

Table I –Fish Species Collected in Wagner Creek

Species	Common Name	Composite Sample ID	Station	# Individuals/ Composite	Sample Type	Trophic Level	Target Group
Mugil cephalus	Striped Mullet	CS-3-MC-01	WCR-3	15	Fillets	Bottom feeder/ detritivore	Human Health/ ecological
Mugil cephalus	Striped Mullet	CS-R4-MC-01	WCR-4	12	Fillets	Bottom feeder/ detritivore	Human Health/ ecological
Mugil cephalus	Striped Mullet	CS-R4-MC-02	WCR-4	12	Fillets	Bottom feeder/ detritivore	Human Health/ ecological
Sphoeroides testudineus	Checkered Puffer	CS-3-ST-01	WCR-3	12	Whole Body	Bottom feeder	Ecological
Sphoeroides testudineus	Checkered Puffer	CS-3-ST-02	WCR-3	12	Whole Body	Bottom feeder	Ecological
Sphoeroides testudineus	Checkered Puffer	CS-4-ST-01	WCR-4	12	Whole Body	Bottom feeder	Ecological
Diapterus plumieri	Striped Mojarra	CS-3-DP-01	WCR-3	11	Headed/ gutted/ scaled	Predator	Human Health/ ecological
Gerres cinereus	Yellowfin Mojarra	CS-4-GC-01	WCR4	9	Headed/ gutted/ scaled	Predator	Human Health/ ecological
Centropomus pectinatus	Common Snook	CS-2-CS-1	WCR-2	2	Fillets	Predator	Ecological
Chiclasoma managuense	Jaguar Guapote	CS-1-CM-01	WCR-1	2	Headed/ gutted/ scaled	Intermediate predator	Ecological

**TABLE II
WAGNER CREEK
MIAMI, FLORIDA
PCB FISH RESULTS**

Type of Fish	Sample #	Total PCBs* (ppb)	# Composited Fish
Checkered Puffer***	CS-3-ST-01	282	12
Checkered Puffer***	CS-3-ST-02	282	12
Checkered Puffer***	CS-4-ST-01	199	12
Striped Mullet	CS-R4-MC-01	90	12
Striped Mullet	CS-R4-MC-02	85	12
Striped Mullet	CS-3-MC-01	79	15
Striped Mojarra	CS-3-DP-01	155	11
Yellowfin Mojarra	CS-4-GC-01	308	9

* Totals based on 18 congeners (NOAA); PCB level of concern in fish is 70 ppb
(using Arlochlor 1254 congener as worst case scenario)

***Not likely to be consumed

ppb = parts per billion

Note: Snook and myan chchlid fish also collected, but not included in chart
as only 2 fish collected of each

**TABLE III
WAGNER CREEK
MIAMI, FLORIDA
ARSENIC FISH RESULTS**

Type of Fish	Sample #	Arsenic (ppm)*	# Composited Fish
Checkered Puffer**	CS-3-ST-01	1.9	12
Checkered Puffer**	CS-3-ST-02	1.6	12
Checkered Puffer**	CS-4-ST-01	1.4	12
Striped Mullet	CS-R4-MC-01	ND	12
Striped Mullet	CS-R4-MC-02	ND	12
Striped Mullet	CS-3-MC-01	ND	15
Striped Mojarra	CS-3-DP-01	ND	11
Yellowfin Mojarra	CS-4-GC-01	1.1	9

*ppm = parts per million; no threshold level of concern; Arsenic in fish is the non-toxic form

**Not likely to be consumed

ND = not detected or not found in the sample

**TABLE IV
WAGNER CREEK
MIAMI, FLORIDA
CADMIUM FISH RESULTS**

Type of Fish	Sample #	Cadmium (ppm)[†]	# Compositied Fish
Checkered Puffer**	CS-3-ST-01	ND	12
Checkered Puffer**	CS-3-ST-02	ND	12
Checkered Puffer**	CS-4-ST-01	ND	12
Striped Mullet	CS-R4-MC-01	ND	12
Striped Mullet	CS-R4-MC-02	ND	12
Striped Mullet	CS-3-MC-01	ND	15
Striped Mojarra	CS-3-DP-01	ND	11
Yellowfin Mojarra	CS-4-GC-01	ND	9

