

**Inventory of Aquatic Organisms
Kimble County, Texas
June 2002**

ABBREVIATIONS

CC Clear Creek

CP Clay Pond

FX Fox Hollow Road

GCP Golf Course Pond, City of Junction

JC Johnson Creek

JN Junction City Park

NL North Llano River

TL Telegraph South Llano River

TTU Texas Tech University Junction Campus

YT Yates Crossing

ALGAE

Chlorophyta

Ankistrodesmus

TTU pond

Notes: Spindle-shaped, gradually tapering to a point at ends.

Bulbochaeta

NL KOA rock

TTU pond bark

Notes: Filamentous, branched with seta bulb-like at base.

Cladophora

FX spring, dangling from bluff

JN bottom of spillway

JN lake bottom (dredge)

GCP

TL riffles

TTU attached; fast-flowing water

TTU low water crossing (still backwater, floating)

TTU top of rock (exposed)

Notes: Large and branched; in flowing waters.

Closterium

CP

JC rock

TTU pond

Notes: Green crescent-shaped desmid.

Cosmarium

CP

GC stream

JC rock

JN lake bottom (dredge)

JN lake (weeds)

NL KOA (scum)

TTU pond plankton

Notes: Green, bilobed.

Dictyosphaerium

JN lake bottom (dredge)

TTU pond

Notes: Spherical cells connected by strands to a mucosal mass.

Draparnaldia

TTU side of bridge (still backwater, floating)

Notes: Central filament with whirled multicellular extensions. Looks frilly.

Micrasterias

GC stream

JC rock

NL KOA (scum)

Notes: “Snowflake.” Unicellular with irregularly serrated edges.

(?) Microspora

JN midway down spillway.

Notes: Filamentous with H-piece at ends .

Mougeotia

FX spring, attached to bluff (?)
GCP plankton
JN lake (weeds)
NL KOA (scum)
TL bank (still)
TL stagnant backwater
TTU top of rock (exposed)
TTU submerged, attached to rock, bridge area
TTU riffles
TTU pond

Notes: Flat and twisted chloroplast; often in shaded still waters.

Pediastrum

CP
JC rock
JN lake bottom (dredge)
JN lake (weeds)
NL KOA rock
TTU pond bark

Notes: Spherical with spiked edges.

Penium

JN lake bottom (dredge)

Notes: Cigar-shaped green desmid.

Protococcus

JC rock

Notes: Small, bilobed or multilobed.

Scenedesmus

JN lake bottom (dredge)
JN lake (weeds)
NL KOA (scum)
TTU pond bark

Notes: Four-cell packet with hair-like extensions at each corner.

Spirogyra

GCP plankton
JC strong current
JN lake bottom (dredge)
JN lake plankton (night)
NL KOA rock
TL bank (still)
TTU low water crossing (still backwater, floating)
TTU pond bark
TTU riffles
TTU still backwater, submerged)
TTU submerged, attached to rock, bridge area

Notes: Sometimes double-spiraled (cf *Genicularia*).

Ulothrix

TTU pond bark

Notes: Shortened cells, almost square.

Zygnema

FX mouth of spring
GCP plankton
JN lake bottom (dredge)
TL bank (still)
TL stagnant backwater
TTU low water crossing (still backwater, floating)

Notes: Double star-shaped chloroplasts.

Chrysophyta (Diatoms)

Achnanthes

CP *Myriophyllum*
NL KOA (*Miophyllum*)

Notes: Attached to *Miophyllum*.

Amphora

JN lake bottom (dredge)
JN lake (weeds)

Notes: Crescent-shaped. Clings to filaments with concave valve.

Cymbella

GCP stream
JN dip (night)
JN lake (weeds)
TTU pond

Notes: Crescent shaped diatom.

Fragilaria

CP
JC rock
JN lake plankton (night)
NL KOA (*Myriophyllum*)
TTU pond bark

Notes: Usually colonial. Long, narrow and spike-like.

