CHARACTERISTICS OF THE FAMILIES OF ARKANSAS FISHES
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PETROMYZONTIDAE (Pet”ro-my-zonti’-dae) Lampreys

Derivation:
Gr. petros = stone; myzo = to suck

Refers to:
Hanging to stones by sucking disc while spawning and ascending swift chutes.

Characteristics:
Absence of jaws
Absence of paired fins
Seven gill openings
Single median nostril
Skeleton cartilaginous
No scales, smooth and slippery skin

POLYDONTIDAE (Poly “y-odon’ti-dae) Paddlefishes

Derivation:
Gr. poly =many; odontos = tooth

Refers to:
Many fine deciduous teeth on jaws and palantines.

Characteristics:
Paddle shaped snout
Heterocercal tail with a pronounced ventral lobe
Scale-less except with ganoid scales on tail
Skeleton cartilaginous
Spiral valve intestine

ACIPENSERIDAE (Ac “i-pen-ser’I-dae) Sturgeons

Derivation:
L. acipenser = a Latin name for the sturgeon. Perhaps from Gr. aci = swift;
L. penna = a wing or fin

Refers to:
The Latin name for a fish (sturgeon).

Characteristics:
Heterocercal tail
Two pairs of barbells before inferior mouth
(Skeleton cartilagenous)
Spiral valve intestine
Five rows of bony scutes on the body
1 dorsal, 2 lateral, 2 ventro-ateral

LEPISOSTEIDAE (Lep”i-so-ste’i-dae) Gars

Derivation:
Gr. lepism = scale’ osteo = bone

Refers to:
Hard bony ganoid scales with are hinged to form a scale-like armor.

Characteristics:
Jaws and face extended into a pronounced beak.
Diamond-shaped ganoid scales covering body.
AMIIDAE (A-mi’I-dae) Bowfin or grinnell
   Derivation:
      Gr. amia = a Greek name for some kind of fish, (perch, mackerel, bonito)
   Refers to:
      The ancient name was applied to this fish.
   Characteristics:
      Long dorsal fin over most of the length of the back, spineless
      Bony plate on the under surface of the lower jaws
      Cycloid Scales reinforced w/ ganoin

ANGUILLIDAE (An-guil’li-dae) Eels
   Derivation:
      L. anguilla = an eel
   Refers to:
      The ancient name was applied to this fish
   Characteristics:
      Snake-like body with a long dorsal fin
      True-jaws and teeth
      Pectoral fins
      Minute, embedded cycloid scales

HIODONTIDAE (Hi”o-don’ti-dae) Mooneyes
   Derivation:
      Gr. hys = shaped like the Greek letter upsilon (Y); odontos = tooth
   Refers to:
      The hypid is a bone, shaped like the letter “Y”, it forms the base of the tongue and bears teeth
   Characteristics:
      Dorsal fin inserted approximately over anal fin, (compare Clupeidae)
      No sharp acutes on midline of body
      Teeth on tongue and mouth well developed
      Lateral line present (ef. Clupeidae)
      Cycloid Scales

CLUPEIDAE (Clu-pe’i-dae) Herrings and Shad
   Derivation:
      L. clupes = a Latin name for some small river fish
   Refers to:
      The ancient name was applied to this fish
   Characteristics:
      Dorsal fin inserted well forward of the anal fin (ef. Hiodontidae)
      Sharp scutes on the midline of the belly
      No teeth on the tongue and the mouth is small
      Lateral line absent (ef. Hiodontidae)
      Cycloid Scales
**SALMONIDAE** (Sal-monii-dae) Salmons, Trouts, and Chars  
Derivation:  
L. salmo = a Latin name for the Salmon, originally from (L) salio, meaning to leap  
Refers to:  
The ability of the salmons to leap into the air  
Characteristics:  
Adipose fin  
Fins soft rayed  
With gristly process in angle of pelvic fin  
Fine scales, more than 70 in the lateral line  
Tiny Cycloid Scales  
Teeth on jaws well developed