ppm = parts per million; threshold level of concern is 0.467 ppm

**Not likely to be consumed

ND = not detected or not found in the sample

**TABLE V
WAGNER CREEK
MIAMI, FLORIDA
LEAD FISH RESULTS**

Type of Fish	Sample #	Lead (ppm)*	# Compositied Fish
Checkered Puffer**	CS-3-ST-01	ND	12
Checkered Puffer**	CS-3-ST-02	ND	12
Checkered Puffer**	CS-4-ST-01	ND	12
Striped Mullet	CS-R4-MC-01	ND	12
Striped Mullet	CS-R4-MC-02	ND	12
Striped Mullet	CS-3-MC-01	ND	15
Striped Mojarra	CS-3-DP-01	ND	11
Yellowfin Mojarra	CS-4-GC-01	ND	9

*ppm = parts per million;no threshold level of concern

**Not likely to be consumed

ND = not detected or not found in the sample

**TABLE VI
WAGNER CREEK
MIAMI, FLORIDA
MERCURY FISH RESULTS**

Type of Fish	Sample #	Mercury (ppm)*	# Compositied Fish
Checkered Puffer**	CS-3-ST-01	ND	12
Checkered Puffer**	CS-3-ST-02	ND	12
Checkered Puffer**	CS-4-ST-01	0.26	12
Striped Mullet	CS-R4-MC-01	ND	12
Striped Mullet	CS-R4-MC-02	ND	12
Striped Mullet	CS-3-MC-01	ND	15
Striped Mojarra	CS-3-DP-01	ND	11
Yellowfin Mojarra	CS-4-GC-01	ND	9

*ppm = parts per million; threshold level of concern is 0.5 ppm

**Not likely to be consumed

ND = not detected or not found in the sample

**TABLE VII
WAGNER CREEK
MIAMI, FLORIDA
FISH DIOXIN TEQ RESULTS**

Type of Fish	Sample #	Dioxin TEQ (ppt)*	# Composited Fish
Checkered Puffer*	CS-3-ST-01	8.5	12
Checkered Puffer*	CS-3-ST-02	8.3	12
Checkered Puffer*	CS-4-ST-01	4.5	12
Striped Mullet	CS-R4-MC-01	0.73	12
Striped Mullet	CS-R4-MC-02	1.3	12
Striped Mullet	CS-3-MC-01	1.1	15
Striped Mojarra	CS-3-DP-01	8.5	11
Yellowfin Mojarra	CS-4-GC-01	4.9	9

*Threshold level of concern for dioxins is 7 parts per trillion

**Not likely to be consumed

ppt = parts per trillion

Note: Snook and myan chchlid fish were also collected, but not included in chart as only 2 fish collected of each

Photo 1— Example of No Fishing Signs Posted Along Wagner Creek



Fish Photo and Description 1 - Yellowfin Mojarra

[Gerres cinereus](#) ([Walbaum, 1792](#))

Family: [Gerreidae](#) (Mojarras)
Order: [Perciformes](#)
Class: Actinopterygii (ray-finned fishes)
FishBase name: Yellow fin mojarra
Max. size: 41.0 cm TL (male/unsexed; Ref. 7251);
 max.weight: 530 g (Ref. 40637)

picture (Gecin_u1.jpg) by [Patzner, R.](#)



