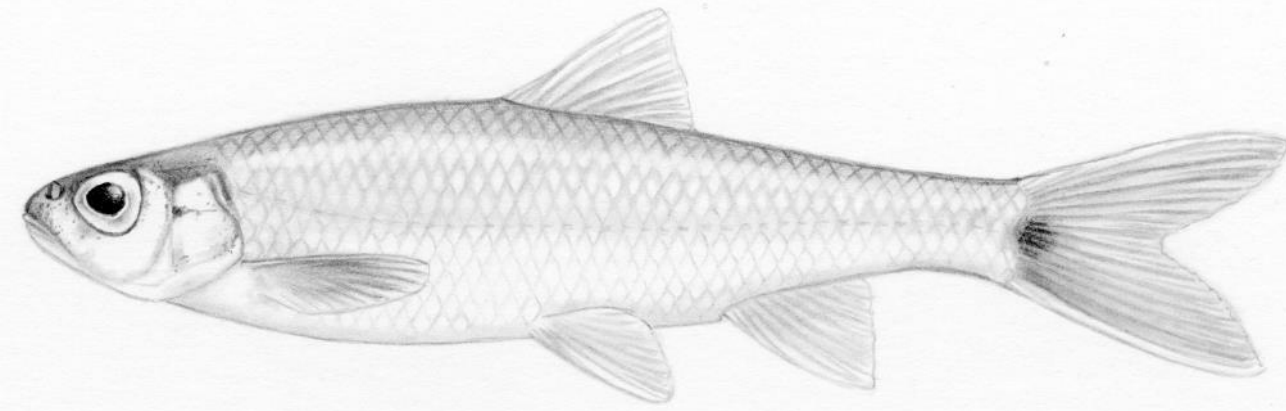
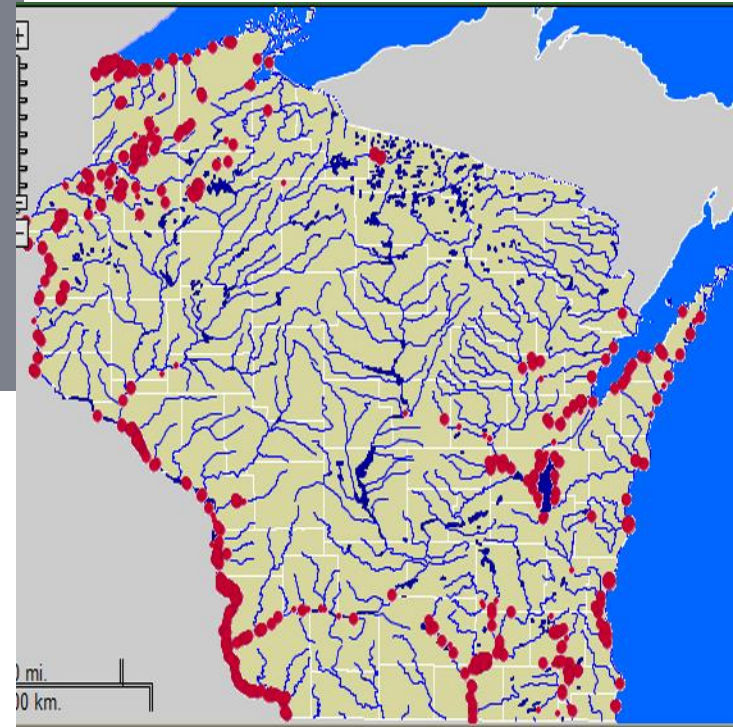
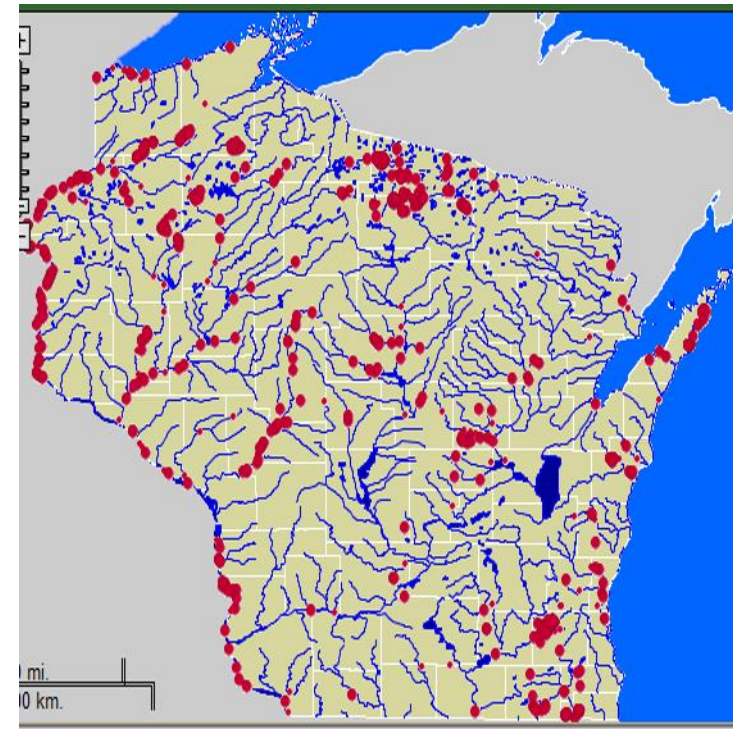
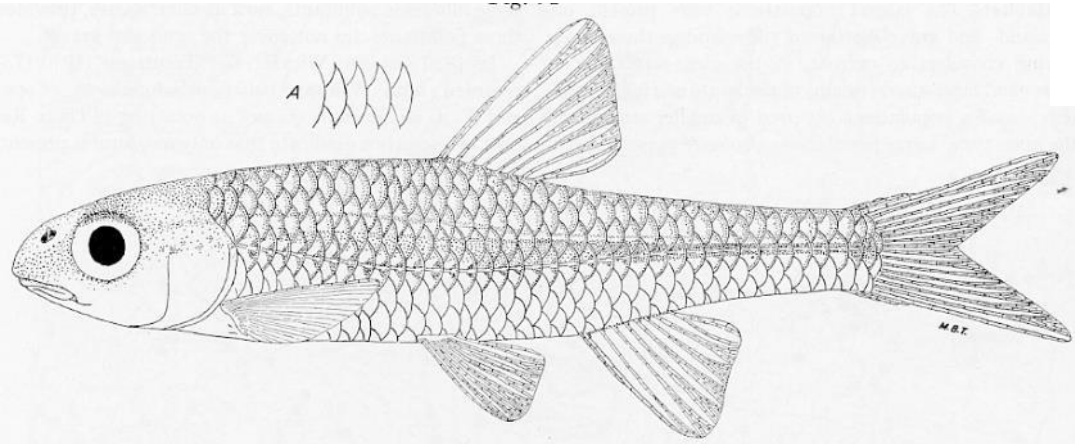


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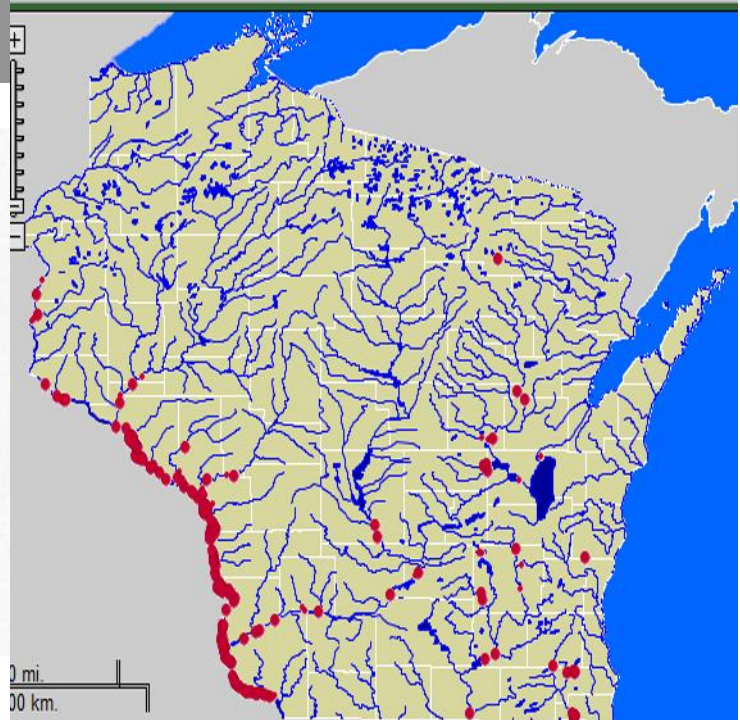
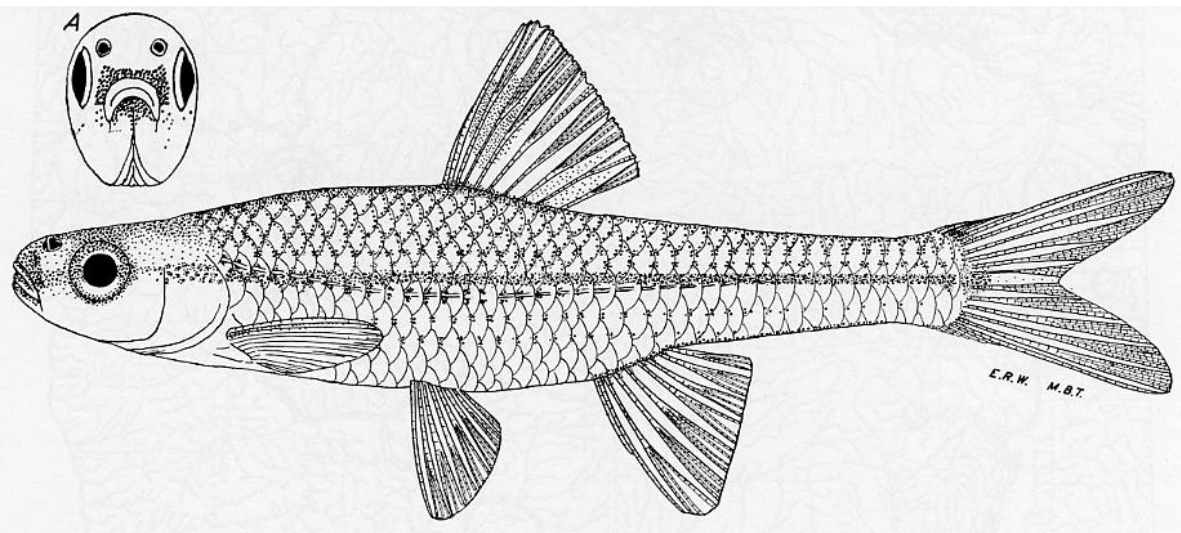
Family Cyprinidae  
**Mimic Shiner**  
*Notropis volucellus*



Family Cyprinidae  
Pugnose Minnow  
*Opsopoeodus emiliae*



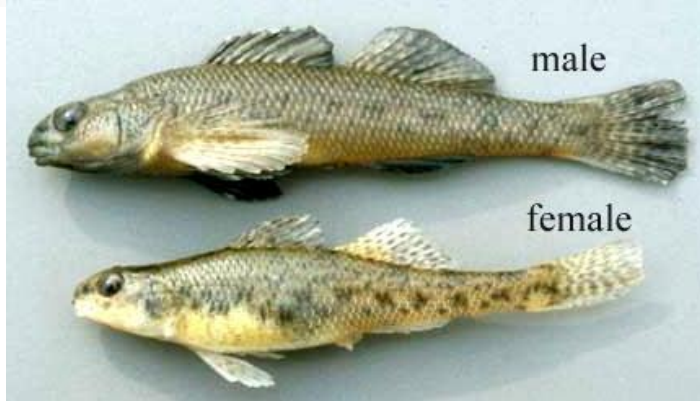
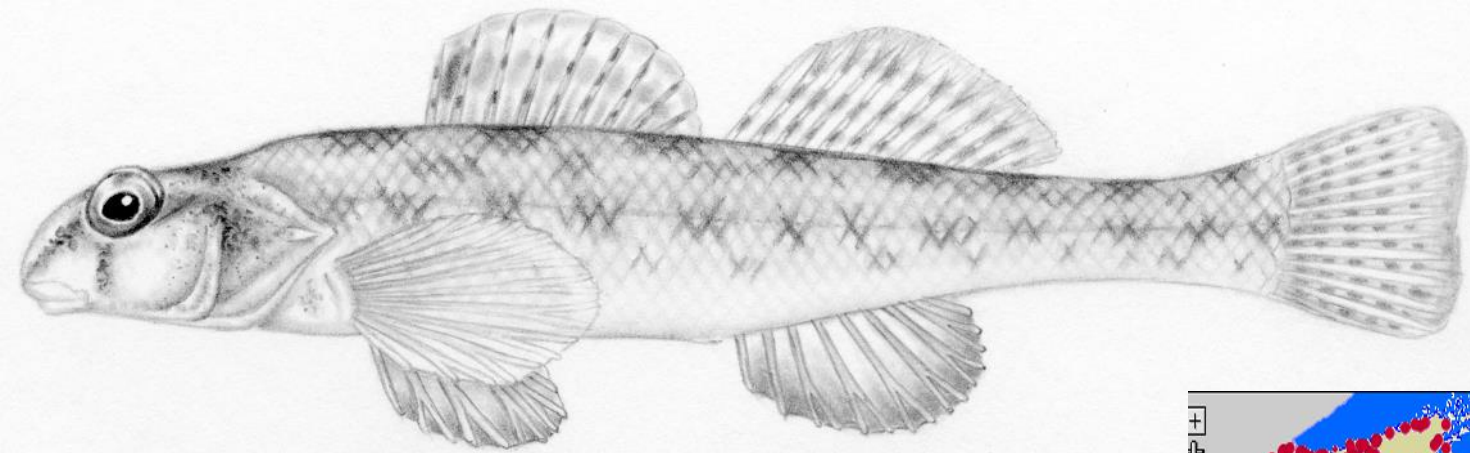
IMAGE HOSTED BY  
GALLERY.NANFA.ORG



Family Percidae

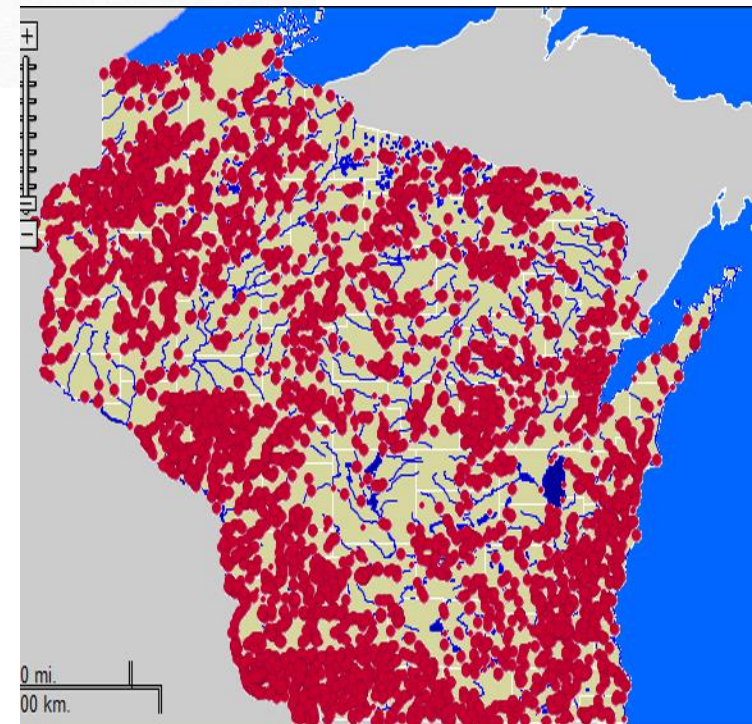
# Johnny Darter

*Etheostoma nigrum*



- W's, X's, V's along the lateral line
- Single anal spine
- Lateral stripe discontinuous around snout

