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Fisheries Component

BIOECOLOGY OF 296 FISH SPECIES OF THE TONLE SAP GREAT LAKE (CAMBODIA).

Prepared by

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WARNING

This document is an advanced draft of a book to be published in the second half of 2007, after the completion of the Built Structures project. In this draft the full accuracy is not guaranteed by the authors yet. Subsequently this document should not be disseminated, cited as a reference nor used for fish species identification.

No picture
IDENTIFICATION - Family: **Akysidae**
IDENTIFICATION - Species name: ***Akysis filifer***
IDENTIFICATION - Author: Ng and Rainboth, 2005
BIOLOGY - Max. total length (cm): 7
BIOLOGY - Max. standard length (cm): 5
BIOLOGY - Length at maturity (cm): 3.8
ECOLOGY - Tonle Sap distribution: Ng and Rainboth, 2005.
ECOLOGY - Status: Native
ECOLOGY - Habitat: Demersal
ECOLOGY - Resilience: No information


Pseudambassis baculis (www.familie-hauffe.de)

IDENTIFICATION - Family: **Ambassidae**
IDENTIFICATION - Species name: ***Pseudambassis baculis***
IDENTIFICATION - Author: Hamilton, 1822
IDENTIFICATION - Name in English: Himalayan glassy perchlet
BIOLOGY - Max. total length (cm): 7
BIOLOGY - Max. standard length (cm): 5
BIOLOGY - Length at maturity (cm): 3.8
ECOLOGY - Tonle Sap distribution: Kottelat, 1985
ECOLOGY - Status: Native
ECOLOGY - Habitat: Demersal
ECOLOGY - Resilience: High


Parambassis apogonoides (Rainboth W.)

IDENTIFICATION - Family: **Ambassidae** (Asian glassfishes)
IDENTIFICATION - Species name: ***Parambassis apogonoides***
IDENTIFICATION - Author: Bleeker, 1851
IDENTIFICATION - Name in Khmer: ត្រីកញ្ឆាស់ធំ
IDENTIFICATION - Name in Khmer (roman): Kanhchras thom
IDENTIFICATION - Name in English: Iridescent glassy perchlet
BIOLOGY - Max. total length (cm): 13
BIOLOGY - Max. standard length (cm): 10
BIOLOGY - Length at maturity (cm): 7
BIOLOGY - Food: zoobenthos mainly animals
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Spawns in streams / inlets (% respondents): 100
REPRODUCTION - Date of spawning (% respondents): Jul 2.4%, Aug-Sep 2.4% Jul-Aug 4.9%, Jun-Jul 58.5%, May-Jul 2.4%, May-Jun 29.3%
REPRODUCTION - Nurses in floodplain (% respondents): 100
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Roberts, 1994

ECOLOGY - All MFD information: Migration: 0. Spawning: It is a mouth brooder (Roberts 1989) Distribution: Found in the Lower Mekong (Rainboth 1996). Feeding: Diet consists of aquatic invertebrates (Rainboth 1996)
ECOLOGY - Feeds in floodplains (% respondents): 100
ECOLOGY - Status: Native
ECOLOGY - Habitat: Demersal
ECOLOGY - Resilience: High
GUILD - Grey fish guild (% respondents): 100

Parambassis ranga (Hossain, M.A.R.)

IDENTIFICATION - Family: **Ambassidae** (Asiatic glassfishes)
IDENTIFICATION - Species name: ***Parambassis ranga***
IDENTIFICATION - Author: Hamilton, 1822
IDENTIFICATION - Name in English: Indian glassy fish
BIOLOGY - Max. total length (cm): 8
BIOLOGY - Length at maturity (cm): 5.8
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: CNMC 1998, Scott and Crossman 1973
ECOLOGY - Migration type: No information on migration type
ECOLOGY - Status: Native
ECOLOGY - Habitat: Demersal
ECOLOGY - Resilience: High

Parambassis siamensis (Baird, I.G.)

IDENTIFICATION - Family: **Ambassidae** (Asiatic glassfishes)
IDENTIFICATION - Species name: ***Parambassis siamensis***
IDENTIFICATION - Author: Fowler, 1937
BIOLOGY - Max. total length (cm): 8
BIOLOGY - Max. standard length (cm): 6
BIOLOGY - Length at maturity (cm): 4.5
BIOLOGY - Notes: A common species proliferating in impoundments (Rainboth 1996).
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Motomura *et al.* 2002
ECOLOGY - All MFD information: Migration: 0. Spawning: 0 . Distribution: Found in the Middle and Lower Mekong Basin (Roberts 1994); mainly in tributaries (Pantulu 1986); Larvae/juveniles have been recorded from the drift in the Mekong River in An Giang (Nguyen *et al.* 2002). Feeding: Feeds on invertebrates (Rainboth 1996).
ECOLOGY - Status: Native
ECOLOGY - Habitat: Demersal
ECOLOGY - Resilience: High

Parambassis wolffii (Rainboth W.)