Environment: reef-associated; freshwater; brackish; marine ; depth range 1 - 15 m
Climate: subtropical; 32°N - 23°S
Importance: fisheries: minor commercial; bait: occasionally
Resilience: Medium, minimum population doubling time 1.4 - 4.4 years (K=0.60; tm=1.5)
Distribution: Western Atlantic: Bermuda and Florida, USA; Bahamas, northern Gulf of Mexico, around Caribbean, including Antilles and south American coast (Ref. 26938) to Rio de Janeiro, Brazil; including northern Gulf of Mexico and the entire Caribbean Sea (Ref. 9626). Eastern Pacific: Mexico to Peru, including the Galapagos Islands.
[Gazetteer](#)
Diagnosis: [Anal spines](#): 3-3; [Anal soft rays](#): 7-7. Silvery with about seven faint pinkish bars on side on body; pelvic fins yellow (Ref. 13442).
Biology: Inhabits shallow coastal waters in open sandy and surfy areas, seagrass beds, near reefs, and mangrove channels (Ref. 7251). Enters brackish water, sometimes even fresh water (Ref. 3722). May occur in small aggregations (Ref. 3722). Feeds on benthic invertebrates such as worms, clams, crustaceans (Ref. 3722); also feeds on insects (Ref. 9303). Often seen feeding in sand patches among reefs by thrusting its mouth into the sediment and expelling sand from the gill openings (Ref. 13442). Easily approached (Ref. 9710). Marketed fresh but not highly esteemed; also processed into fishmeal (Ref. 3722).
Red List Status: Not in IUCN Red List , (Ref. 36508)
Dangerous: reports of ciguatera poisoning , [Dammann, A.E.. 1969](#)
Coordinator: [Woodland, David J.](#)
Main Ref: [Bussing, W.A.. 1995. \(Ref. 9303\)](#)

Fish Photo and Description 2 - Striped Mojarra

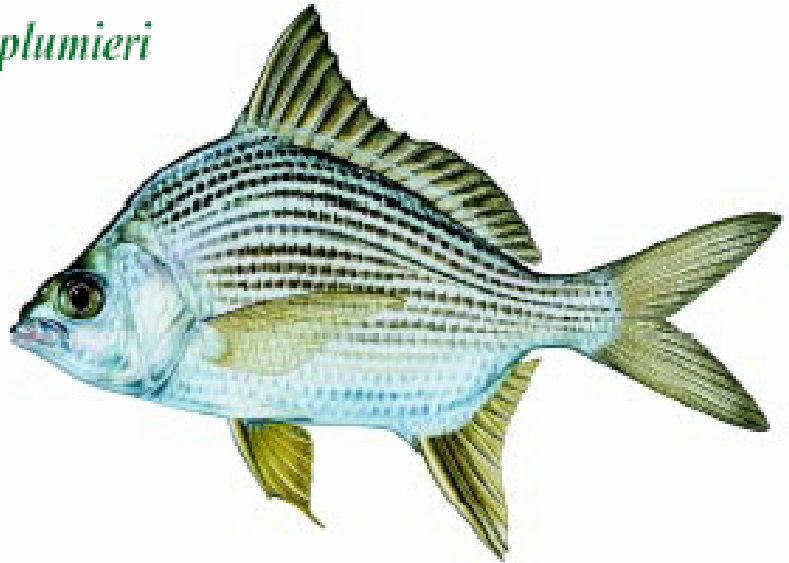
STRIPED MOJARRA - *Diapterus plumieri*

Family Gerreidae, MOJARRAS

Description: body dark olive above; tan to silvery on side, often with a metallic sheen; conspicuous blackish stripe along center of each scale row, except toward belly; all fins except pectoral fins dusky in large adults; and anal fins sometimes dark orange; pelvic spine and first 2 anal spines pale; dorsal and anal spines long and stout; 3 anal spines.

Size: to 30 cm (1ft).

Where found: brackish and coastal fresh waters (in limestone regions), grassy areas.



Fish Photo and Description 3 - Checkered Puffer



Category: Aquatic Health and Fish Kills - Puffers (*Tetraodontidae*) of Florida

Image Title: Checkered Puffer (*Sphoeroides testudineus*)

General Range: New Jersey to Brazil; abundant from Florida to Brazil.

Florida Range: abundant along the southeast coast; rare or absent along the Gulf coast.

Habitat: shallow, often estuarine, habitats; often near mangroves.

Fish Photo and Description 4 - Striped Mullet

Striped (Black) Mullet



Family Mugilidae, MULLET
Mugil cephalus

Description: color bluish-gray or green above, shading to silver on sides with distinct horizontal black barrings, white below; fins lightly scaled at base, unscaled above; blunt nose and small mouth; second dorsal fin originates behind that of the dorsal fin.