illustrations © J.T. Sipiorski



Family Percidae

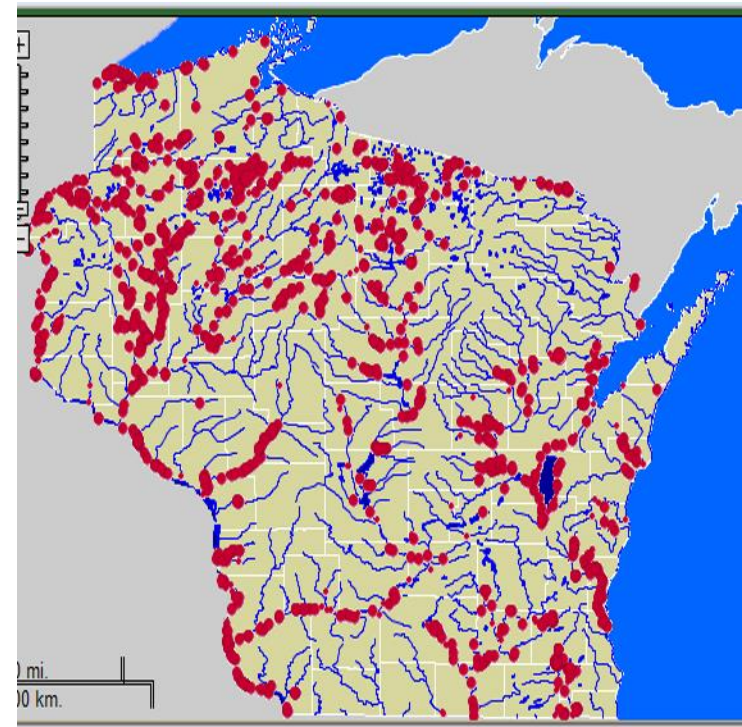
# Logperch

*Percina caprodes caprodes*



- “Tiger stripes” along side • 2 Anal spines
- Bulbous tip to snout

illustrations © J.T. Sipiorski



Family Percidae  
Iowa Darter  
*Etheostoma exile*

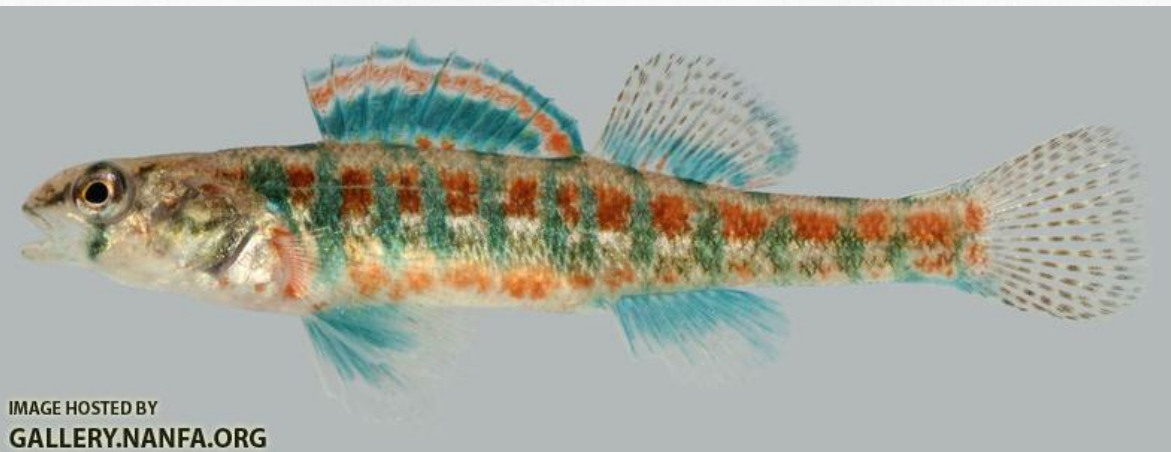
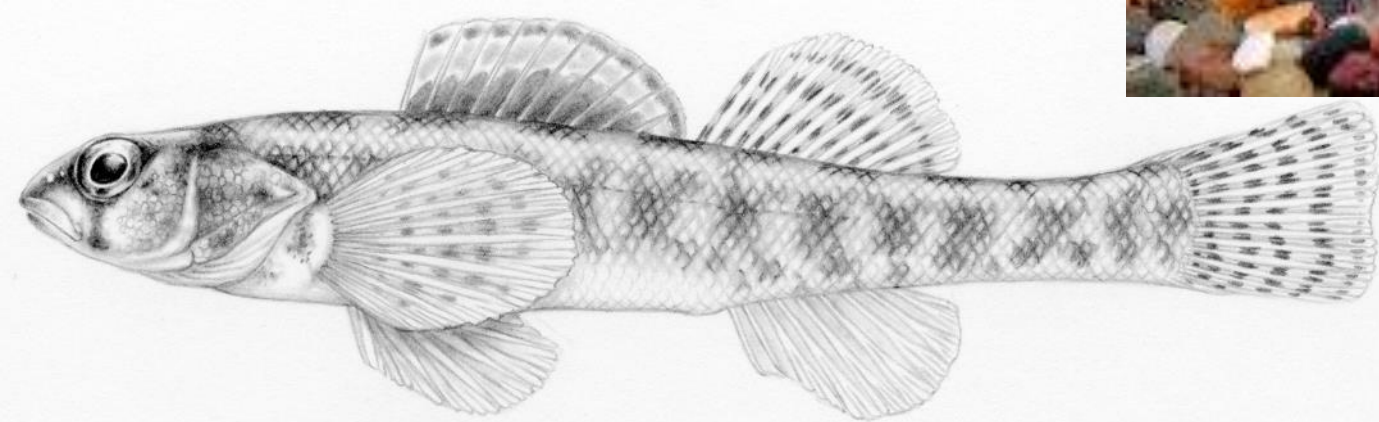
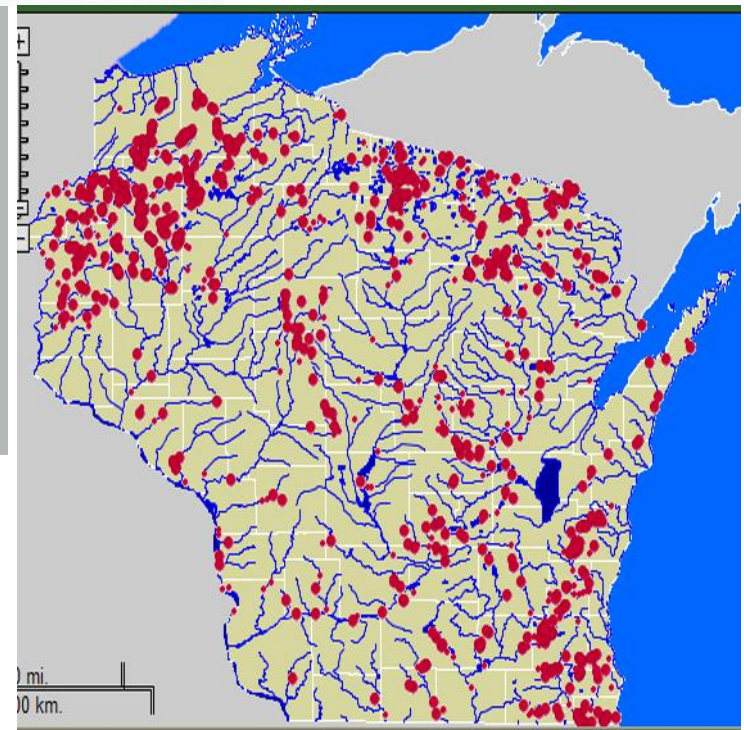
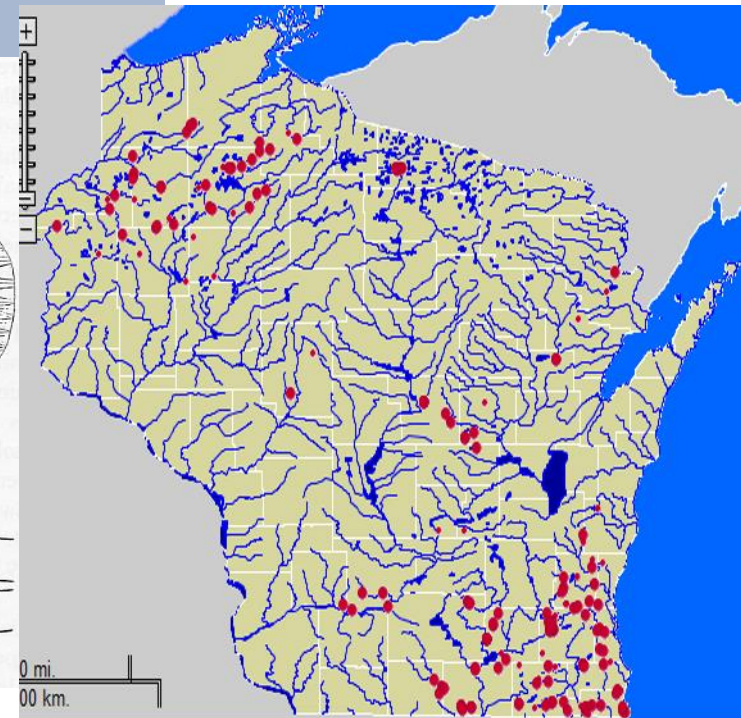
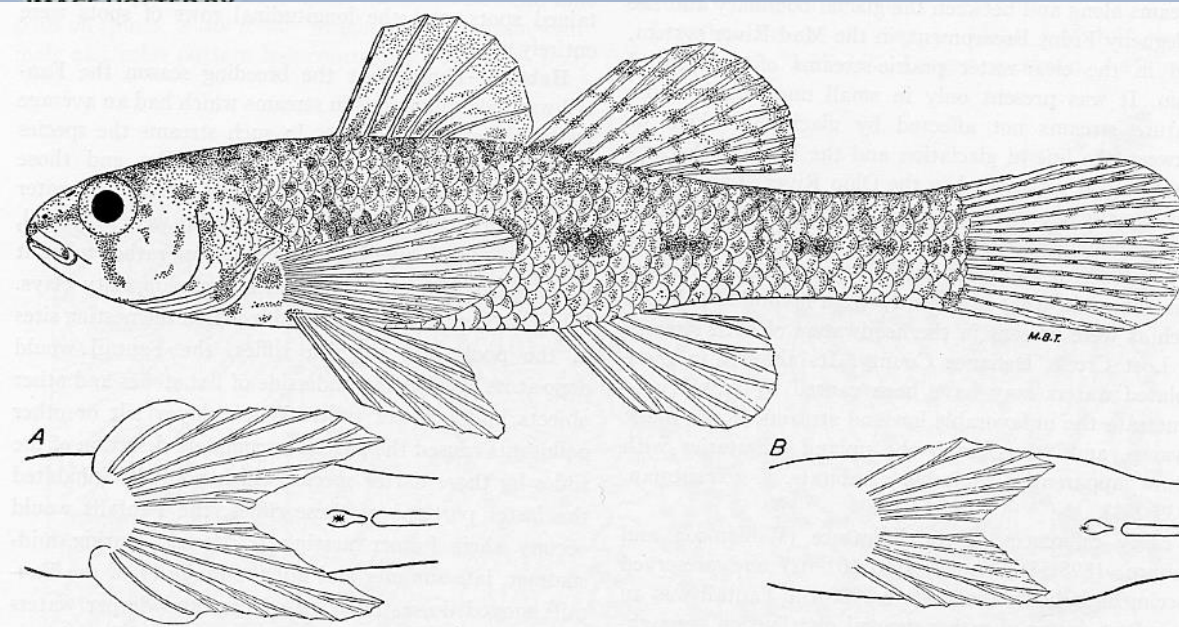


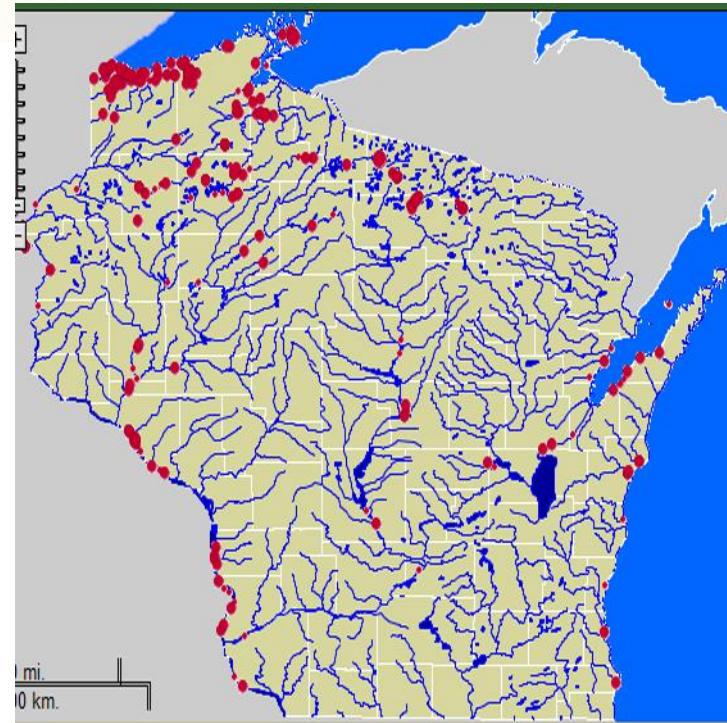
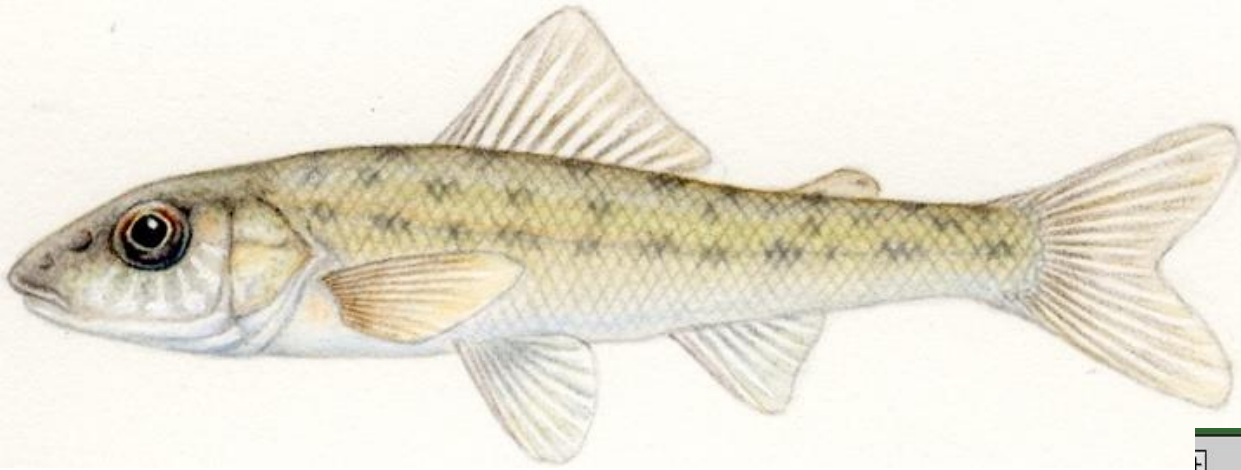
IMAGE HOSTED BY  
GALLERY.NANFA.ORG



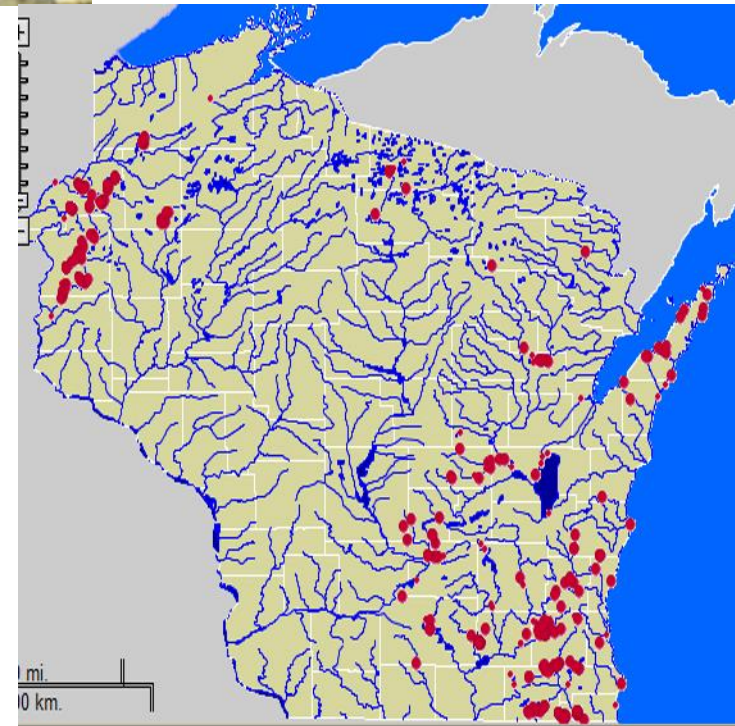
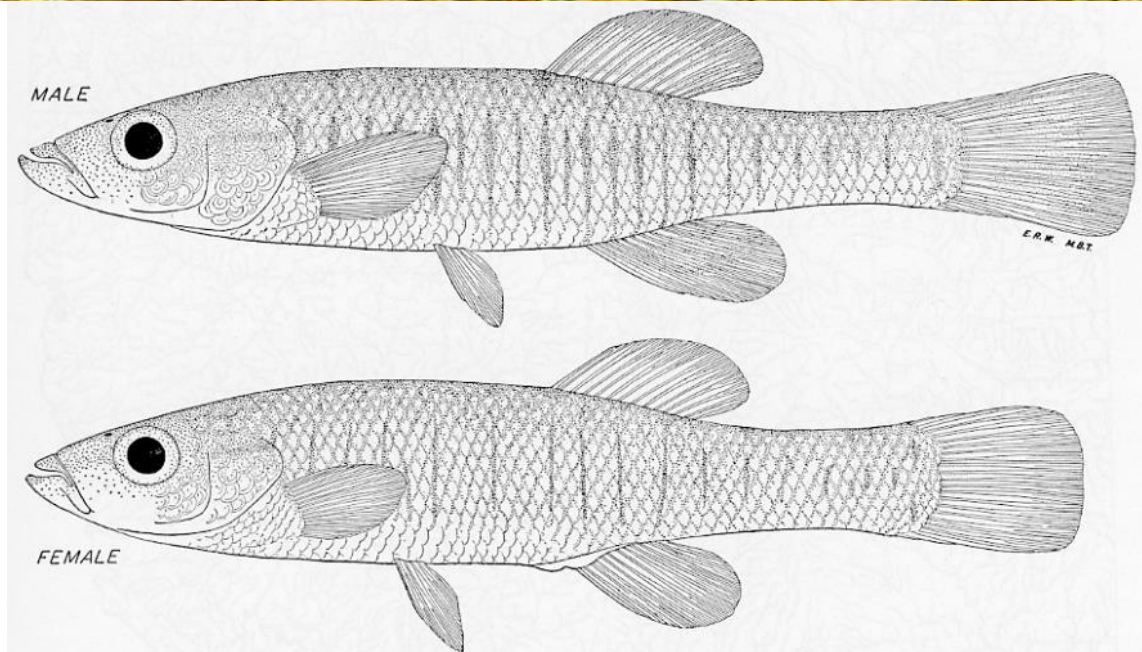
Family Percidae  
Least Darter  
*Etheostoma microperca*



Family Percopsidae  
Trout-perch  
*Percopsis omiscomaycus*

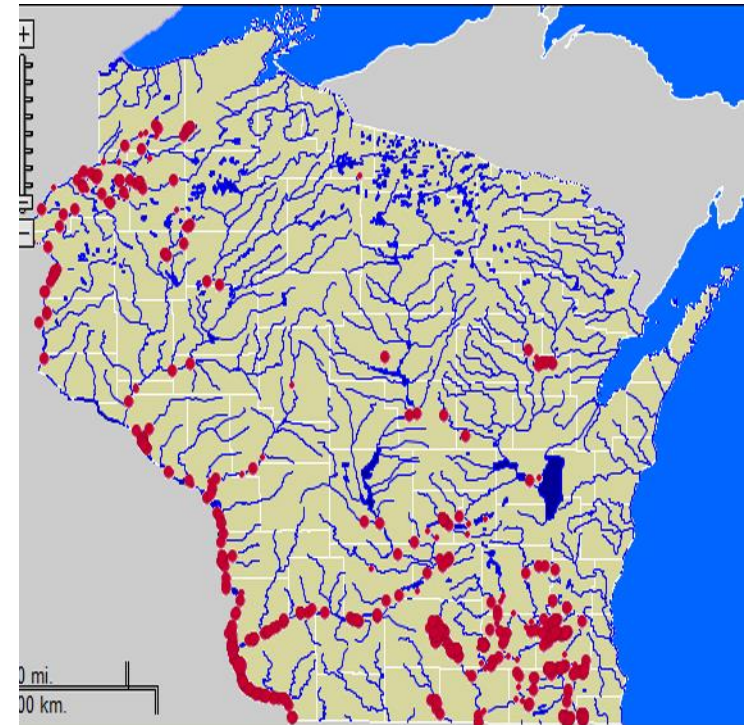
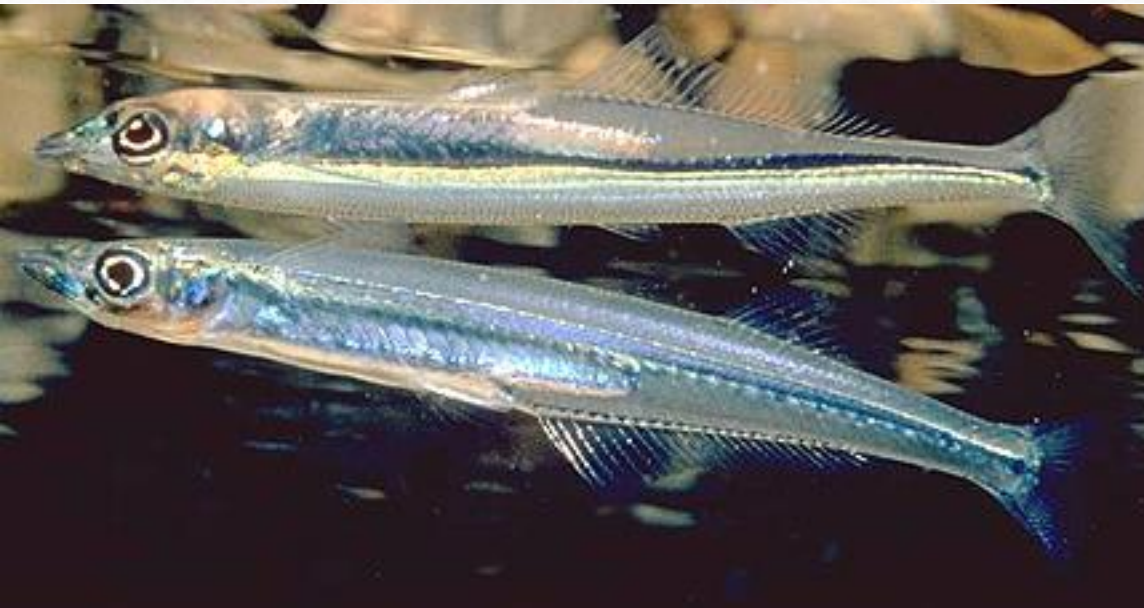
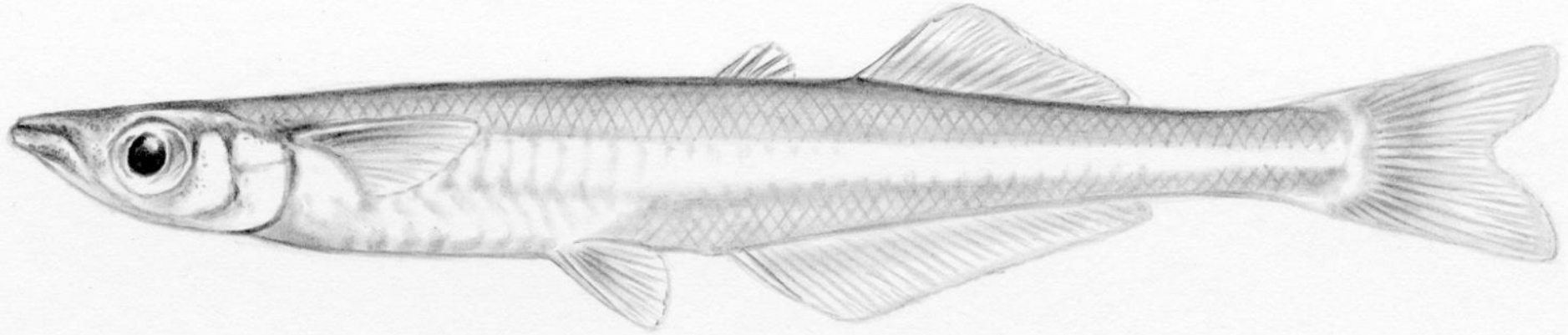