**UMBRIDAE** (Um’ bri-dae) Mudminnows  
Derivation:  
L. umbra = a Shade  
Refers to:  
The few species in this family are all of a dark hue  
Characteristics:  
Small  
Dark vertical bar at the base of the rounded caudal fin  
Fins soft rayed  
Caudal fin rounded  
Pelvic fins small and abdominal  
Cycloid Scales

**ESCOIDAE** (E-soc’i-dae) Pickerels, pikes, nd muskellunges  
Derivation:  
L. esox = a Latin name fo a kinds of fish found in the Rhine River, a pike.  
Refers to:  
The ancient name was applied to this fish  
Characteristics:  
Jaws extended in duckbill fashion  
Short dorsal fin inserted far back on body  
Stout, sharp teeth in jaw  
Cycloid scales, deeply scalloped on anterior margin  
Fins soft rayed

**CYPRINIDAE** (Cy-prin’i-dae) Minnows  
Derivation:  
Gr. kyprinos = ancient name for the carp  
Refers to:  
The ancient name was applied to this fish  
Characteristics:  
Dorsal fin with less than 10 rays, the carp and goldfish accepted  
Pharyngeal teeth usually in two rows, not more than eight teeth to a row  
Well developed pharyngeal arches  
Fins usually have 8 rays  
Cycloid scales
CATOSTOMIDAE (Cat’o-stom’l-da) Suckers
Derivation:
Gr. kata = inferior; stoma = mouth
Refers to:
The position of the sucking mouth
Characteristics:
Inferior, sucking, protractile mouth
Jaws toothless
Pharyngeal teeth numerous (n=20+)
High dorsal ray count
Dorsal fin with more than 10 rays
Cycloid scales
Scale-less head

ICHTALURIDAE (Ic”ta-lu’ri-da) Freshwater catfishes
Derivation:
Gr. ichthys = a fish; ailoures = a cat
Refers to:
The long barbells resemble a cat’s whiskers
Characteristics:
Scale less
4 Conspicuous pair of barbells
2 snout, 2 on end of maxillae, 4 on chin
Venomous spines at origin of dorsal and pectoral fins
Adipose fin present

AMBLYOPSIDAE (Am”bly-op’si-da) Blind cave fishes
Derivation:
Gr. amblys = blunt; opsis = appearance
Refers to:
The blunt appearance of the head of the fish
Characteristics:
Eyes rudimentary and under the skin
Pelvic fins absent or rudementary
Anus under the throat
Scattered embedded cycloid scales, appears naked and white

APHREDODERIDAE (Af”ri-do-der’i-da) Pirateperches
Derivation:
Gr. aphodos = excrement; dere = throat
Refers to:
The position of the vent which is located in the throat
Characteristics:
One dorsal fin
with 3-4 short spines, 10-11 soft rays
Anal fin w/ 2 -3 spines
Preopercle serrated; opercle with a spine
Anus located under the throat
Physoclistic = pneumatic duct to pharynx lost
Ctenoid scales
**Gasterosteidae** (Gas"ter-os-ti'i-da) Sticklebacks

**Derivation:**
Gr. gaster = belly; osteon = bone

**Refers to:**
The bony plate between the ventral fins

**Characteristics:**
Two or more free spines preceding the single dorsal fin
Pelvic fins reduced to a single stout spine
Slender caudal peduncle

**Fundulidae** (Fun dul’i-da) Killfishes or topminnows

**Derivation:**
L. Fundus meaning “bottom” the habitat,

**Refers to:**
Swimming just below the surface

**Characteristics:**
Many teeth on jaws
Resembles the cyprinids but with teeth on the jaws
Use to be in Family Cyprinodontidae
Skim along just below surface of water
Mouth opens on the upper aspect of the flattened head
Use thin layer of oxygen rich water at surface
Vertical barring on the body
Single dorsal fin, located far back over anal fin
Caudal fin rounded
No spines exist in fins
Cycloid scales