Similar Fish: white mullet, *M. curema*; fantail mullet, *M. gyrans* (both white and fantail mullet have black blotch at base of pectoral fin, which is lacking in the black mullet).

Where found: INSHORE.

Size: roe mullet common to 3 pounds but in aquariums known to reach 12 pounds or more.

***Florida Record:** n/a

Remarks: adults migrate OFFSHORE in large schools to spawn; juveniles migrate INSHORE at about 1 inch in size, moving far up tidal creeks; frequent leapers; feeds on algae, detritus and other tiny marine forms.

Fish Photo and Description 5 - Jaguar Guapote



JAGUAR GUAPOTE (*Cichlasoma managuense*)

COMMON NAME - Jaguar guapote

DESCRIPTION - Broken lateral line and black-and-white patterning make this species distinct; toothed and protrusible mouth; numerous purple to black spots or blotches on body and fins with series of black squares along their sides; males typically larger than

females; only local species that might be confused with the jaguar guapote is the black crappie, but guapote's teeth and broken lateral line instantly set it apart.

RANGE – Known mostly from coastal canal systems of southeast Florida, ranging as far north as West Palm Beach; first reported in 1992 from a photograph of two specimens caught in a farm pond, near Miami Canal. Native range is Atlantic slope of Central and South America.

HABITAT – Currently found in southeast Florida box-cut canals; tolerant of poor water quality. In native range occupy a variety of habitats including rivers and lakes with muddy, sandy, and rocky bottoms.

SPAWNING HABITS – Female lays about 4,000 adhesive eggs on hard, flat surface; both parents protective of eggs and young; most spawning occurs from March through July, with a secondary peak in October-November.

FEEDING HABITS – Medium-sized opportunistic predator; feeds primarily on small fish (including many exotic species) and aquatic insects; also consumes some snails, worms, and even an occasional lizard.

AGE AND GROWTH - Largest collected by FWC about 16 inches long and weighed 2.8 pounds, but reportedly grows larger.

SPORTING QUALITY – Limited; caught on beetle-spins and other small artificial baits, as well as, live worms and small fish; no bag or size limits.

EDIBILITY - Excellent; a mainstay in its native range.

STATE AND WORLD RECORDS – IGFA all-tackle record caught in Florida weighed 3.5 pounds and was 21.5 inches long. Not included in state records data base.

Fish Photo and Description 6 - Common Snook

Common Snook



Family Centropomidae, SNOOKS
Centropomus undecimalis

Description: distinct lateral line; high, divided dorsal fin; sloping forehead; large mouth, protruding lower jaw; grows much larger than other snooks; pelvic fin yellow.

Similar Fish: other *Centropomus*.

Where found: from central Florida south, usually INSHORE in coastal and brackish waters, along mangrove shorelines, seawalls, and bridges; also on reefs and pilings NEARSHORE.

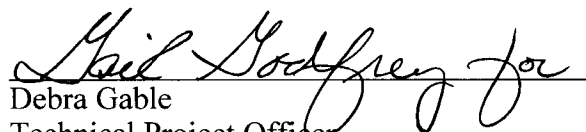
Size: most catches 5 to 8 pounds.

***Florida Record:** 44 lbs., 3 ozs.

Remarks: spawns primarily in summer; cannot tolerate water temperatures below 60 degrees F; can tolerate wholly fresh or saltwater; schools along shore and in passes during spawning season; feeds on fish and large crustaceans.

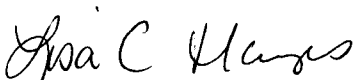
Certification

The Miami Civic Center Fish Evaluation Health Consultation was prepared by the Florida Department of Health, Bureau of Community Environmental Health, under a cooperative agreement with the Agency for Toxic Substances and Disease Registry. It is in accordance with approved methodology and procedures existing at the time the health consultation was begun.



Debra Gable
Technical Project Officer,
SPS, SSAB, DHAC

The Division of Health Assessment and Consultation, ATSDR, has reviewed this health consultation, and concurs with its findings.



for Roberta Erlwein
Team Leader,
CAT, SSAB, DHAC, ATSDR