Family Fundulidae  
**Banded Killifish**  
*Fundulus diaphanus*

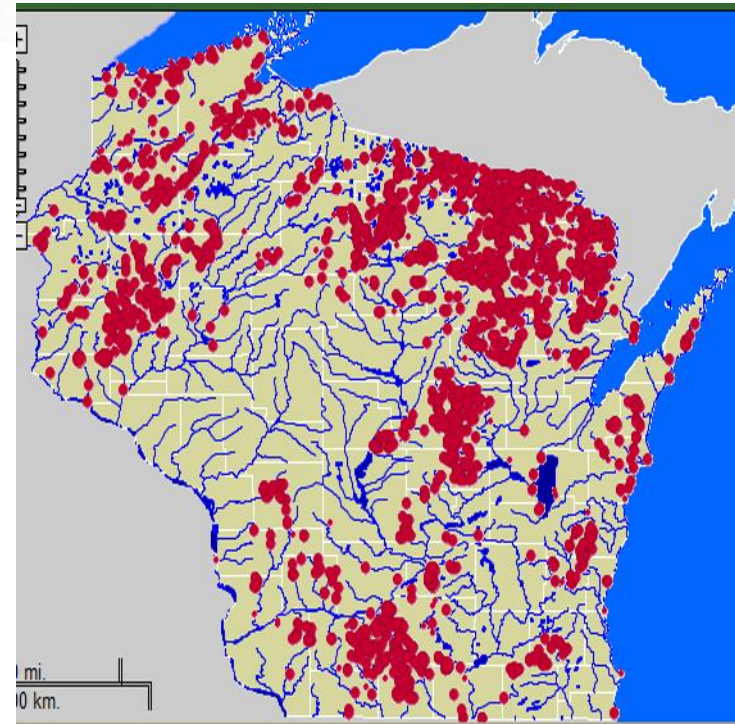
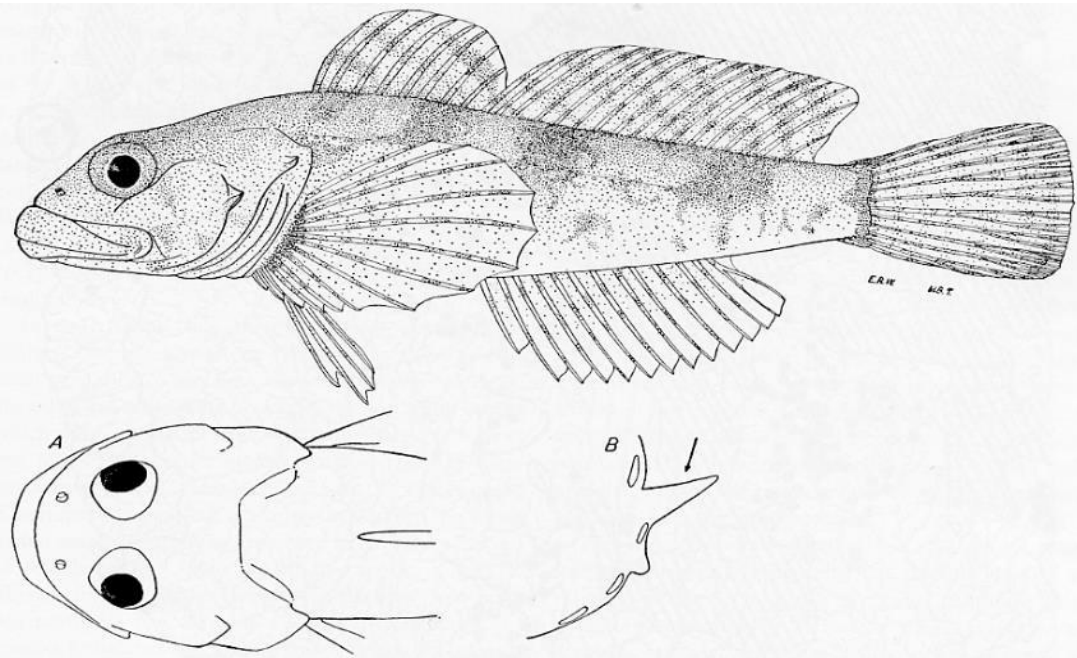




Family Atherinopsidae  
Brook Silverside  
*Labidesthes sicculus*



Family Cottidae  
Mottled Sculpin  
*Cottus bairdii*



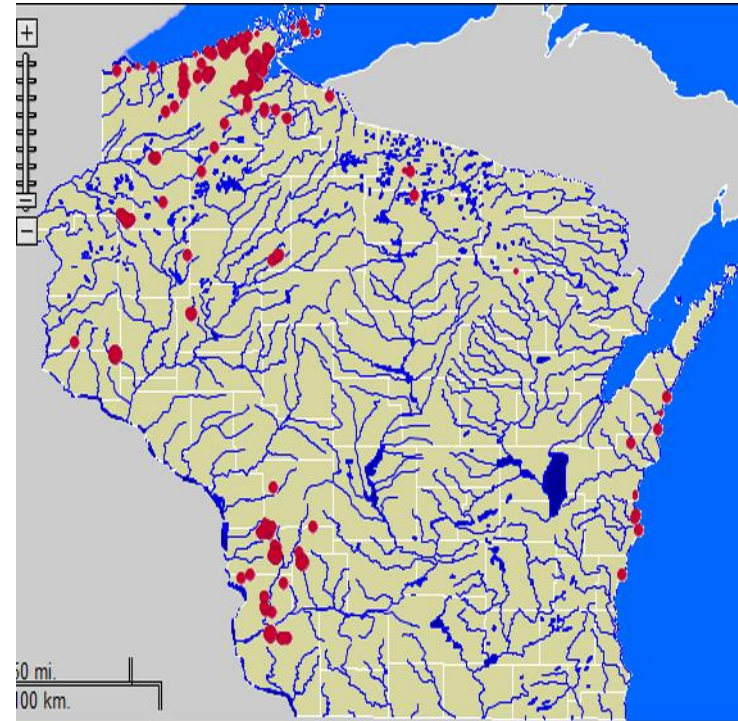
Family Cottidae

Slimy Sculpin

*Cottus cognatus*



E



Family Acipenseridae

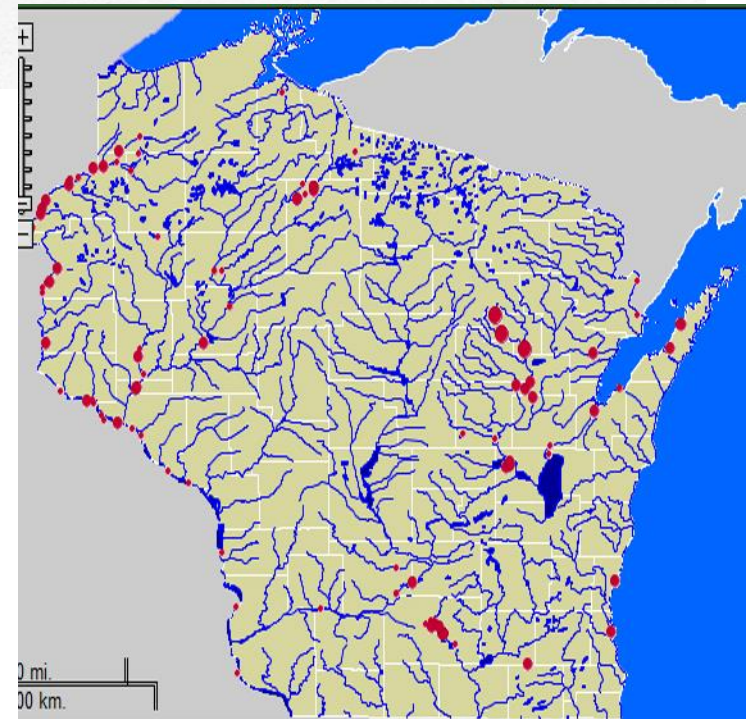
# Lake Sturgeon

*Acipenser fulvescens*



- Conical snout
- Heterocercal caudal fin
- Bony scutes
- Barbels

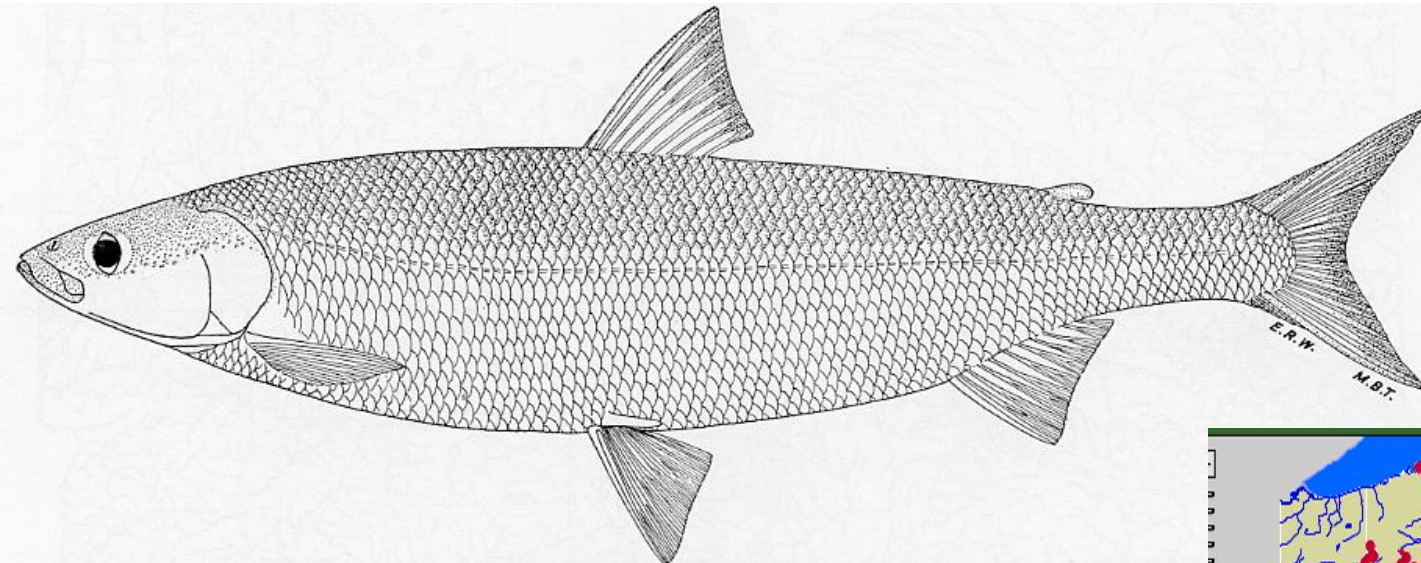
illustrations © J.T. Sipiorski



Family Salmonidae

# Cisco

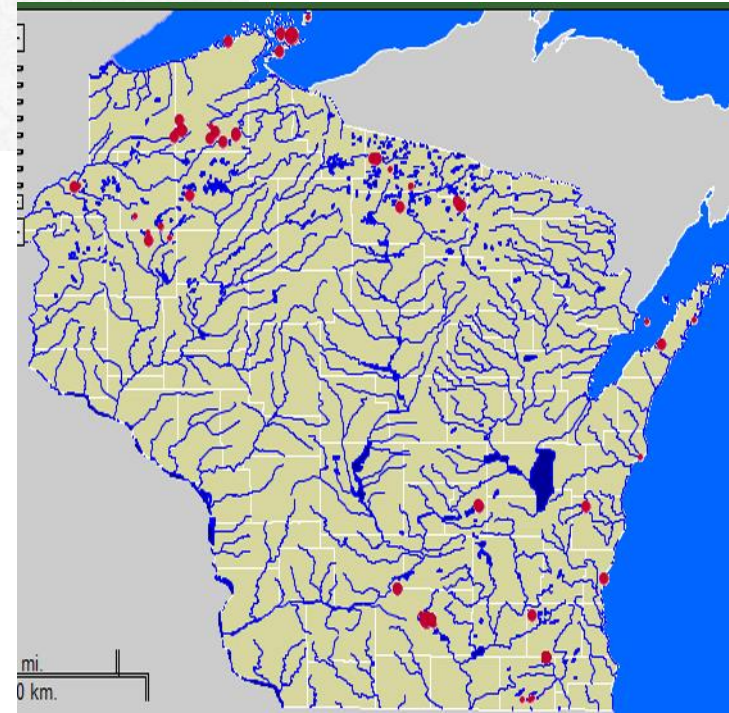
## *Coregonus artedii*



- Silvery
- Adipose fin
- Axillary process

- Terminal mouth
- Elliptical cross section

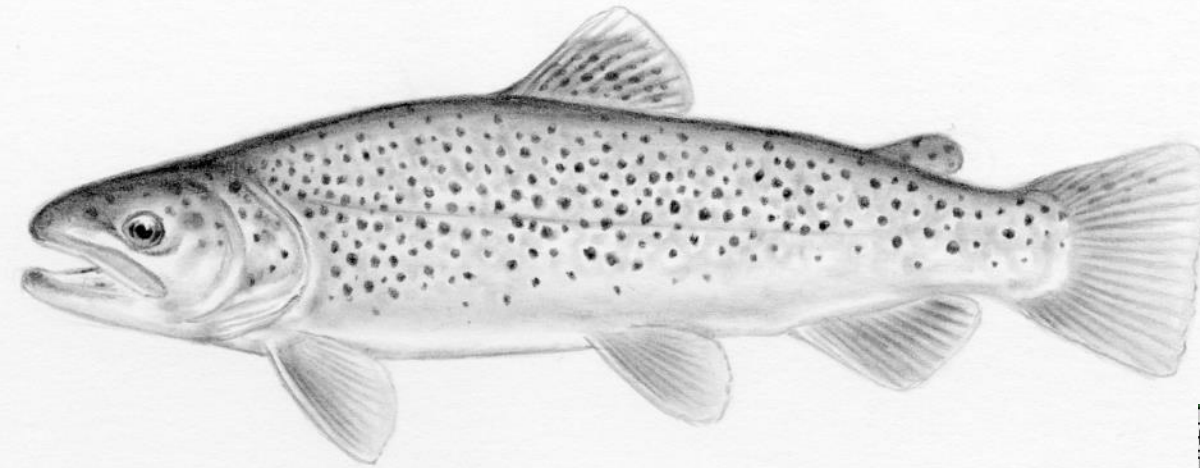
illustrations © J.T. Sipiorski



Family Salmonidae

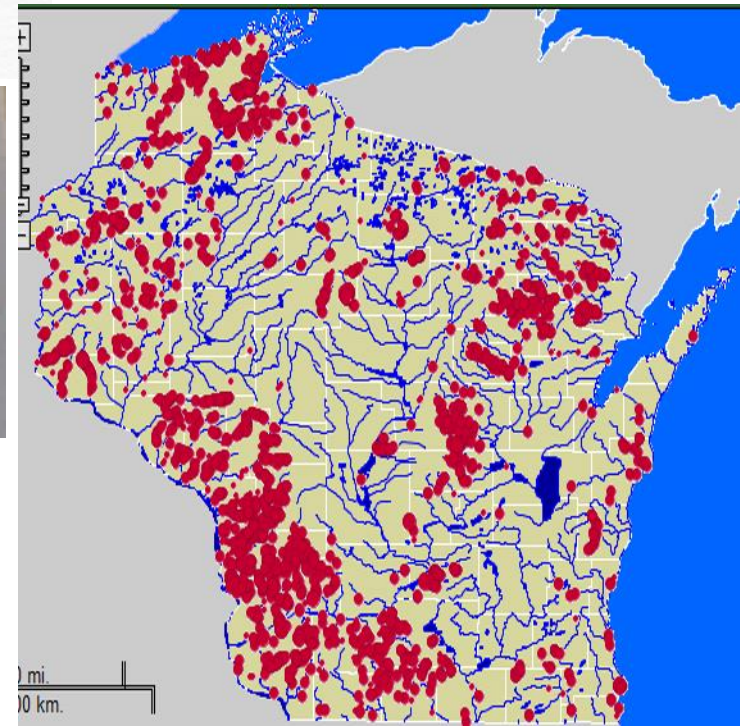
# Brown Trout

*Salmo trutta*



- Adipose fin
- Axillary process
- Large dark spots on light background on flank
- Few spots if any on caudal fin
- Tan to yellow flank