IDENTIFICATION - Family: **Ambassidae** (Asiatic glassfishes)
IDENTIFICATION - Species name: ***Parambassis wolffii***
IDENTIFICATION - Author: Bleeker, 1851
IDENTIFICATION - Name in Khmer: ត្រីកន្ត្រែងប្រែង
IDENTIFICATION - Name in Khmer (roman): Kantrorng preng
IDENTIFICATION - Name in English: Duskyfin glassy perchlet
BIOLOGY - Max. total length (cm): 25
BIOLOGY - Max. standard length (cm): 20
BIOLOGY - Length at maturity (cm): 12.9
BIOLOGY - Food: zoobenthos mainly animals
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Spawns in streams / inlets (% respondents): 97.5
REPRODUCTION - Spawns in TS permanent lake (% respondents): 2.5
REPRODUCTION - Date of spawning (% respondents): Jun 2.6%, Jul-Oct 2.6% Jun-Jul 66.7% Mar-Apr 2.6%, May-Jul 2.6%, May-Jun 23.1%
REPRODUCTION - Nurses in floodplain (% respondents): 100
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Thuok and Sina, 1997
ECOLOGY - All MFD information: Migration: 0. Spawning: 0 . Distribution: 0. Feeding: Feeds on insects, crustaceans, and small fish (Rainboth 1996).
ECOLOGY - Feeds in floodplains (% respondents): 100
ECOLOGY - Status: Native
ECOLOGY - Habitat: Demersal
ECOLOGY - Resilience: High
GUILD - Grey fish guild (% respondents): 100

Anabas testudineus (Chavalit Vidthayanon)

IDENTIFICATION - Family: **Anabantidae** (Climbing gouramies)
IDENTIFICATION - Species name: ***Anabas testudineus***
IDENTIFICATION - Author: Bloch, 1792
IDENTIFICATION - Name in Khmer: ត្រីក្រាញ់
IDENTIFICATION - Name in Khmer (roman): Kranh
IDENTIFICATION - Name in English: Climbing perch
BIOLOGY - Max. total length (cm): 25
BIOLOGY - Length at maturity (cm): 15.7
BIOLOGY - Food: Nekton mainly animals
BIOLOGY - Notes: possesses an accessory air-breathing organ (Allen 1991), which makes it capable of breathing atmospheric air, and to survive away from water for days or weeks when it searches for a new habitat (Smith 1945, Rahman 1989); It is known to emerge from the water at night when it seeks new habitats by climbing over dry land using flared gill covers and flexing the caudal peduncle (Rainboth 1996); It remains buried under the mud during dry season (Rahman 1989), and can tolerate extremely unfavourable water conditions and is associated mainly with turbid, stagnant waters (Pethiyagoda 1991).
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information

ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Thuok and Sina, 1997
ECOLOGY - All MFD information: Migration: A black fish species (Bardach 1959); which does not migrate longitudinally within the Mekong, but it undertakes lateral migrations from the main river, or any other permanent water body, to flooded areas during the flood season and returns to the permanent water body at the beginning of the dry season. In Laos and Thailand, it is reported to return to the main river during receding water and spend the dry season in pools associated with sub-merged woods and shrubs (Poulsen and Valbo-Jørgensen 2000). Spawning: Eggs were reported to occur from March to October with a peak from April to June. (Poulsen and Valbo-Jørgensen 2000); It spawns from March/April until July (Yen et al. 1979, Bardach 1959, Poulsen and Valbo-Jørgensen 2000) or August (Duangsawasdi et al. 1988) in for example rain fed and irrigated paddy (Poulsen and Valbo-Jørgensen 2000).
It is sexually mature when it is ten months old, weighs 12-16 gr. and has a body length of 7-8 cm (Khanh et al. 1999) or 10 cm (Duangsawasdi et al. 1988); The mature female has 780,000 ± 140,000 eggs/kg body weight with a diameter of 0.75 mm (Tuan 1999); Fish of 10-19 cm body length and about 38.0-126.2 g body weight have ca 10,200-52,000 eggs with an average number of egg of 26,000 (Duangsawasdi et al. 1988); Average egg diameter is 0.63 mm (Duangsawasdi *et al.* 1988); The eggs are floating and hatch in 18 hrs at a temperature of 28-30ºC; The newly hatched larvae are 1.96 mm long (Tuan 1999). . Distribution: Occurs in the mainstream from Chiang Saen to the Mekong Delta (Poulsen and Valbo-Jørgensen 2000); and found in tributaries of the Lower Mekong (Pantulu 1986); Larvae/juveniles have been recorded from the drift in both the Mekong and Bassac Rivers in An Giang (Nguyen et al. 2002). Feeding: Feeds on macrophytic vegetation (Pethiyagoda 1991.), rice and grass seeds (Yen et al. 1979), shrimps (Pethiyagoda 1991, NIFI 1993), prawns (Yen et al. 1979), fish fry (Pethiyagoda 1991) fish (Rainboth 1996, Yen et al. 1979, NIFI 1993), zooplankton, aquatic insects, detritus (Krachangdara 1994), and plant roots (NIFI 1993).
ECOLOGY - Migration type: Displays longitudinal as well as lateral migrations.
ECOLOGY - Status: Native
ECOLOGY - Habitat: Demersal
ECOLOGY - Resilience: High

Arius intermedius (Chavalit Vidthayanon)

IDENTIFICATION - Family: **Ariidae**
IDENTIFICATION - Species name: ***Arius intermedius***
IDENTIFICATION - Author: Venciguerra, 1881
IDENTIFICATION - Remark: Formerly Hemipimelodus intermedius
BIOLOGY - Max. total length (cm): 15
ECOLOGY - Tonle Sap distribution: possible
ECOLOGY - Status: No information
ECOLOGY - Habitat: Demersal
ECOLOGY - Resilience: Medium

Arius sona (Chavalit Vidthayanon)

IDENTIFICATION - Family: **Ariidae**
IDENTIFICATION - Species name: ***Arius sona***
IDENTIFICATION - Author: Hamilton, 1822

IDENTIFICATION - Name in Khmer: ត្រីកុក
IDENTIFICATION - Name in Khmer (roman): Kaock
IDENTIFICATION - Name in English: Sona sea catfish
BIOLOGY - Max. total length (cm): 92
BIOLOGY - Length at maturity (cm): 49.7
BIOLOGY - Food: Mainly animals
REPRODUCTION - Spawns in rivers (% respondents): 2.5
REPRODUCTION - Spawns in streams / inlets (% respondents): 92.5
REPRODUCTION - Spawns in TS permanent lake (% respondents): 5
REPRODUCTION - Date of spawning (% respondents): Apr-May 2.9% Feb-Mar 8.6% Jun-Jul 45.7% Mar-Apr 11.4%, May-Jul 2.9%, May-Jun 28.6%
REPRODUCTION - Nurses in floodplain (% respondents): 100
ECOLOGY - Tonle Sap distribution: Rainboth, 1996
ECOLOGY - Feeds in floodplains (% respondents): 100
ECOLOGY - Status: Questionable
ECOLOGY - Habitat: Demersal
ECOLOGY - Resilience: Low
GUILD - Grey fish guild (% respondents): 100


Arius thalassinus (Chavalit Vidthayanon)

IDENTIFICATION - Family: **Ariidae**
IDENTIFICATION - Species name: ***Arius thalassinus***
IDENTIFICATION - Author: Rüppell, 1837
IDENTIFICATION - Remark: Formerly Netuma thalassinus
IDENTIFICATION - Name in Khmer (roman): Kaock
IDENTIFICATION - Name in English: Giant seacatfish
BIOLOGY - Max. total length (cm): 185
BIOLOGY - Length at maturity (cm): 92.2
BIOLOGY - Food: plant/zoobenthos/nekton
REPRODUCTION - Spawns in rivers (% respondents): 2.5
REPRODUCTION - Spawns in streams / inlets (% respondents): 92.5
REPRODUCTION - Spawns in TS permanent lake (% respondents): 5
REPRODUCTION - Date of spawning (% respondents): Apr-May 2.9% Feb-Mar 8.6% Jun-Jul 45.7% Mar-Apr 11.4%, May-Jul 2.9%, May-Jun 28.6%
REPRODUCTION - Nurses in floodplain (% respondents): 100
ECOLOGY - Tonle Sap distribution: MFD occurence map
ECOLOGY - Feeds in floodplains (% respondents): 100
ECOLOGY - Status: Questionable
ECOLOGY - Habitat: Demersal
ECOLOGY - Resilience: Medium
GUILD - Grey fish guild (% respondents): 100