Frustulia

CP
JC rock
JN lake bottom (dredge)
NL KOA (*Myriophyllum*)
NL KOA (scum)
TTU pond plankton
TTU pond bark

Notes: Canoe-shaped.

Gyrosigma

JC in flowing water
JC rock
JN lake bottom (dredge)
NL KOA rock
NL KOA (*Myriophyllum*)
TTU pond bark

Notes: Propeller offset, slightly sigmoid in shape.

Navicula

CP

GCP plankton

JC rock

JN dip (night)

JN lake bottom (dredge)

JN lake (weeds)

NL KOA (scum)

Notes: Long and narrow, tapers at ends.

Rhopalodium

TTU pond

Notes: Straight margins, very deflected apices.

Stauroneis

JN lake bottom (dredge)

Notes: Knob on each tip.

Surirella

GC stream

JN dip (night)

NL KOA (*Myriophyllum*)

NL KOA (scum)

Notes: Wedge-shaped with valves. Chloroplasts marginal, extending inward.

Synedra

JC in flowing water

JN lake plankton (night)

JN lake (weeds)

TTU pond bark

Notes: Long, slender and spine-like. Can be rod-shaped.

Tabellaria

CP

JC rock

JN lake bottom (dredge)

JN lake plankton (night)

Notes: Colonial, breaks into rectangular units.

Cyanophyta

Anabaena

JN lake bottom (dredge)

JN lake (weeds)

Notes: Long chain with enclosed cysts.

Coelosphaerium

JN lake bottom (dredge)

Notes: Small cells in a gelatinous mass.

Merismopedia

GC stream

JC rock

JN lake (weeds)

JN lake bottom (dredge)

NL KOA (scum)

TTU pond

Notes: Packets of rectangular cells, regularly/evenly distributed.

Oscillatoria (small)

GCP plankton

JC strong current

JN lake bottom (dredge)

JN lake plankton (night)

JN midway down spillway

TL riffles

TL stagnant backwater

TTU pond

TTU pond bark

TTU submerged, attached to rock, bridge area

Notes: Several sizes and species; no gelatinous coating.

Oscillatoria (large)

GCP plankton

NL KOA (scum)

TL bank

Notes: Several sizes and species; no gelatinous coating.

Spirulina

GCP plankton
JN lake bottom (dredge)
JN lake (weeds)
NL KOA (scum)
TTU pond bark

Notes: Long and corkscrew-shaped.

PROTOZOA

Flagellata

Ceratium

TTU pond bark

Notes: Dinoflagellate with multiple spike-like extensions.

Coleps

TTU pond

Notes: Barrel-shaped with enlarged spicules on posterior surface

Cothurnia

TTU pond

Notes: Sessile, stalked in a vase-like sheath.

Euglena

CP *Myriophyllum*
CP Plankton
JN lake bottom (dredge)
TTU pond plankton

Notes: Long and twisted.

Glenodinium

JC flowing water
TTU pond plankton

Notes: Spherical, ellipsoidal, or ring-like. Annulus is complete circle.

Gonium

NL KOA (*Myriophyllum*)

NL KOA (scum)

Notes: Colonial flagellate with green chloroplast.

Phacus

CP

TTU pond plankton

Notes: Round and slightly spiraled. Has chloroplasts and eyespot.

Sarcodina

Actinophrys

CP

NL KOA (scum)

TTU pond bark

Notes: Spines radiating from amoeboid body.

Amoeba

NL KOA (scum)

CP

TTU pond bark

Notes: With pseudopodia

Diffugia

TTU pond

Notes: Test is vase-shaped and made up of particles

Ciliata

Dileptus

JC rock

JN dip (night)

NL KOA (*Myriophyllum*)

Notes: Long, narrow ciliate.

Euplotes

JC rock

JN lake plankton (night)

NL KOA (scum)

Notes: Small with fused cilia. Very active.

Oxytricha

NL KOA (*Myriophyllum*)

Notes: Large cilia not fused. Oral groove.

Paramecium

JC rock

JN

Notes: Slipper-shaped. Prominent oral groove.