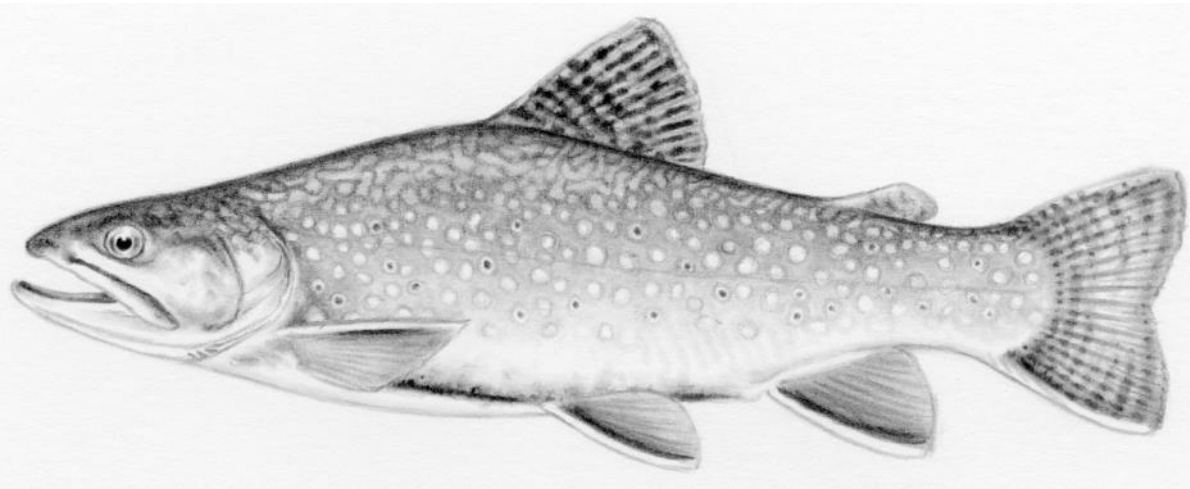
illustrations © J.T. Sipiorski



Family Salmonidae

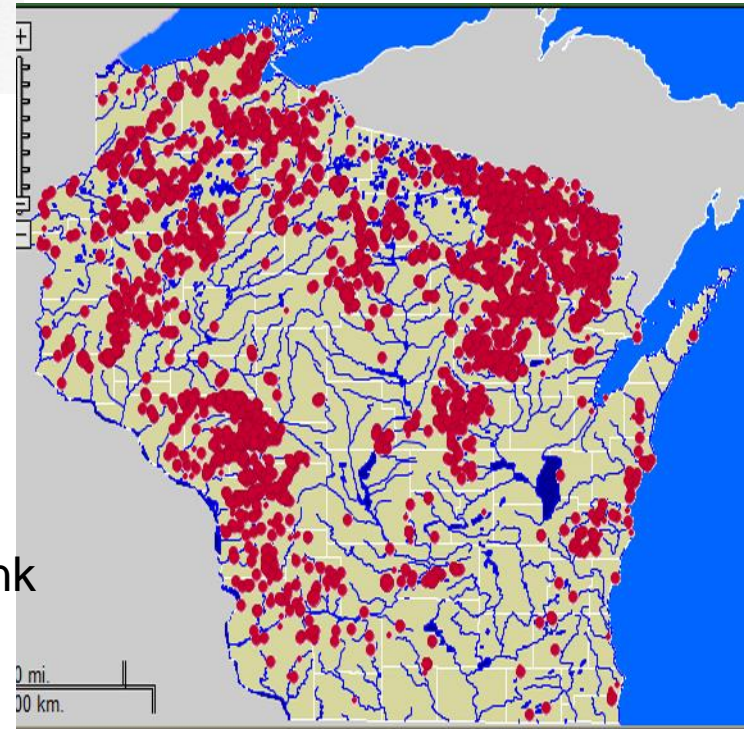
# Brook Trout

*Salvelinus fontinalis*



- Adipose fin
- Axillary process
- Vermiform marks on back
- Light spots on dark background on flank
- Often reddish lower flank

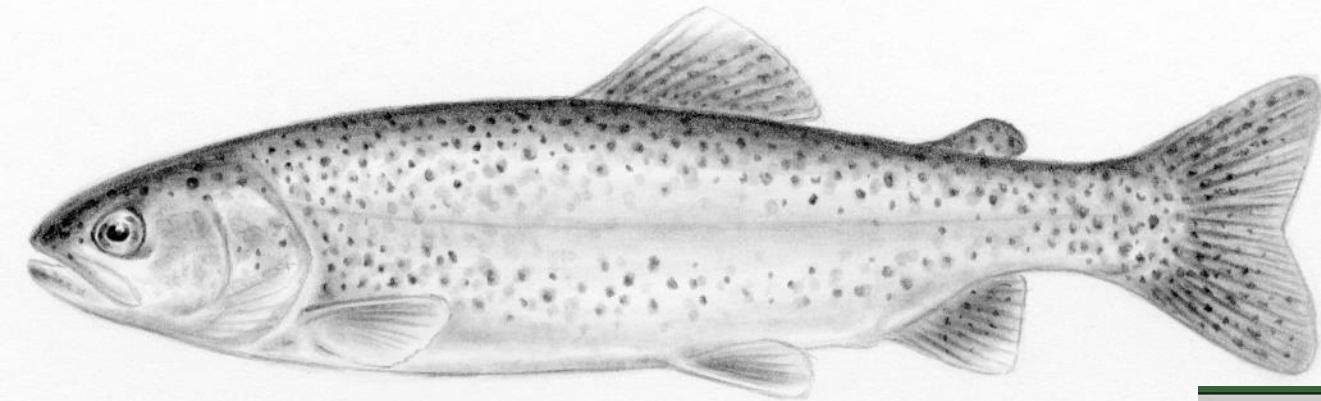
illustrations © J.T. Sipiorski



Family Salmonidae

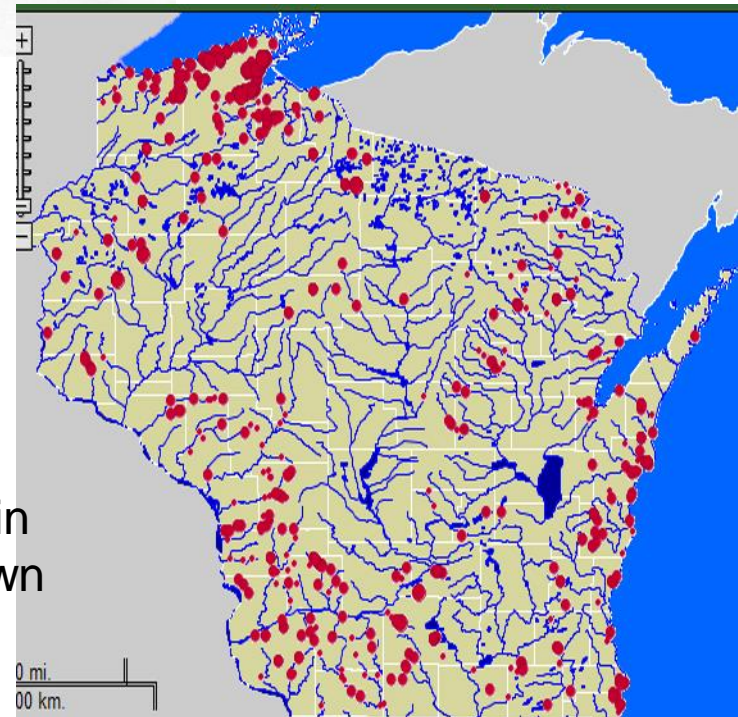
# Rainbow Trout

*Oncorhynchus mykiss*



- Adipose fin
- Axillary process
- Many, small dark spots on light background on flank
- Many spots on caudal fin
- Pinkish lateral band down side

illustrations © J.T. Sipiorski

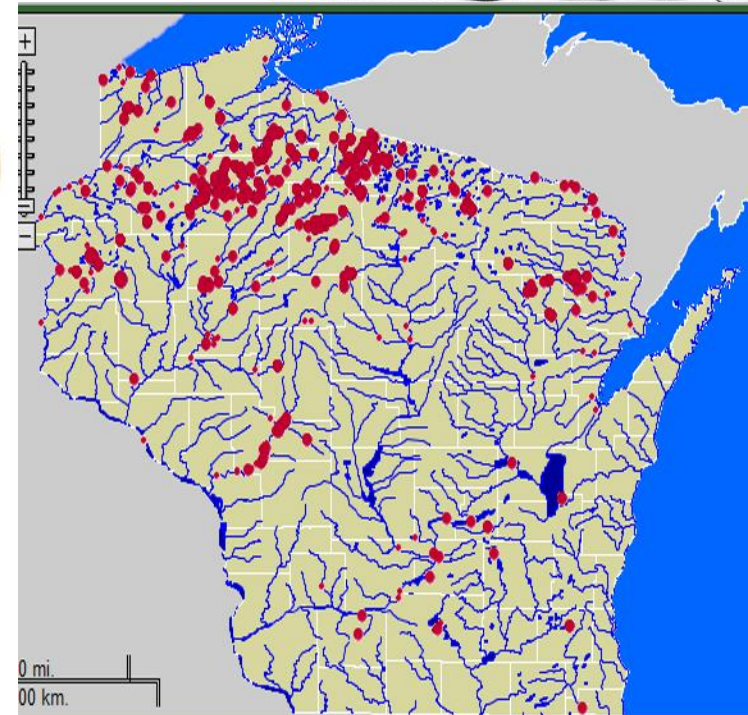
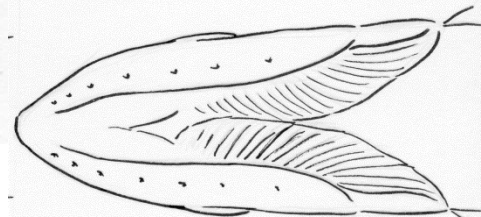
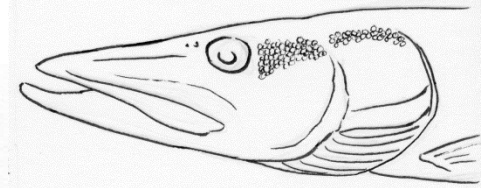




Family Esocidae

# Muskellunge

*Esox masquinongy*



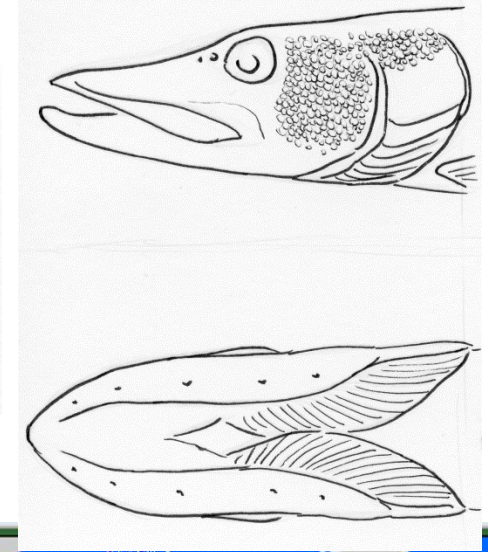
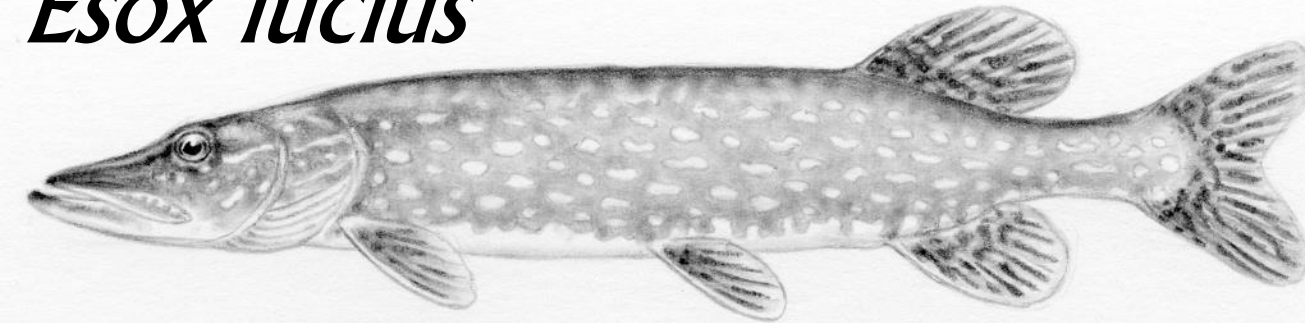
- Dorsal and anal fin far back on body
- 6-9 jaw pores on each side
- NO scales on cheek and operculum
- Dark vertical bars (or spots) on light background
- Light or no tear mark

illustrations © J.T. Sipiorski

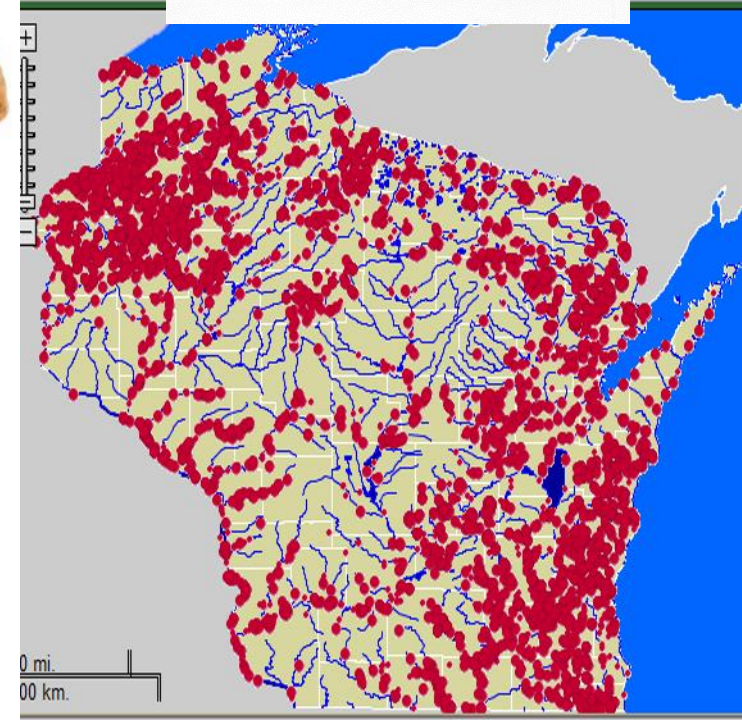
Family Esocidae

# Northern Pike

*Esox lucius*



- Dorsal and anal fin far back on body
- Five jaw pores on each side
- Fully scaled cheek NOT operculum
- Light horizontal bars on darker background
- Light or no tear mark

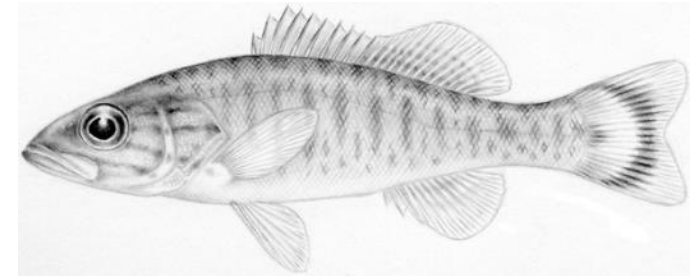
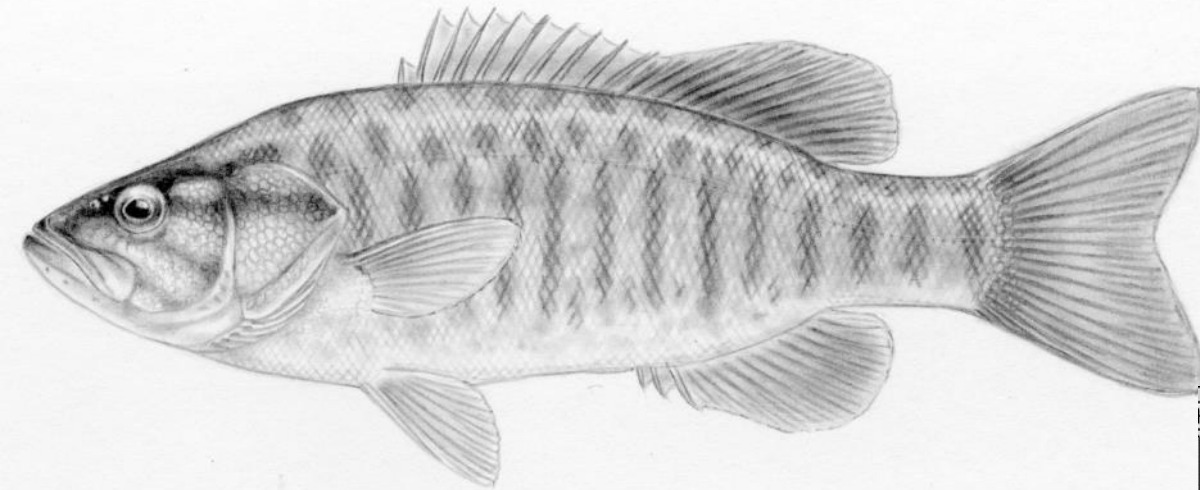


illustrations © J.T. Sipiorski

Family Centrarchidae

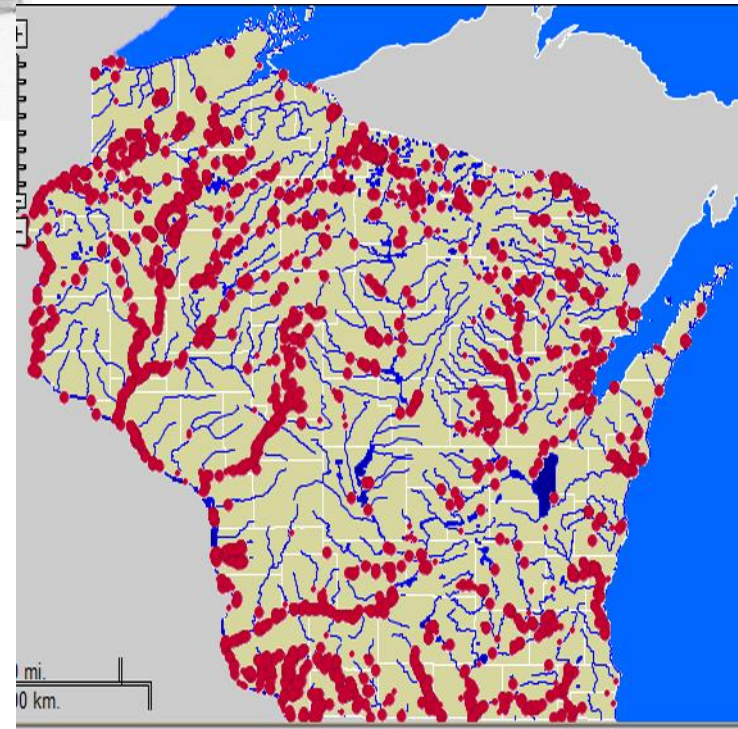
# Smallmouth Bass

*Micropterus dolomieu*



- 10 Dorsal spines
- 3 Anal spines
- Corner of mouth beneath pupil

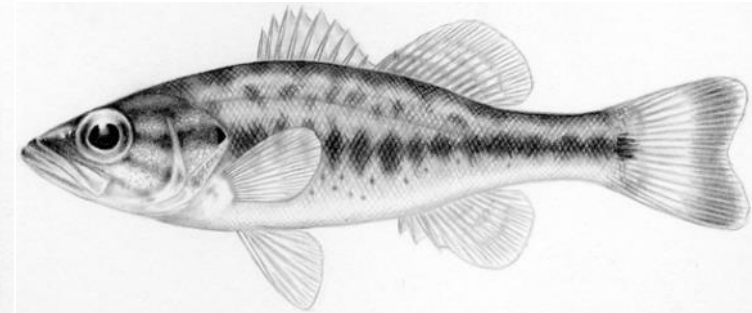
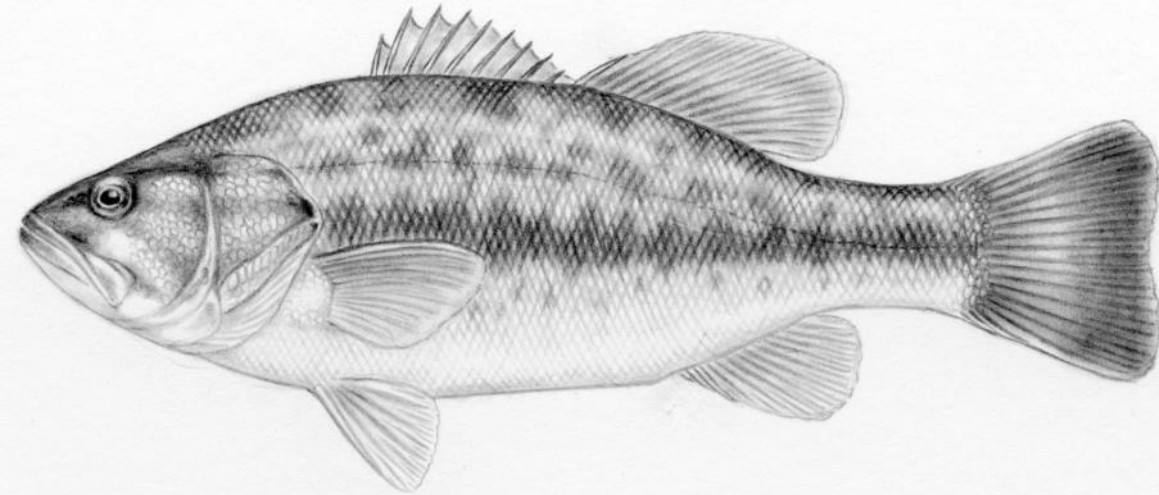
- Broad connection between dorsal fins
  - Brownish with vertical bars
- illustrations © J.T. Sipiorski