Arius maculatus (Chavalit Vidthayanon)

IDENTIFICATION - Family: **Ariidae** (Sea catfishes)
IDENTIFICATION - Species name: ***Arius maculatus***
IDENTIFICATION - Author: Thunberg, 1792
IDENTIFICATION - Name in Khmer: ត្រីកុក

IDENTIFICATION - Name in Khmer (roman): Kaock
IDENTIFICATION - Name in English: Spotted catfish
BIOLOGY - Max. total length (cm): 80
BIOLOGY - Length at maturity (cm): 44
BIOLOGY - Food: Nekton mainly animals
BIOLOGY - Notes: Occasionally forms schools (Jayaram 1984).
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Spawns in rivers (% respondents): 2.5
REPRODUCTION - Spawns in streams / inlets (% respondents): 92.5
REPRODUCTION - Spawns in TS permanent lake (% respondents): 5
REPRODUCTION - Date of spawning (% respondents): Apr-May 2.9% Feb-Mar 8.6% Jun-Jul 45.7% Mar-Apr 11.4%, May-Jul 2.9%, May-Jun 28.6%
REPRODUCTION - Reproductive guild: Bearers: external brooders
REPRODUCTION - Nurses in floodplain (% respondents): 100
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: MFD occurence map
ECOLOGY - All MFD information: Migration: 0. Spawning: 0 . Distribution: Found in the Mekong Delta (Rainboth 1996). Feeding: Feeds on invertebrates and small fishes (Jayaram 1984, Rainboth 1996).
ECOLOGY - Migration type: Only seems to display Longitudinal migrations.
ECOLOGY - Feeds in floodplains (% respondents): 100
ECOLOGY - Status: Native
ECOLOGY - Habitat: Demersal
ECOLOGY - Resilience: Medium
GUILD - Grey fish guild (% respondents): 100

Arius stormii (Rainboth W.)

IDENTIFICATION - Family: **Ariidae** (Sea catfishes)
IDENTIFICATION - Species name: ***Arius stormii***
IDENTIFICATION - Author: Bleeker, 1858
IDENTIFICATION - Remark: Hemiarius stormii according to MFB
IDENTIFICATION - Name in Khmer: ត្រីកួក
IDENTIFICATION - Name in Khmer (roman): Kaock
IDENTIFICATION - Name in English: Armoured sea catfish
BIOLOGY - Max. total length (cm): 50
BIOLOGY - Length at maturity (cm): 29
BIOLOGY - Food: zoobenthos mainly animals
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Spawns in rivers (% respondents): 2.5
REPRODUCTION - Spawns in streams / inlets (% respondents): 92.5
REPRODUCTION - Spawns in TS permanent lake (% respondents): 5
REPRODUCTION - Date of spawning (% respondents): Apr-May 2.9% Feb-Mar 8.6% Jun-Jul 45.7% Mar-Apr 11.4%, May-Jul 2.9%, May-Jun 28.6%
REPRODUCTION - Nurses in floodplain (% respondents): 100
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Lim et al. 1999
ECOLOGY - All MFD information: Migration: 0. Spawning: Individuals between 250 g to 540 g were found to have 18-30 large eggs in February and March. This species may spawn two or more times a year, including at least once in the dry season and once in the rainy season (Baird and Phylavanh 1999). . Distribution: Found in the lower course of the Mekong as far upstream as Khone Falls (Rainboth 1996); where it is common (Baird and Phylavanh 1999); The species is not

known above the Khone Falls (Roberts 1993). Feeding: Feeds on fish (Rainboth 1996, Baird and Phylavanh 1999), crabs, shrimps, filamentous algae, and bark (Baird and Phylavanh 1999).
ECOLOGY - Feeds in floodplains (% respondents): 100
ECOLOGY - Status: Native
ECOLOGY - Habitat: Demersal
ECOLOGY - Resilience: Medium
GUILD - Grey fish guild (% respondents): 100