Stentor

JN lake bottom (dredge)

NL KOA (scum)

Notes: Moves rapidly. Very dark. Trumpet to bell shaped.

Spirostoma

CP *Myriophyllum*

Notes: Moves rapidly.

Stylonychia

JC rock

JN dip (night)

TTU pond bark

Notes: Three posterior fused cilia.

Urocentrum

JC rock

JN

JN dip (night)

Notes: Bilobed with and long, narrow caudal flagellum.

Vorticella

JN lake bottom (dredge)

NL KOA rock

TTU pond bark

Notes: Cup-like ciliate suspended on a long pedicle. Sessile.

PLATYHELMINTHES

Planarian

CP *Myriophyllum*

Unidentified turbellarians

CP *Myriophyllum*

CP Plankton

GASTROTRICHA

Chaetonotus

CP

JC rock

TTU pond bark

Notes: Body completely covered with prominent hairs.

ROTIFERA

Brachionus

CP

Notes: One foot is shorter than the other.

Euchlanis

JC rock

NL KOA (scum)

Notes: Two short feet.

Lecane

CP

JC rock

JN lake plankton (night)

JN lake (weeds)

TTU pond bark

Notes: Goblet-shaped with a single long foot.

Philodina

JC flowing water

JN dip (night)

JN lake (weeds)

NL KOA (scum)

TTU pond bark

Notes: Large, broad with paired ciliated disks at head. Two-lobed foot.

Rotaria

GC stream

JC rock

NL KOA rock

NL KOA (scum)

TTU pond bark

Notes: Inchworm-like movement. Uses foot to attach. Smaller.

Trichocerca

CP

JC rock

Notes: Foot as long as body. Anterior projection.

CNIDARIA

Chlorohydra

JN lake bottom (dredge)

Notes: Single polyp with chlorophyll.

NEMATODA

CP *Myriophyllum*

CP Plankton

JN dip (night)

JN lake bottom (dredge)

JN lake (weeds)

NL KOA rock

TTU pond bark

MOLLUSCA

Corbicula

NL

Notes: Purple inner color, ridges equal, lateral teeth equal.

ANNELIDA

oligochaete

JN dip (night)

Helobdella

NL KOA

Notes: Leech. Flat body, \ventral sucker. Tan with black stripes.

TARDIGRADA

Macrobiotus

JN lake bottom (dredge)

TL bank (still)

Notes: Eight leg-like appendages.

INSECTA

Order Ephemeroptera

TTU Fire Pit Run.

Family Heptageniidae

Notes: Very flat heads.

Family Leptophlebiidae

Notes: Less flat heads.

Family Triconrythidae

Notes: Large gills, operculate, segment 2)

Leptohyphes (oval operculate gill)

Tricorythodes (triangular operculate gill)

Family Baetidae

Notes: Round heads, humped-shaped back.

Order Odonata

Suborder Zygoptera

JN Llano-Interstate Riffle

TTU Fire Pit Run

Notes: Narrow bodies. Three terminal gill filaments.

Family Calopterygidae

Notes: First antennae segment greatly elongated.

Hetaerina (Prementum cleft short.)

Family Coenagrionidae

Notes: 3-5 dorsal premental setae.

Suborder Anisoptera
TTU Fire Pit Run

Notes: Wide bodies.

Family Gomphidae

Notes: Flat prementum. Four segment antennae.

Order Hemiptera

Family Nepidae

Ranatra

TTU pond

Family Notonectidae

Buenoa

CP Plankton

Notes: Backswimmer.

Family Naucoridae

Ambrysus

JN North-Interstate riffle

Notes: Chelate prolegs with large femora.

Order Trichoptera

TTU Fire Pit Run

Family Hydropsychidae

Notes: Sclerotized thorax. Visible featherlike gills on abdomen.

Family Hydroptilidae

Notes: Sclerotized thorax. Very small. Microcaddisflies.

Family Leptoceridae

Notes: Antennae six times longer than its width.

Family Philopotamidae

Notes: T-shaped, membranous labium.