Family Centrarchidae

# Largemouth Bass

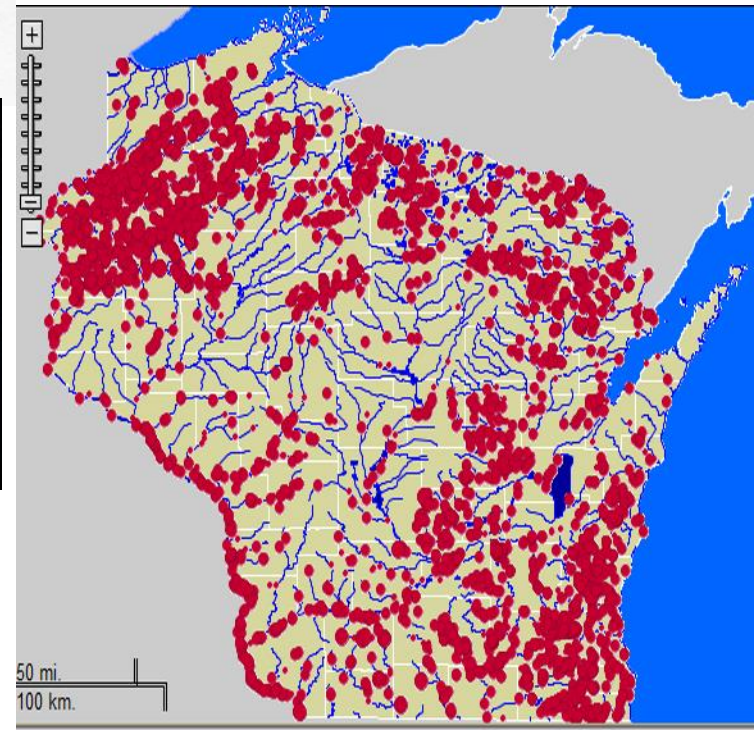
*Micropterus salmoides*



illustrations © J.T. Sipiorski



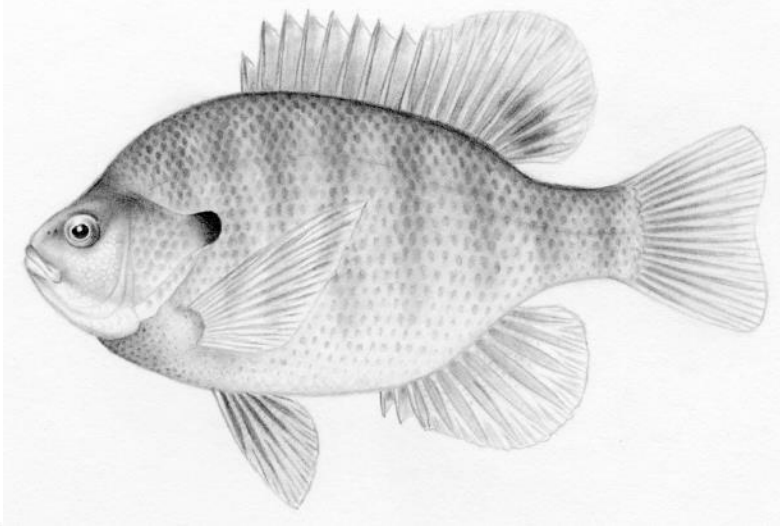
- 10 Dorsal spines
- 3 Anal spines
- Corner of mouth at back of eye
- Minimal connection between dorsal fins
- Greenish with blotchy lateral stripe



Family Centrarchidae

# Bluegill

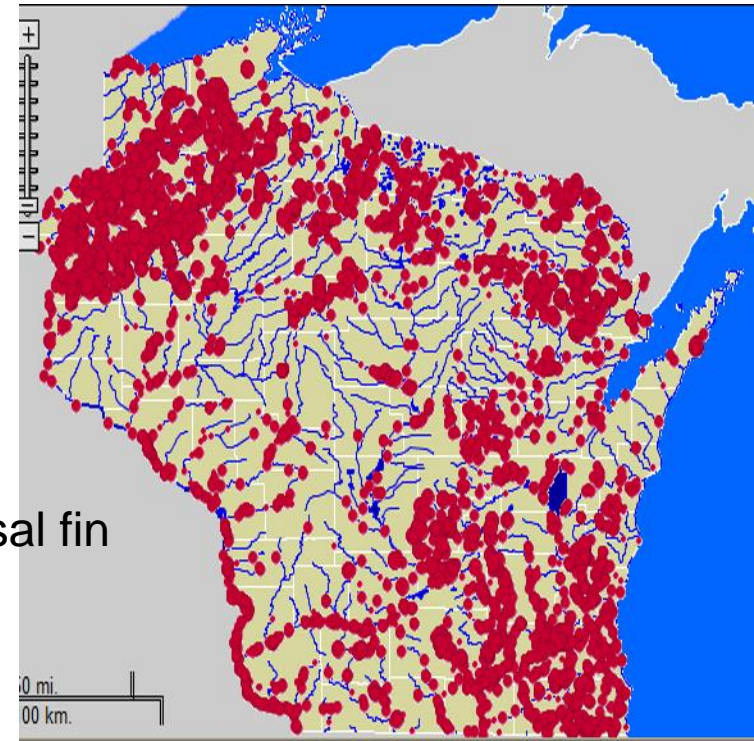
*Lepomis macrochirus*



- 10 Dorsal spines
- 3 Anal spines
- All dark “ear flap”
- 38-48 Lateral scales

- Dark spot on rear dorsal fin
- Pale blue margin on operculum

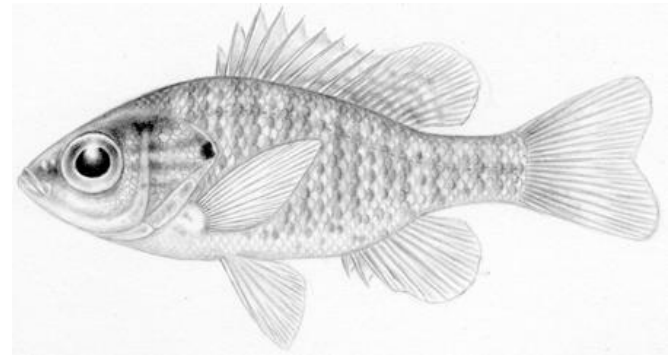
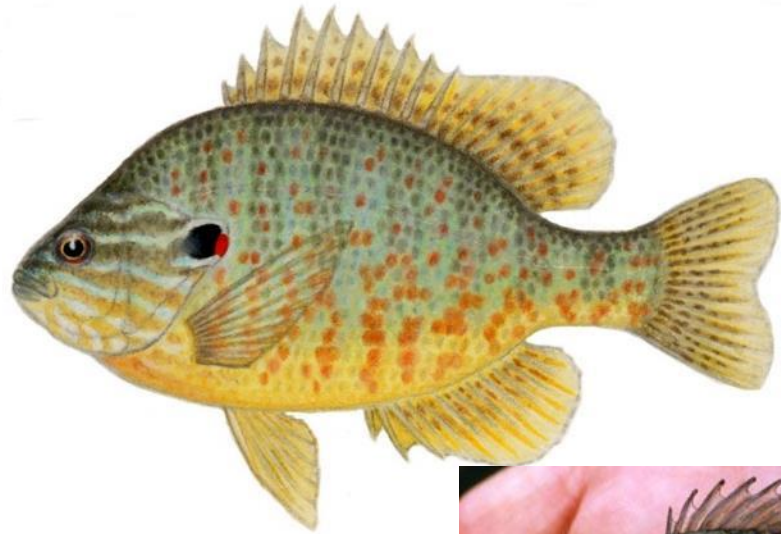
illustrations © J.T. Sipiorski



Family Centrarchidae

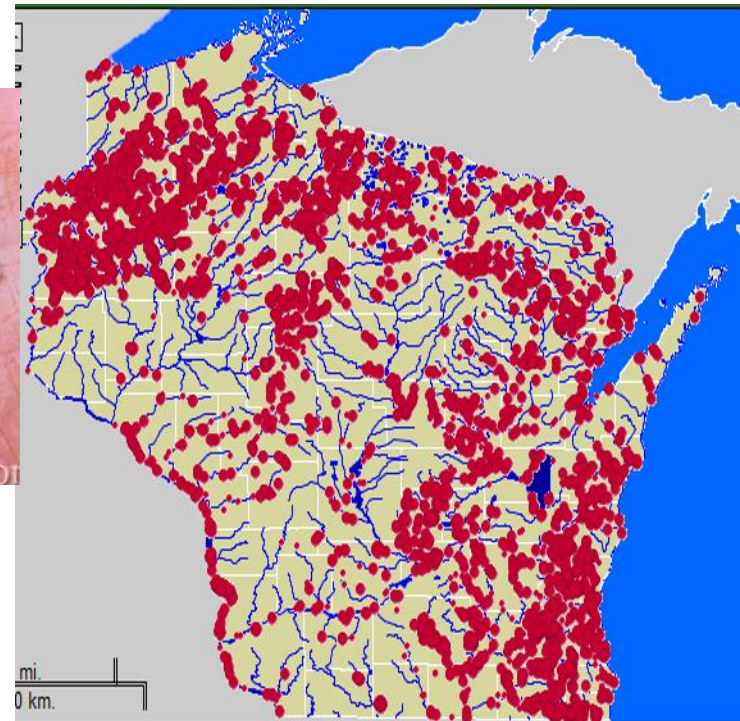
# Pumpkinseed

*Lepomis gibbosus*



- 10 Dorsal spines
- 3 Anal spines
- “Ear flap” dark center with red spot tip
- 35-47 Lateral scales
- Rear dorsal fin blotchy
- Facial stripes

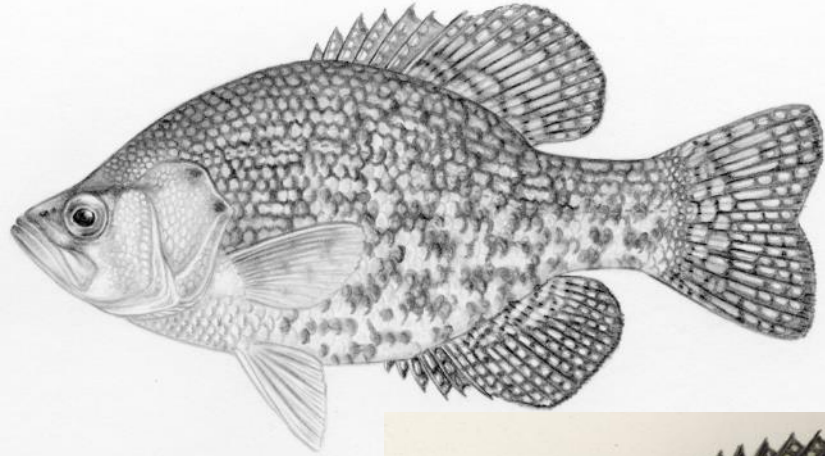
illustrations © J.T. Sipiorski



Family Centrarchidae

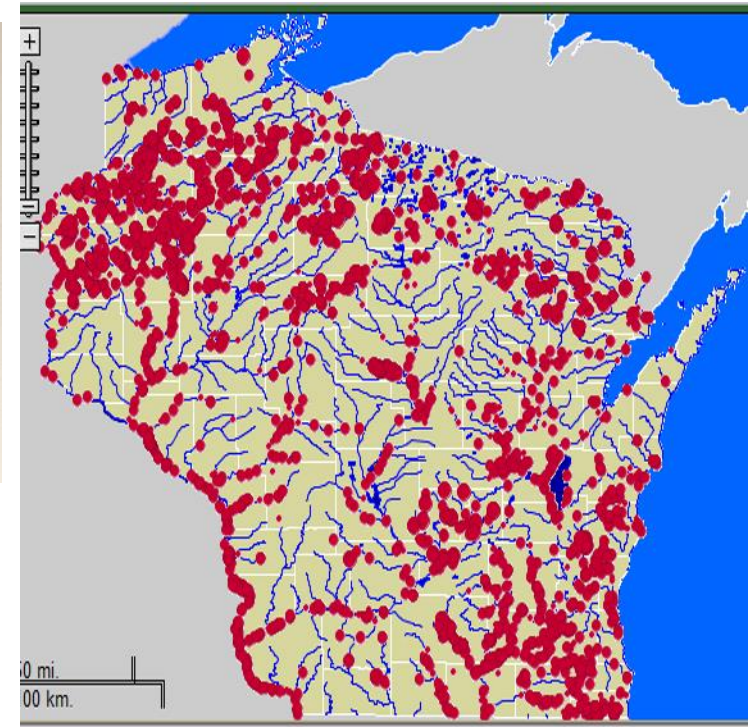
# Black Crappie

*Pomoxis nigromaculatus*



- 7-9 Dorsal spines
- 6 Anal spines
- Forehead same length as dorsal fin base
- Speckled
- Iridescent sheen

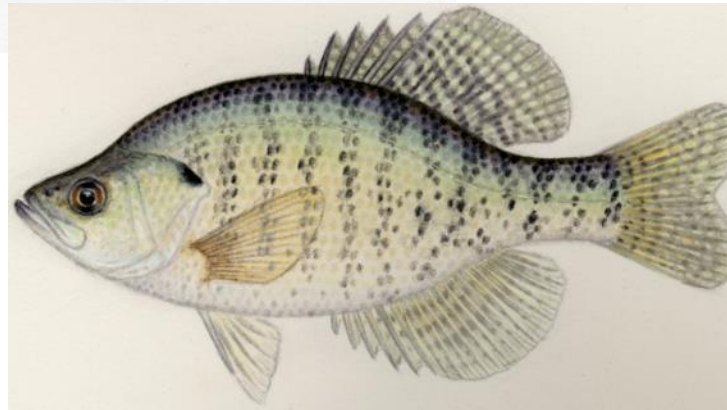
illustrations © J.T. Sipiorski



Family Centrarchidae

# White Crappie

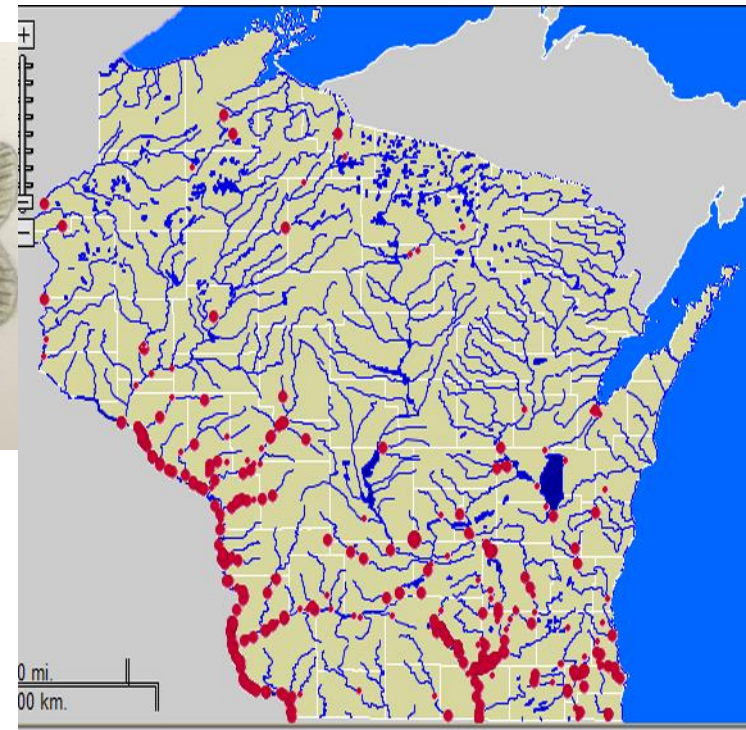
*Pomoxis annularis*



- 6 Dorsal spines
- 6 Anal spines
- Forehead longer than dorsal fin base

- Often striped
- Iridescent sheen

illustrations © J.T. Sipiorski

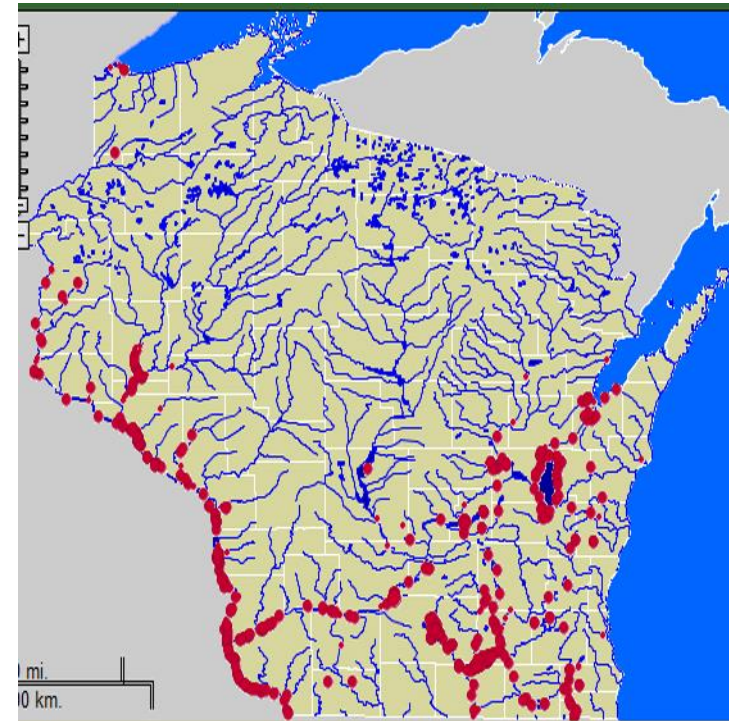
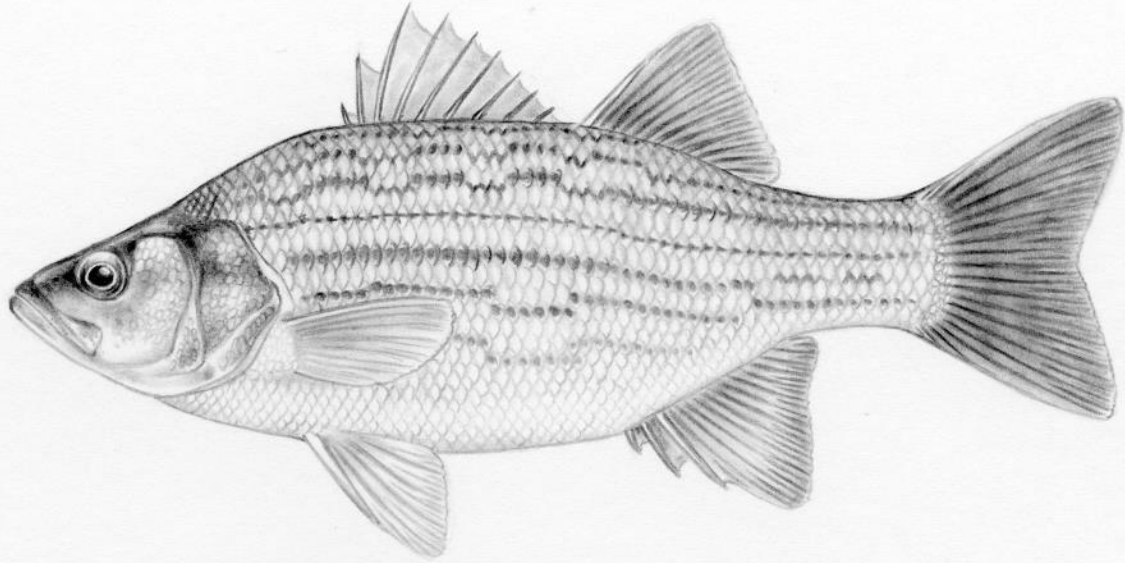