**Poeciliidae** (Poe”ci-li’i-da) Livebearers

**Derivation:**
Gr. poikilias = (poikilos = many colored) the name of a kind of spotted fish

**Refers to:**
The ancient name was applied to this fish

**Characteristics:**
Mouth opens on the upper aspect of the flattened head
Use thin layer of oxygen rich water at surface
No vertical bars on the body
Sensory canal on side of head
Elongated anal fin on the males’ females with a large black gravid spot on the abdomen,
Internal fertilization and sperm storage
Females can store sperm for months
Live bearing of young → viviparous

**Percopsidae** (Per-cop’si-da) Troutperches

**Derivation:**
Gr. perke = the perch, a kind of fish; opsis = appearance

**Refers to:**
Has the appearance of a perch

**Characteristics:**
Adipose fin
Spotted
Dorsal fin with two weak spines; has ctenoid scales
**Atherinidae** (A”the-in’i-da) Silversides

Derivation:
- Gr. atherine = the ancient name for a kind of smelt; ather = spear or spike

Refers to:
- The shape of this fish resembles a spear or spike

Characteristics:
- Semi-translucent body
- Bright silvery striped extending lengthwise along side
- Beak-like snout
- Two-dorsal fins; the first with soft flexible spines, the second with soft spines
- Long, falcate anal fin
- Physoclistic: lack pneumatic duct btw pharynx and air bladder

**Moronidae** (Mor” on’ i -dae) Temperate Basses

Derivation:

Refers to:
- The ancient name was applied to this fish

Characteristics:
- **Percichthyidae** and **Serranidae** were old family names
- Silvery
- Preopercle serrated; opercle with 1 or 2 spines
- Three anal spines
- Usually horizontally striped

**Elasmommatidae** ( ) Pygmy Sunfishes

Derivation:

Refers to:

Characteristics:
- 4 or 5 dorsal spines
- 3 spines and 5 or 6 soft rays on anal fine
- Lack a lateral line
- Maximum size of about 3 inches
- Caudal fin usually rounded
- Some consider them to be in the family Centrachidae
- Cycloid scales

**Centrarchidae** (Cen-trark’i-da) Sunfishes

Derivation:
- Gr. kentron = a spine; archos = rectum or anus

Refers to:
- The development of the anal spines

Characteristics:
- Deep, laterally compressed bodies
- Single dorsal fin including both spinous (over 5 spines) and soft rays
- Three or more anal spines
- Pelvic fins placed forward (thoracic)
- Lateral line complete
- Ctenoid scales
PERCIDAE (Per’ci-da’e) Perches and darters
Derivation:
Gr. perke = a kind of fish, the perch
Refers to:
The ancient name was applied to this fish
Characteristics:
Two distinct dorsal fins
   First spiny rayed, second soft rayed
Pelvic fins thoracic
One or two anal fin spines
Anal papilla developed
Overlapping ctenoid scales on body

SCIAENIDAE (Sci-aen’i-da’e) Drum
Derivation:
Gr. skiaina = an ancient name of the sea fish
Refers to:
The ancient name was applied to this fish
Characteristics:
Single dorsal fin including both spinous and soft rays
Complete lateral line extending onto caudal fin
One or two anal spines
Lower pharyngeal arches large
Complicated swim bladder capable of producing audible sounds
Ctenoid scales

MUGILIDAE (Mu-jil’i-da’e) Mullets
Derivation:
L. mugil = a sort of fish
Refers to:
The ancient name was applied to this fish
Characteristics:
A small weak mouth; pectorals high on the sides of the body
A small four spined dorsal fin considerably in advance of the soft portion
May bear conspicuous adipose membranes over their eyes

COTTIDAE (Cot’ti-da’e) Sculpins
Derivation:
Gr. kottos = old name of the European millers thumb, from kotta, meaning head
Refers to:
The large head of the cottids
Characteristics:
Enlarged flattened head
Expanded pectoral fins
Heavy naked bodies (i.e. lack scales)
Lack gas bladder
Banded appearance
Preopercle spine