Family Rhyacophilidae

Notes: Segment IX with dorsal schlera.

Order Megaloptera

TTU Fire Pit Run

Family Corydalidae

Notes: Large, piercing mandibles.

Corydalus (Hellgramites.)

OSTRACODA

JC rock

Notes: Bivalved.

CLADOCERA

Ceriodaphnia

CP

Notes: Bivalve with unenclosed head. Large.

COPEPODA

Canthiopus

JN lake bottom (dredge)

Notes: Calanoid copepod.

Cyclops (adults)

CP

JC rock

NL KOA rock

Notes: Short antennae. Red eyespot.

Cyclops (nauplius larvae)

CP

JC rock

Notes: Red eyespot. Shelled with many appendages. Seed-shaped.

AMPHIPODA

Gammarus

NL KOA (scum)

Notes: First and second antennae equal lengths.

FISHES

Family Cyprinidae (Minnows and Shiners)

Cyprinella (Notropis) venustus blacktail shiner

TTU in river

Notes: Black spot on caudal fin as large as the eye. No visible body stripes.

Notropis amabilis Texas shiner

TTU in river

Notes: Black lips and large eye.

(?) *Pimephales promelas* fathead minnow

TTU in river

Notes: Did not examine intestines.

(?) *Pimephales vigilax* bullhead minnow

TTU in river

Notes: Did not examine intestines.

Family Catostomidae (Suckers)

Moxostoma congestum grey redhorse

TTU in river

Notes: Fins are orange. Sucker-like mouth.

Family Centrarchidae (Sunfish)

Lepomis cyanellus green sunfish

TTU in slough

Notes: Maxillary not extended beyond middle of eye. Length of gill rakers is six times their width.

Lepomis megalotis longear sunfish

TTU in slough and in river

Notes: Long, black-lobe opercle extension.

Micropterus salmoides large mouth bass

TTU in river

Notes: Angle of mouth is beneath the eye. Gill rakers long in relation to width.

Family Percidae (Perches and Darters)

Etheostoma grahami Rio Grande darter

TTU in river

Notes: Incomplete lateral line. Scales on opercle.

Etheostoma lepidum greenthroat darter

TTU in river under rocks

Notes: Area of soft dorsal fin is greater than area of anal fin. Body has more than ten bars. Body bars vertical.

Etheostoma spectabile orangethroat darter

TTU in river under rocks

Notes: Area of soft dorsal fin is greater than area of anal fin. Body has eight to nine body bars. Bars slant ventral-caudal. Orange throat in males of species.

Percina carbonaria Texas log perch
TTU in river

Notes: Vertical bars constricted medially.

Family Cichlidae (Cichlids)

Cichlasoma cyanoguttatum Rio Grande perch
TTU in river

Notes: Very long dorsal fin; pectoral fins immediately dorsal to pelvic fins.

Inventory of Plankton
Mason Mountain Wildlife Management Area, Mason County, Texas
June 2002

ABBREVIATIONS

AP Acid Pond

EP Ephemeral Puddle

GP Green Pond

HD House Deck

NP North Pond

SP South Pond

ALGAE

Chlorophyta

Cladophora

SP

Notes: Large and branched; in flowing waters.

Closterium

EP

GP

NP

SP

Notes: Green crescent-shaped desmid.

Cosmarium

NP

SP

Notes: Green, bilobed.

Dimorphococcus

NP

Notes: Two kidney-shaped and two spherical cells held together in a mucosal mass with tetroids.

Gleotrichia

NP

SP

Notes: Filamentous with round bulb-like end on each filament.

Kirchneriella

GP

Notes: Horseshoe-shaped cells in a mucosal mass.

Micrasterias

GP

Notes: “Snowflake.” Unicellular with irregularly serrated edges.

Mougeotia

NP

SP

Notes: Flat and twisted chloroplast; often in shaded still waters.

Pediastrum

NP

SP

Notes: Spherical with spiked edges.

Scenedesmus

GP

NP

SP

Notes: Four-cell packet with hair-like extensions at each corner.