Family Moronidae

White Bass

*Morone chrysops*



Family Percidae

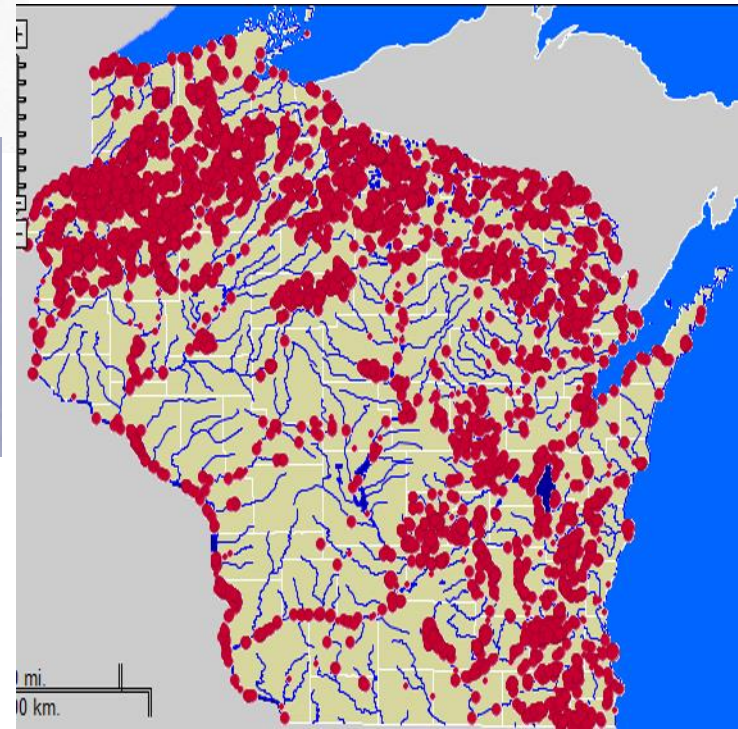
# Yellow Perch

*Perca flavescens*



- Two dorsal fins
- 6-9 dark vertical bars on flank
- Orange tinge to ventral fins

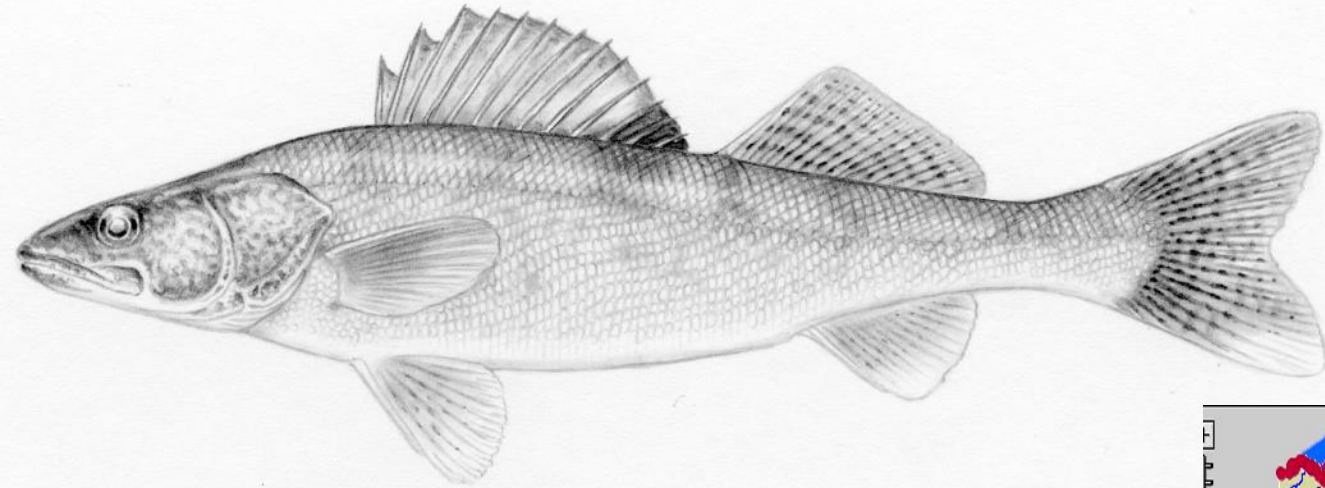
illustrations © J.T. Sipiorski



Family Percidae

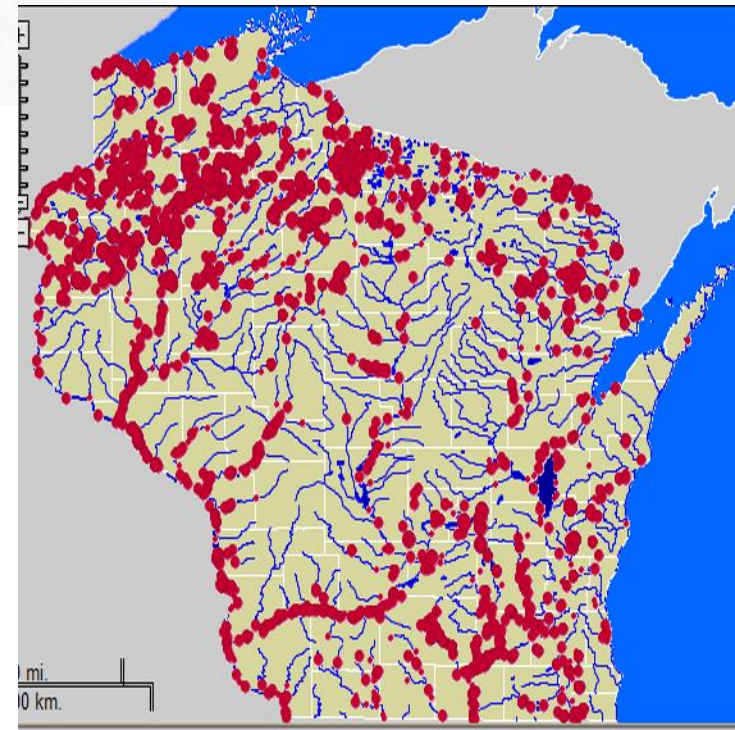
# Walleye

*Sander vitreus*



- Two dorsal fins
- White tips to all ventral fins (pectoral, anal, caudal)
- Dark patch at posterior base of 1<sup>st</sup> dorsal fin
- Mottled flank

illustrations © J.T. Sipiorski

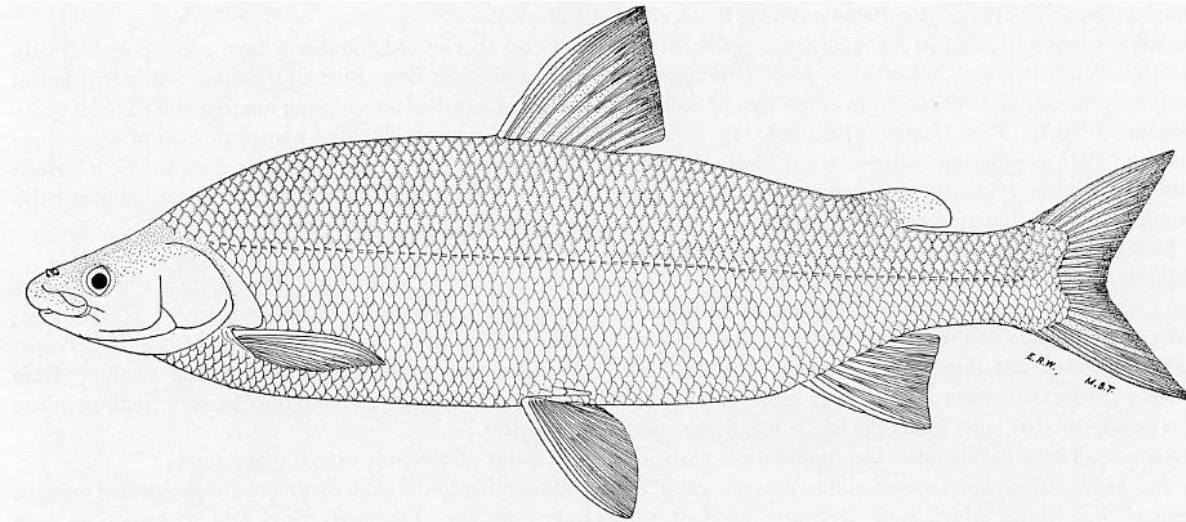


Rarer or more northern species

Family Salmonidae

# Whitefish

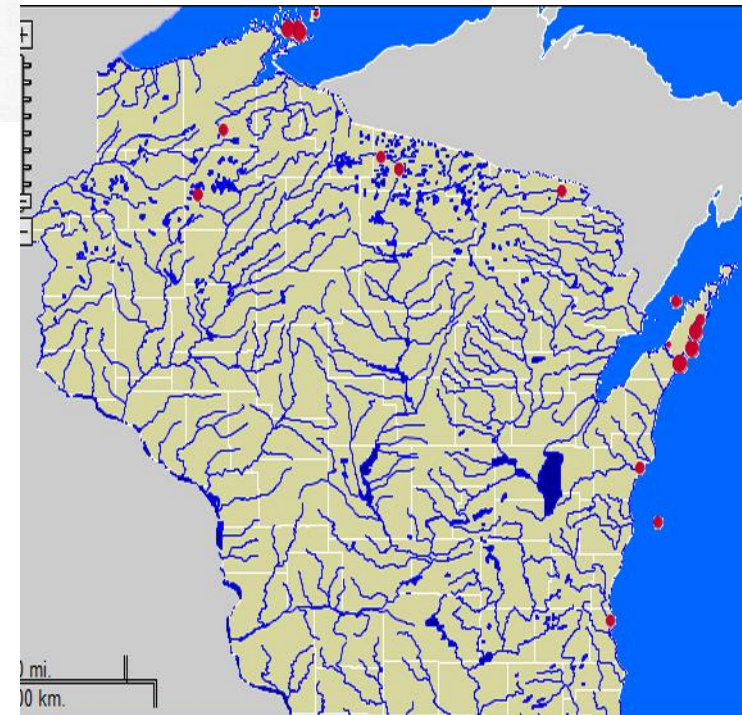
*Coregonus clupeaformis*



- Silvery, humpbacked
- Adipose fin
- Axillary process

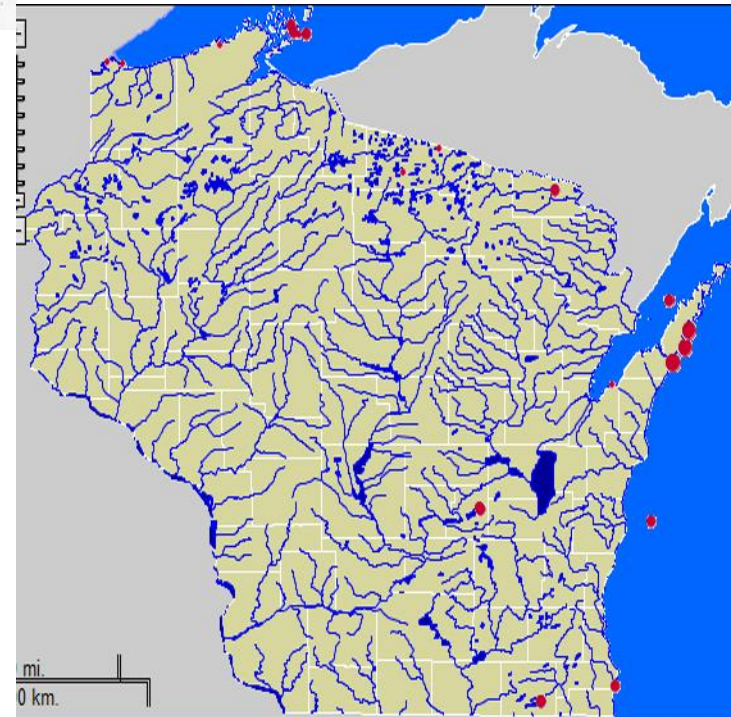
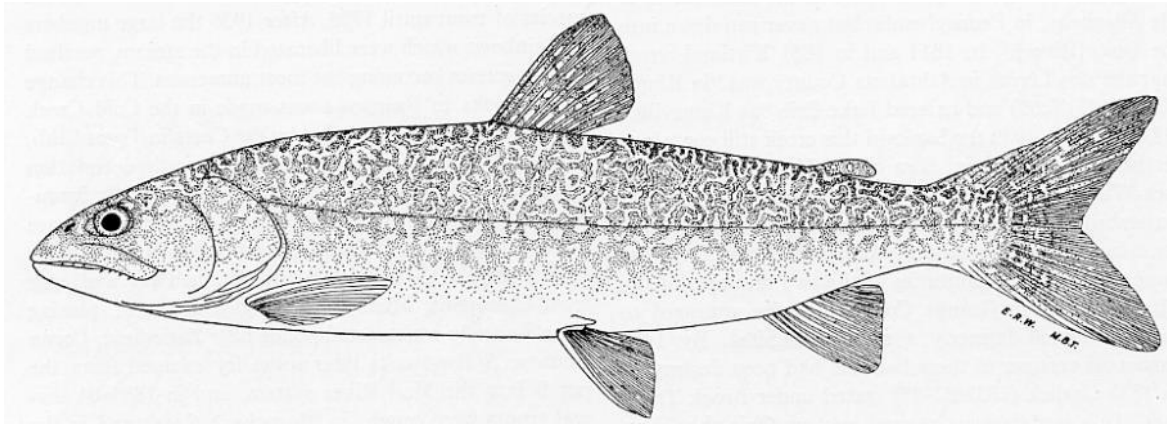
- Subterminal mouth
- Elliptical cross section

illustrations © J.T. Sipiorski



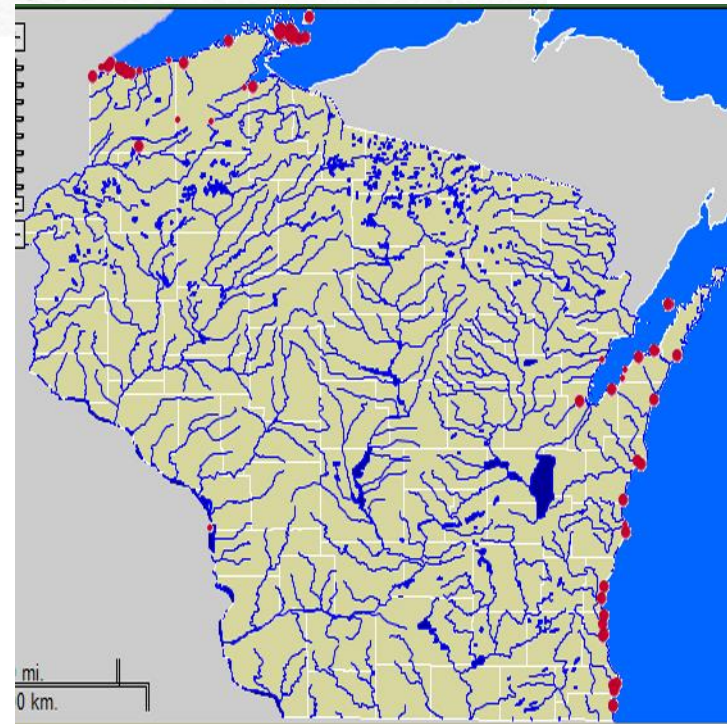
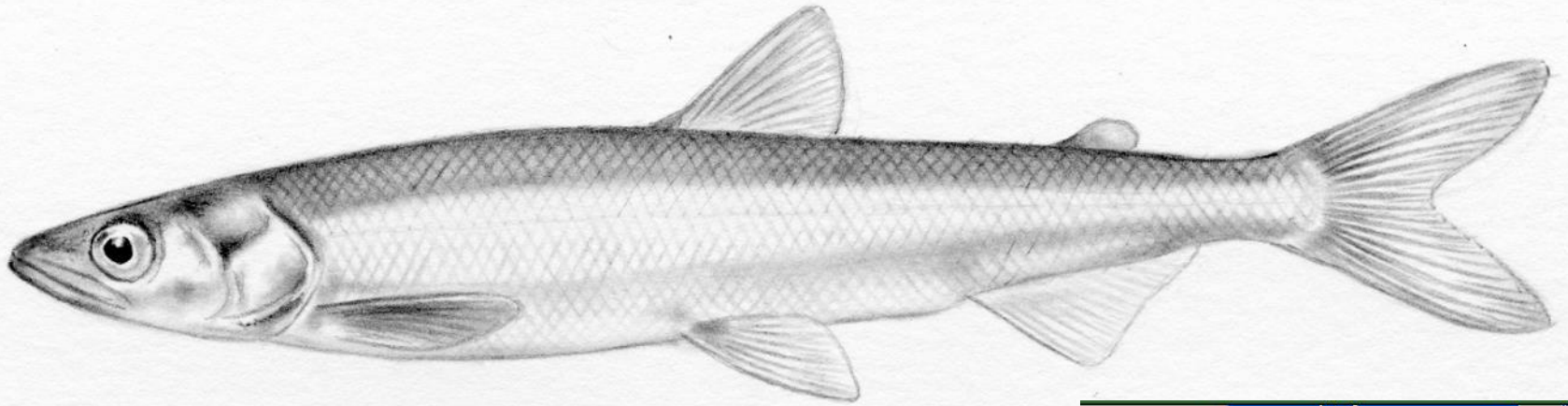
# Lake Trout