Selenastrum

NP

Notes: Crescent-shaped cells found in colonies.

Sphaerocystis

NP

Notes: Colonial with spherical cells surrounded by gelatinous envelope.

Spirogyra
SP

Notes: Sometimes double-spiraled (cf *Genicularia*).

Staurostrum
NP
SP

Notes: Double triangle.

Chrysophyta (Diatoms)

Amphora
NP

Notes: Crescent-shaped. Clings to filaments with concave valve.

Cymbella
SP

Notes: Crescent-shaped. Halves not equal in size.

Frustulia
GP
NP
SP

Notes: Canoe-shaped.

Navicula
GP

Notes: Long and narrow, tapers at ends.

Rhopalodia
NP

Notes: Fusiform with ends recurved.

Stauroneis
NP

Notes: Knob on each tip.

Surirella
NP

Notes: Wedge-shaped with valves. Chloroplasts marginal, extending inward.

Cyanophyta

Anabaena
SP

Notes: Long chain with enclosed cysts.

Coelosphaerium
SP

Notes: Small cells in a gelatinous mass.

Merismopedia
GP

Notes: Packets of rectangular cells, regularly/evenly distributed.

Microcystis
SP

Notes: Irregular colonies of cells enclosed in gelatinous mass.

Oscillatoria (small)
GP

Notes: Several sizes and species; no gelatinous coating.

PROTOZOA

Flagellata

Ceratium
GP
SP

Notes: Spike-like dinoflagellate.

Euglena

EP

GP

NP

Notes: Long and twisted.

Trachelomonas

NP

Notes: Testate with very long flagellum. Brown in color.

Gonium

SP

Notes: Colonial flagellate with green chloroplast.

Phacus

EP

Notes: Round and slightly spiraled. Has chloroplasts and eyespot.

Volvox

NP

Notes: Spherical colony of green cells.

Sarcodina

Actinophrys

NP

Notes: Spines radiating from amoeboid body.

Amoeba

SP

Notes: With pseudopodia

Ciliata

Coleps

NP

Notes: Barrel-shaped with enlarged spicules on posterior surface.

Paramecium

NP

Notes: Slipper-shaped. Prominent oral groove.

Prorodon

NP

Notes: Spherical with pigmented inclusions.

Trichodina

NP

SP

Notes: *Disk-like with ring of cilia on oral end. Hooked teeth on base.*

Stentor

NP

SP

Notes: Moves rapidly. Very dark. Trumpet to bell shaped.

PLATYHELMINTHES

Castrella

NP

SP

Notes: Blunt head with two double eyespots. Pointed tail.

Catenula

NP

SP

Notes: Long and narrow with arrow-shaped head.

GASTROTRICHA

Chaetonotus

SP

Notes: Body completely covered with prominent hairs.

ROTIFERA

Euchlanis

NP

SP

Notes: Two short feet.

Lecane

NP

SP

Notes: Goblet-shaped with a single long foot.

Philodina

NP

Notes: Large, broad with paired ciliated disks at head. Two lobed foot.

Platyias

SP

Notes: Box-like with rostral and caudal spikes.

Rotaria

NP

SP

Notes: Inchworm-like movement. Uses foot to attach. Smaller.

Testudinella

SP

Notes: Very flat and round with foot protruding from one side.

NEMATODA

NP
SP

OSTRACODA

EP
GP
NP
SP

Notes: Bivalved.

CLADOCERA

Ceriodaphnia
SP

Notes: Bivalve with unenclosed head. Large.

Chydorus
SP

Notes: Circular in shape, long snout.

Daphnia
SP

Notes: Bivalved.

Sida
EP
SP

Notes: Dorsal ramus of antennae three-segmented.

COPEPODA

Cyclops (adults)

NP

SP

Notes: Short antennae. Red eyespot.

Cyclops (nauplius larvae)

GP

SP

Notes: Red eyespot. Shelled with many appendages. Seed-shaped.

AMPHIPODA

Gammarus

GP

NP

Notes: First and second antennae equal lengths.