*Salvelinus namaycush*



# Rainbow Smelt

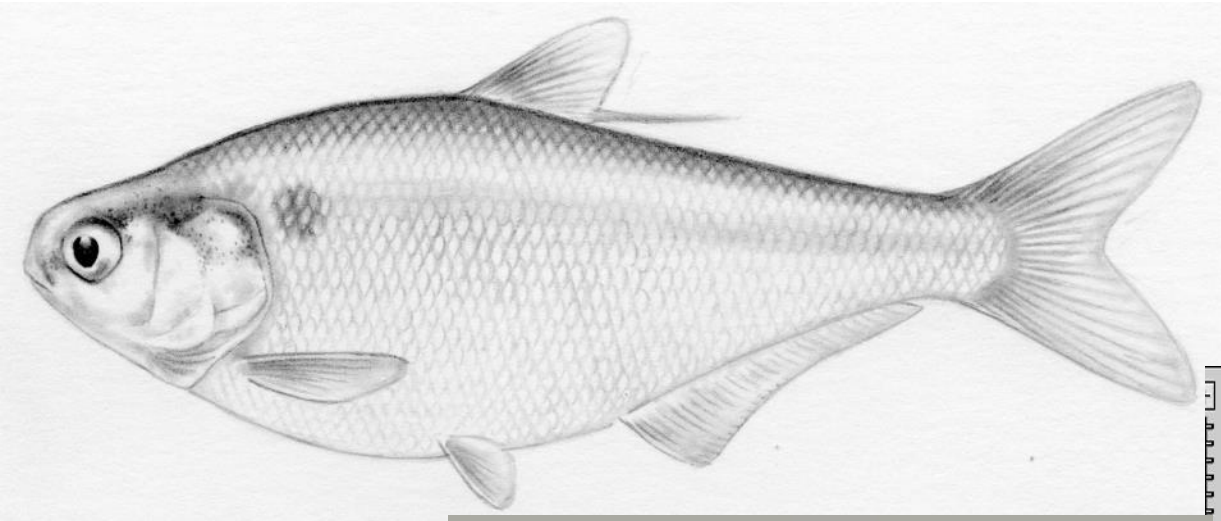
*Osmerus mordax*



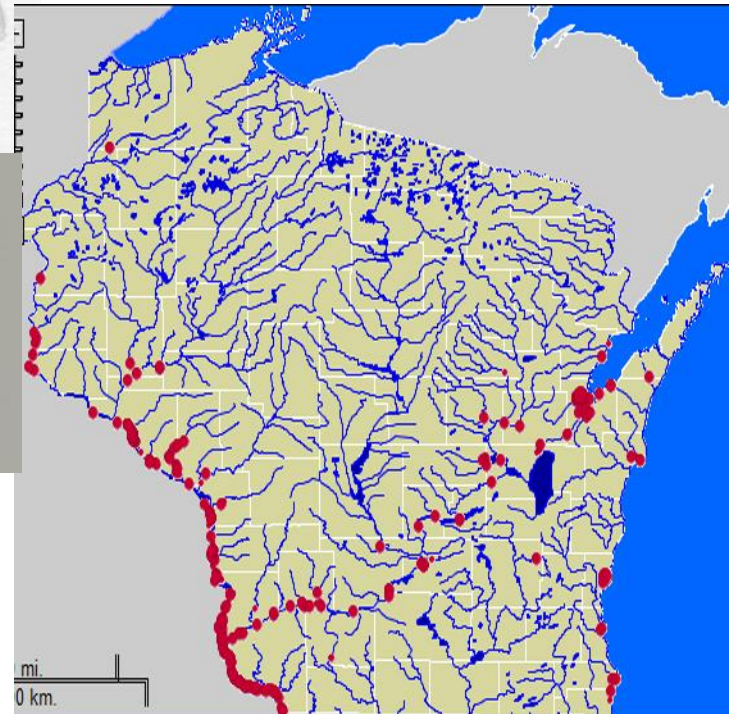
Family Clupeidae

# Gizzard Shad

*Dorosoma cepedianum*



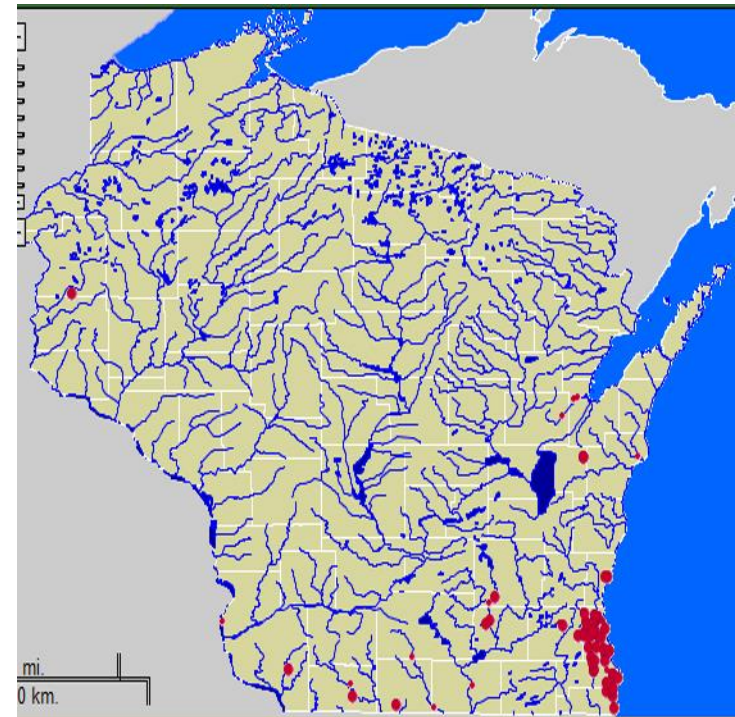
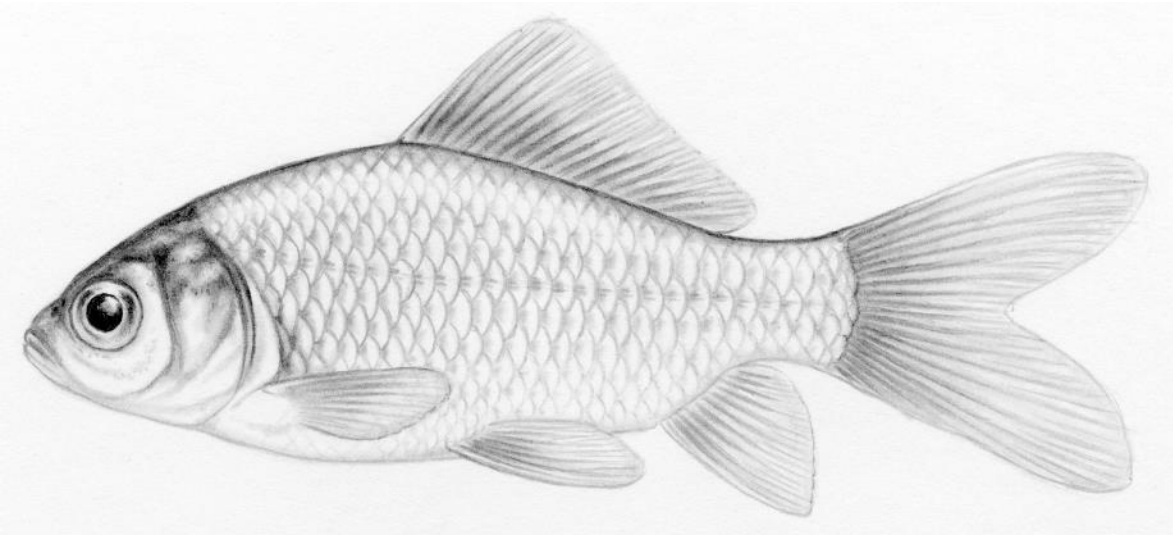
- No Lateral line
  - Single lateral spot
  - Keeled belly, isthmus to anus
  - Dorsal fin centered on back, WITH basal filament
  - Subterminal mouth, boxy snout
- illustrations © J.T. Sipiorski





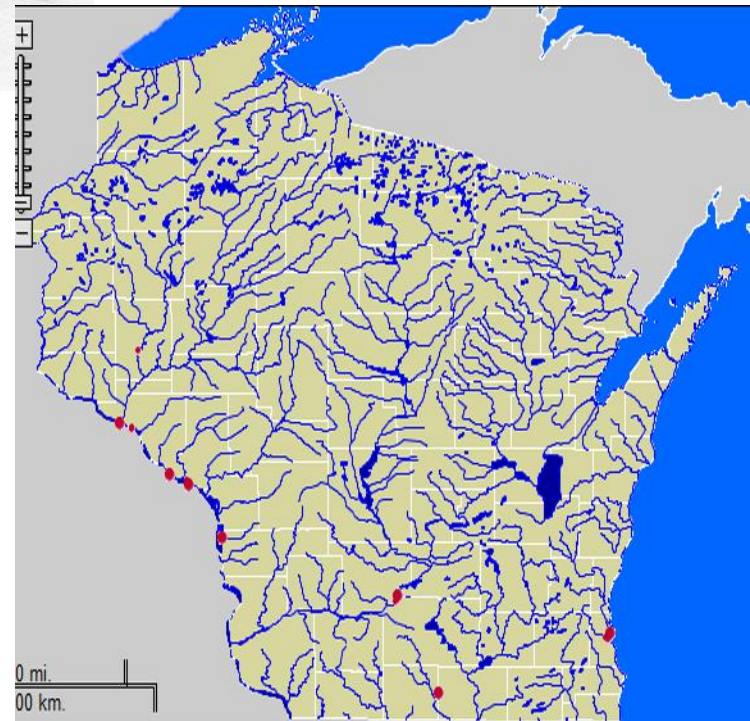
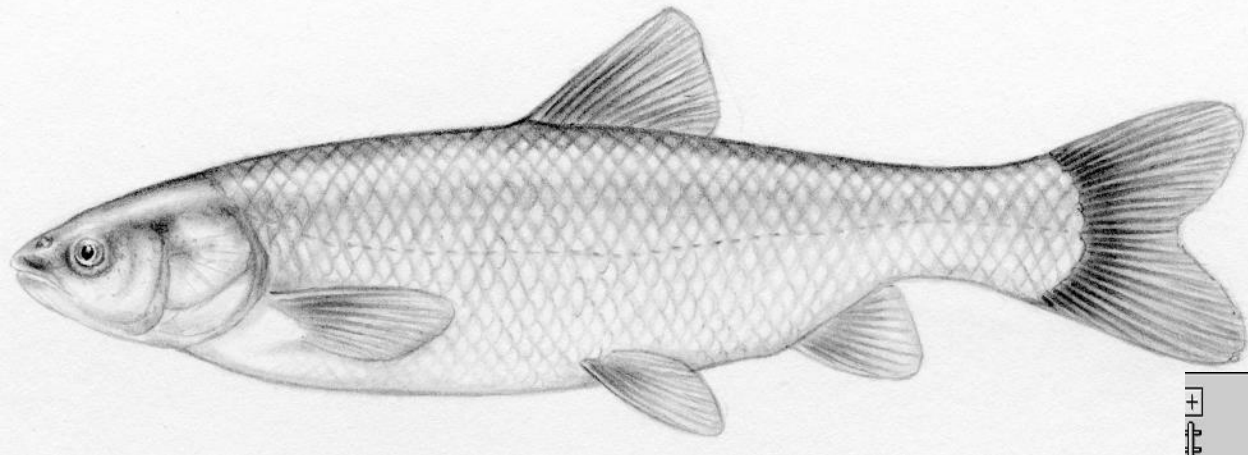
# Goldfish

*Carassius auratus*



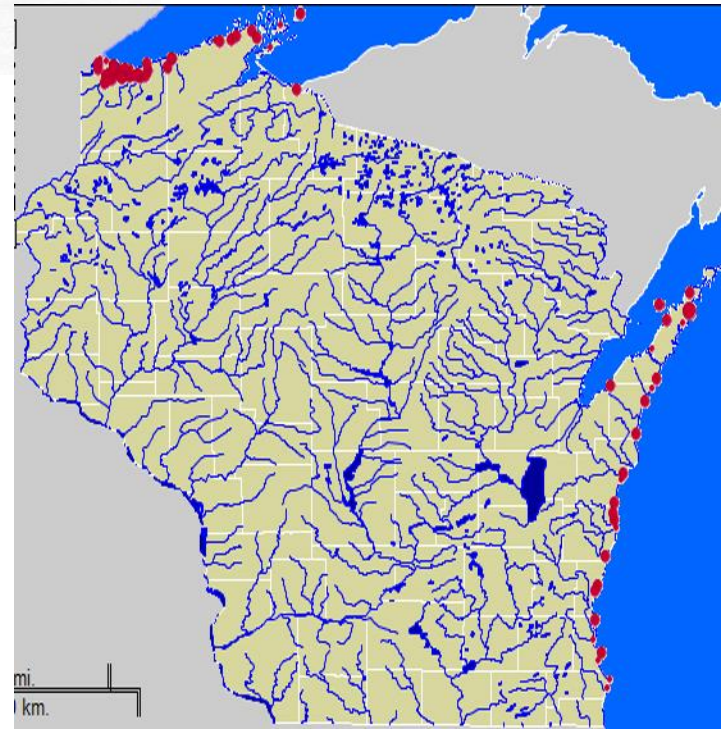
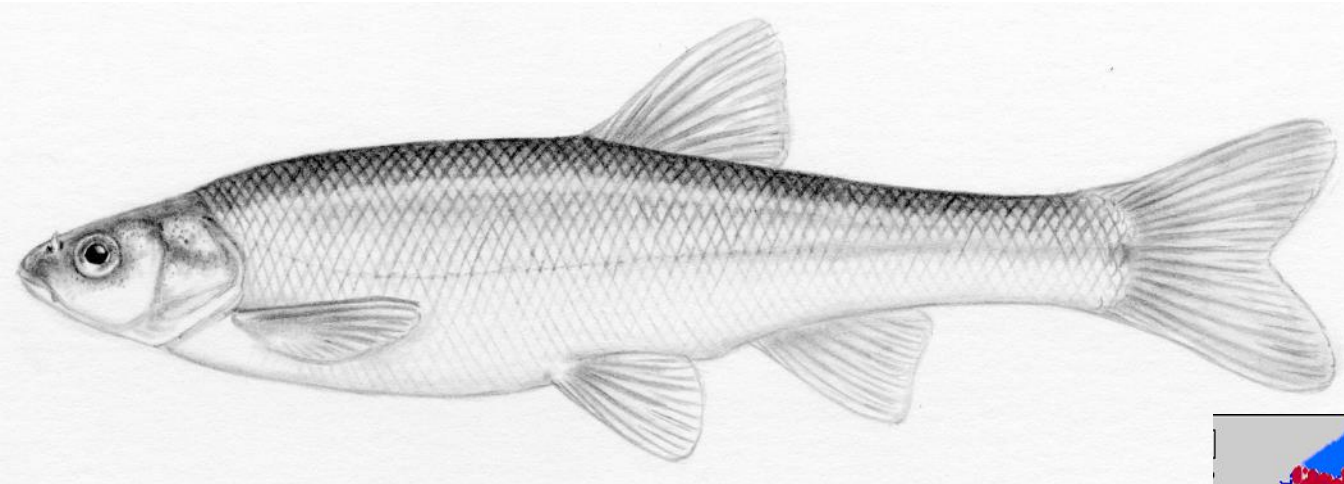
# Grass Carp

*Ctenopharyngodon idella*



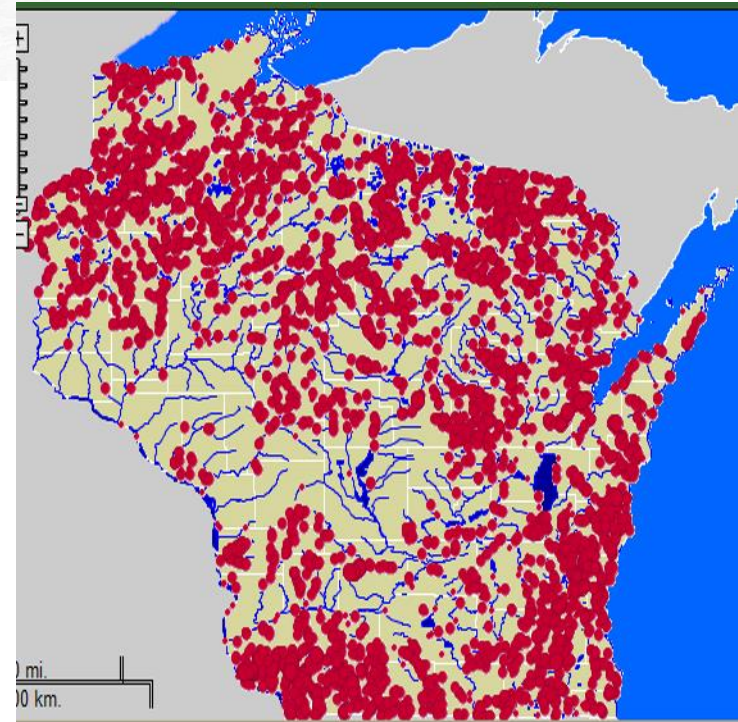
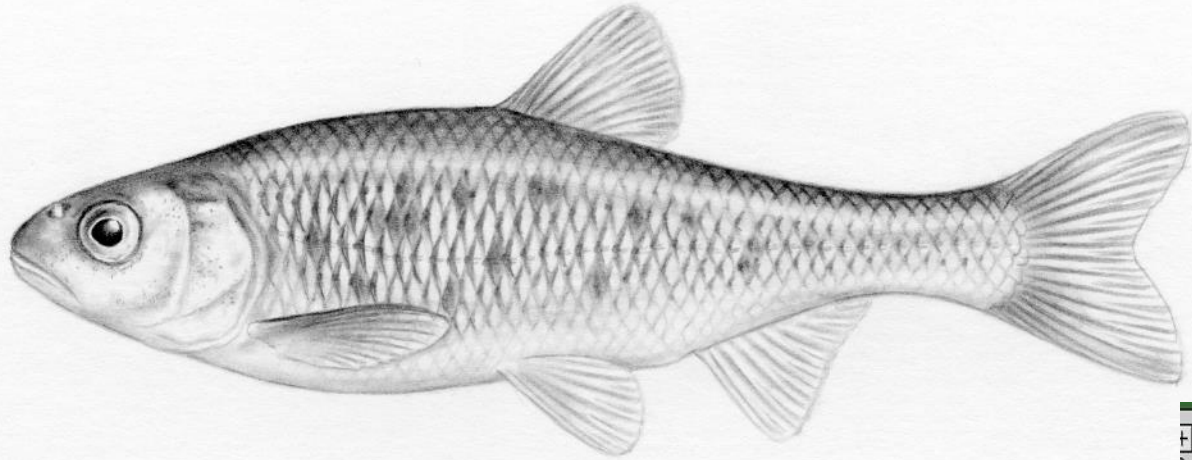
# Lake Chub

*Couesius plumbeus*



# Common Shiner

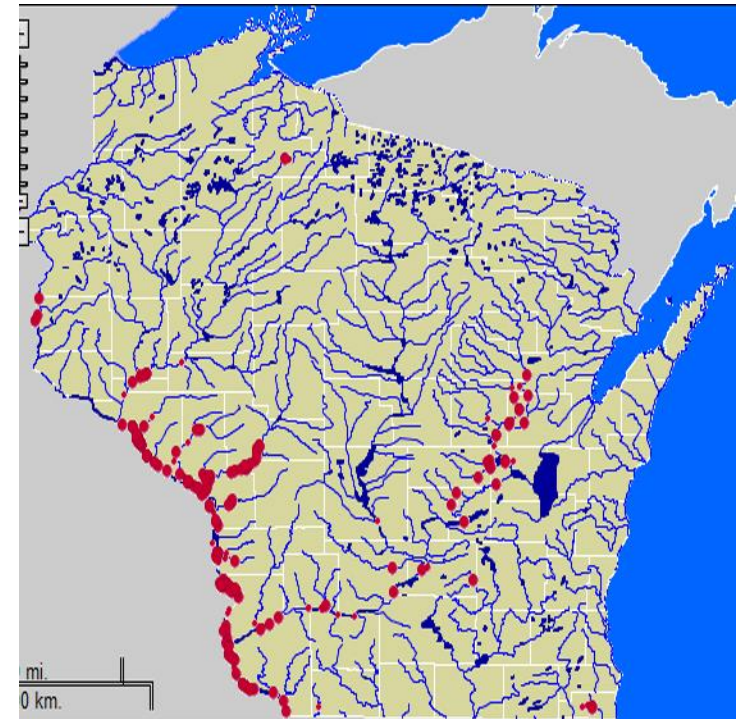
*Luxilus cornutus*



Family Catostomidae

# Spotted Sucker

## *Minytrema melanops*



- Fusiform body
- Short dorsal fin
- Short snout
- NO lateral line

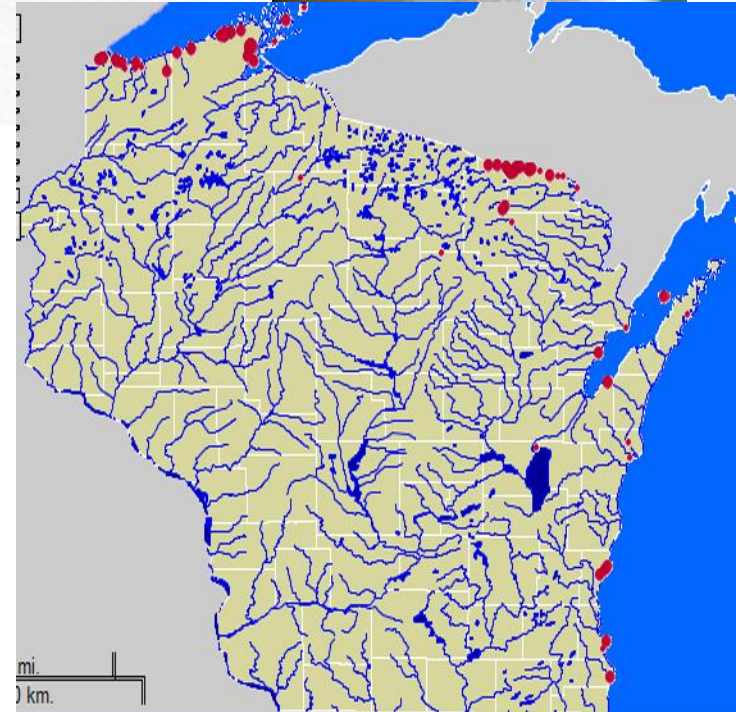
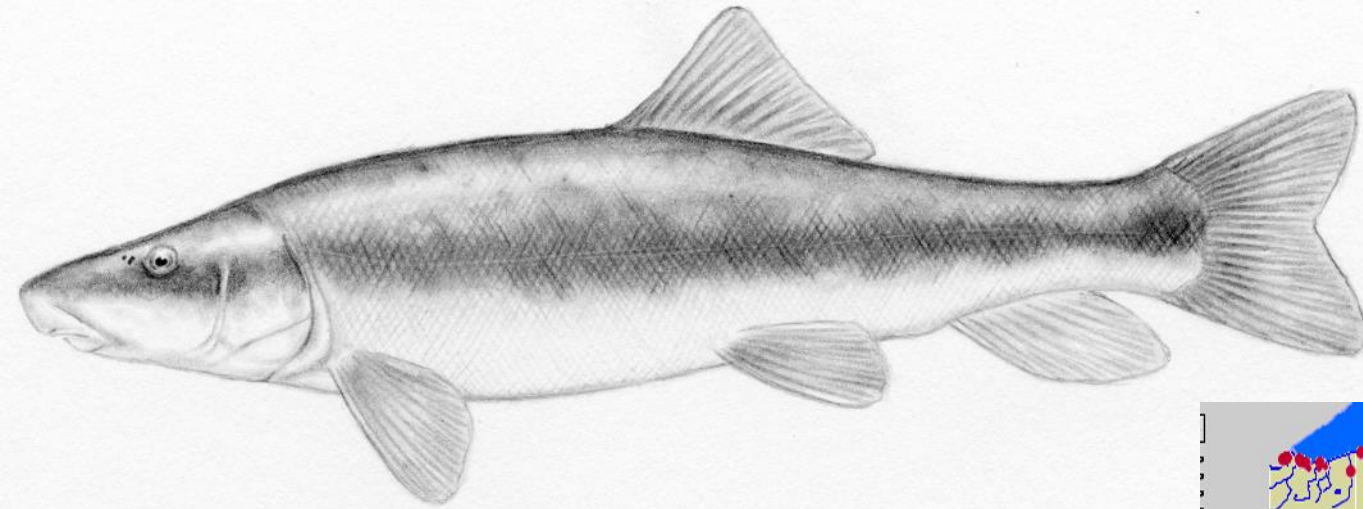
- Plicate lips
- Dark spots on scale junctions

illustrations Milton Trautman

Family Catostomidae

# Longnose Sucker

*Catostomus catostomus*



- Fusiform body
- Short dorsal fin
- Elongate snout

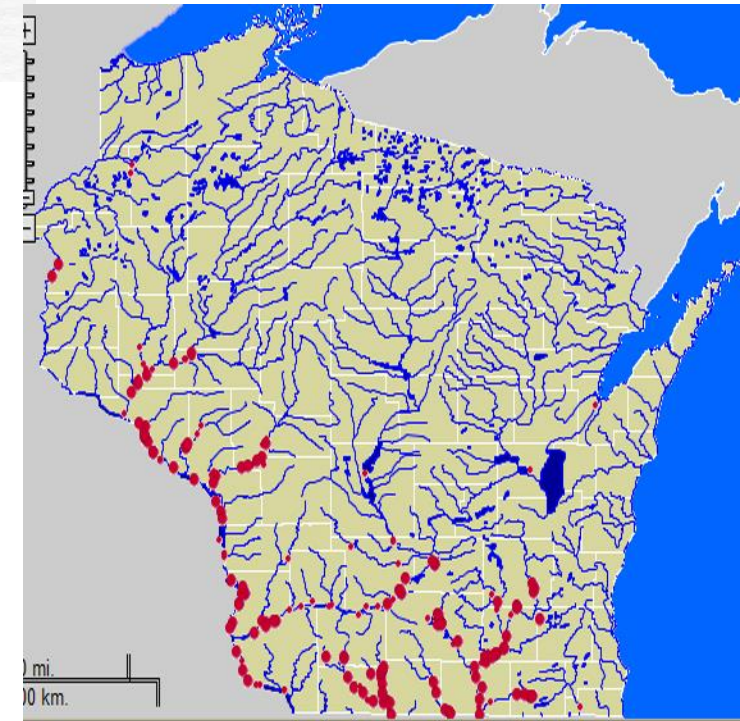
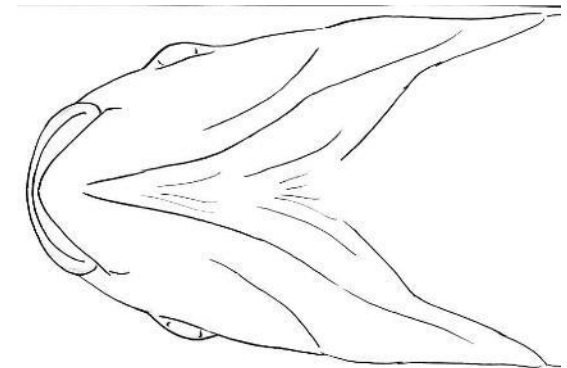
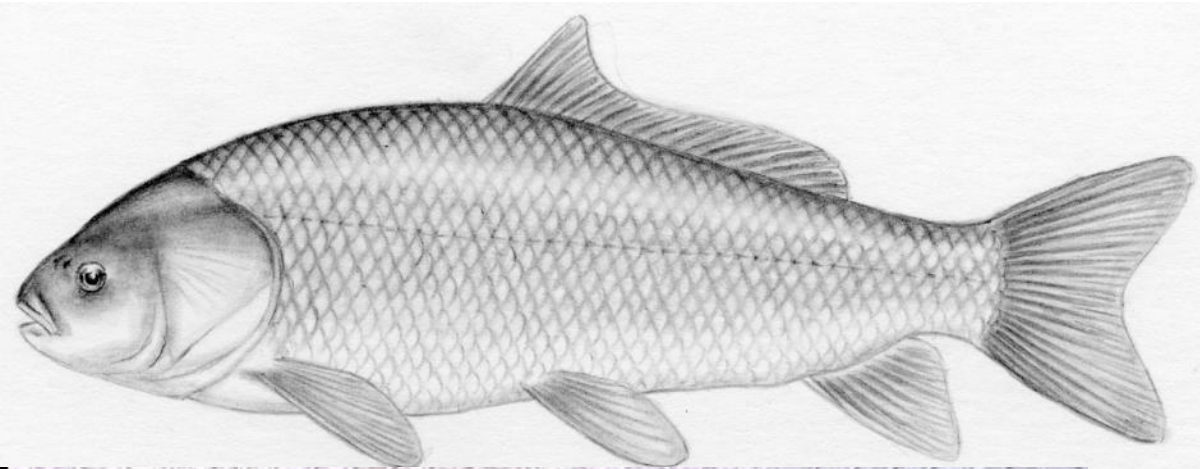
- Pappilose lips
- 95-120 lateral scales

illustrations © J.T. Sipiorski

Family Catostomidae

# Bigmouth Buffalo

*Ictiobus cyprinellus*



- Semicircular subopercle
- Smooth lips
- Olive bronze cast
- rounded nape
- TERMINAL mouth

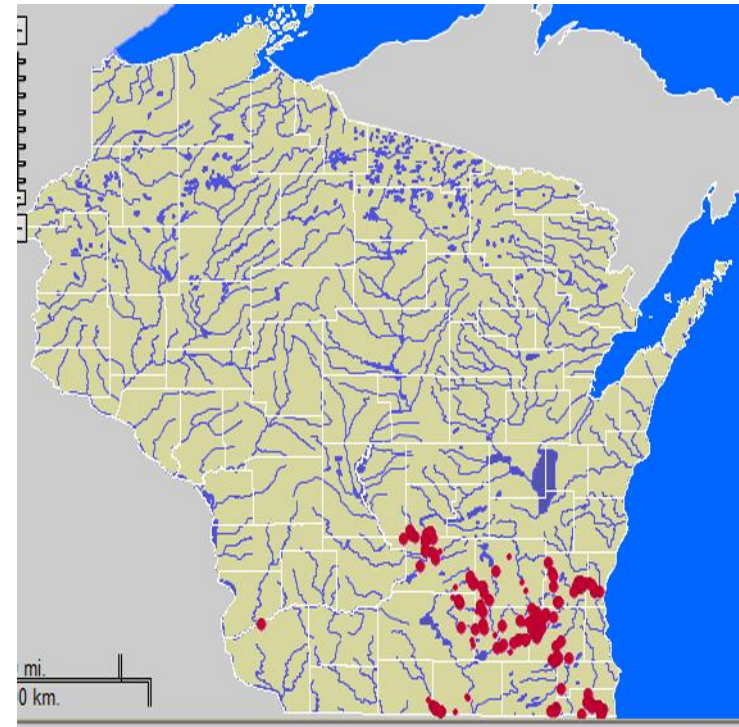
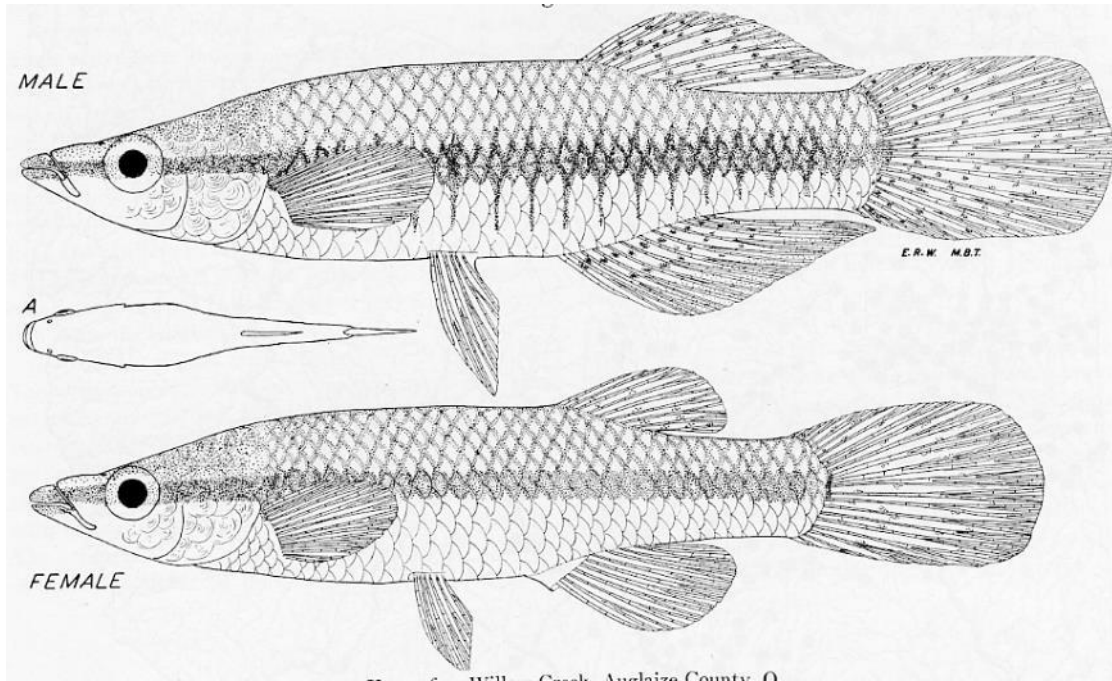
illustrations © J.T. Sipiorski

# Blackstripe Topminnow

*Fundulus notatus*



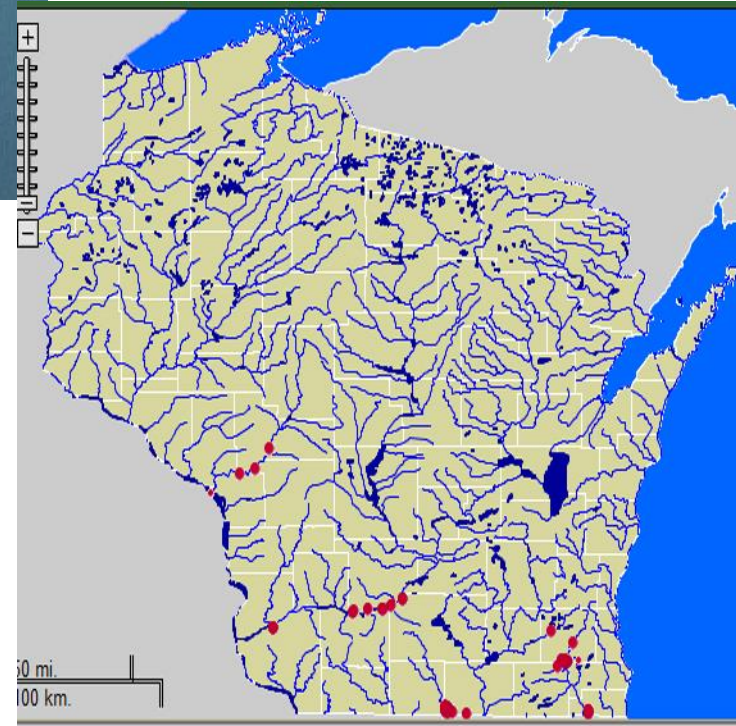
© Joseph Tomelleri





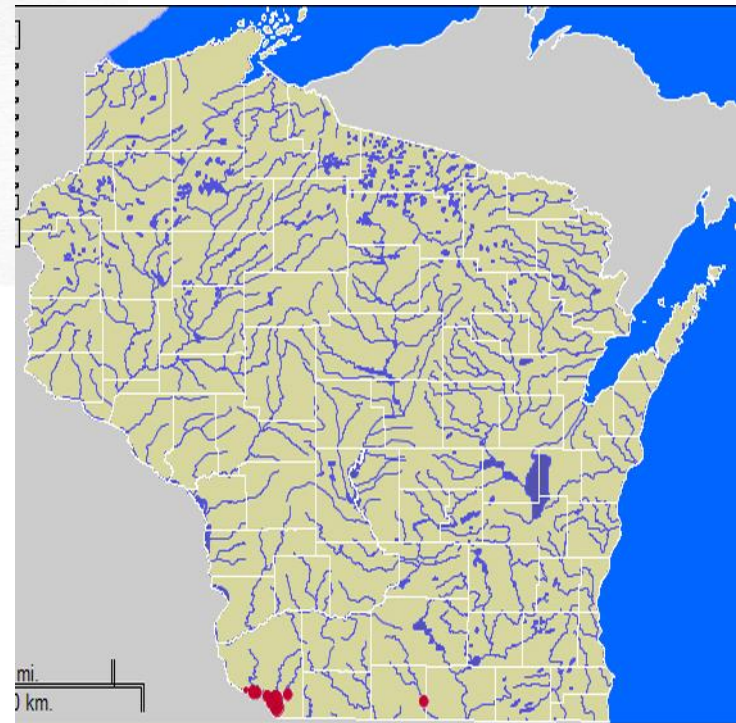
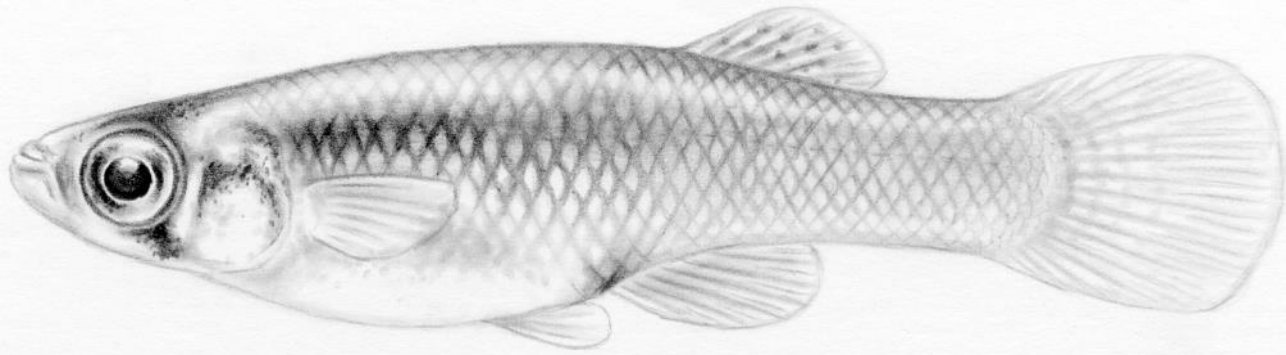
# Starhead Topminnow

*Fundulus dispar*



# Western Mosquitofish

*Gambusia affinis*



# Ninespine Stickleback

*Pungitius pungitius*