Arius truncatus *(Chavalit Vidthayanon)*

IDENTIFICATION - Family: **Ariidae** (Sea catfishes)
IDENTIFICATION - Species name: ***Arius truncatus***
IDENTIFICATION - Author: Valenciennes, 1840
IDENTIFICATION - Name in Khmer: ត្រីកុក
IDENTIFICATION - Name in Khmer (roman): Kaock
BIOLOGY - Max. standard length (cm): 42
BIOLOGY - Length at maturity (cm): 24.9
BIOLOGY - Food: Mainly animals
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Spawns in rivers (% respondents): 2.5
REPRODUCTION - Spawns in streams / inlets (% respondents): 92.5
REPRODUCTION - Spawns in TS permanent lake (% respondents): 5
REPRODUCTION - Date of spawning (% respondents): Apr-May 2.9% Feb-Mar 8.6% Jun-Jul 45.7% Mar-Apr 11.4%, May-Jul 2.9%, May-Jun 28.6%
REPRODUCTION - Nurses in floodplain (% respondents): 100
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: MFD occurence map
ECOLOGY - All MFD information: Migration: 0. Spawning: 0 . Distribution: Found in the Lower Mekong, where the species can be quite abundant at times (Rainboth 1996). Feeding: Feeds on fishes and crustaceans (Rainboth 1996).
ECOLOGY - Feeds in floodplains (% respondents): 100
ECOLOGY - Status: Native
ECOLOGY - Habitat: Demersal
ECOLOGY - Resilience: Low
GUILD - Grey fish guild (% respondents): 100

Hemipimelodus borneensis (Rainboth W.)

IDENTIFICATION - Family: **Ariidae** (Sea catfishes)
IDENTIFICATION - Species name: ***Hemipimelodus borneensis***
IDENTIFICATION - Author: Bleeker, 1851
IDENTIFICATION - Name in Khmer: ត្រីកុក
IDENTIFICATION - Name in Khmer (roman): Kaork
BIOLOGY - Max. total length (cm): 37
BIOLOGY - Max. standard length (cm): 30
BIOLOGY - Length at maturity (cm): 18.5
BIOLOGY - Food: plants/detritus+animals

ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Kottelat, 1985
ECOLOGY - All MFD information: Migration: It is not believed to undertake long distance migrations (Rainboth 1996). Spawning: 0 . Distribution: Ascends the Mekong as far as Khone Falls (Rainboth 1996); but has not been found above the Falls (Roberts 1993); Larvae/juveniles have been recorded from the drift in both the Mekong and Bassac Rivers in An Giang (Nguyen et al. 2002). Feeding: Diet consists of bivalve molluscs, crustaceans (Rainboth 1996, Bardach 1959), aquatic macrophytes (Rainboth 1996), and plant detritus (Rainboth 1996, Baird and Phylavanh 1999); insects (Baird and Phylavanh 1999) mainly aquatic insect larvae but also some flying insects (Bardach 1959),
fish, algae (Baird and Phylavanh 1999, Bardach 1959), roots, bark, small leaves and other plant parts. (Baird and Phylavanh 1999), and to a lesser extent planktonic crustaceans. (Bardach 1959).
This species seem to be carnivorous in the dry season, and an algae, plant matter and insect eater during high-water season. This may be an adaptation based on the fact that many of the small fish found in the Mekong mainstream in the dry season either migrate into streams or other small to medium sized tributaries close by during the rainy season (Baird and Phylavanh 1999).
ECOLOGY - Status: Native
ECOLOGY - Habitat: Demersal
ECOLOGY - Resilience: Medium

Hemipimelodus daugueti (Chavalit Vidthayanon)

IDENTIFICATION - Family: **Ariidae** (Sea catfishes)
IDENTIFICATION - Species name: ***Hemipimelodus daugueti***
IDENTIFICATION - Author: Chevey, 1932
BIOLOGY - Max. total length (cm): 26
BIOLOGY - Length at maturity (cm): 16.3
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Kottelat, 1985
ECOLOGY - All MFD information: Migration: 0. Spawning: 0 . Distribution: Occurs in the large rivers of Cambodia (Rainboth 1996). Feeding: 0
ECOLOGY - Status: Native
ECOLOGY - Habitat: Demersalf
ECOLOGY - Resilience: Medium

Bagrichthys macracanthus (IFReDI Collection)

IDENTIFICATION - Family: **Bagridae** (Bagrid catfishes)
IDENTIFICATION - Species name: ***Bagrichthys macracanthus***
IDENTIFICATION - Author: Bleeker, 1854
IDENTIFICATION - Name in Khmer: ត្រីចេកទុំ
IDENTIFICATION - Name in Khmer (roman): Cheik tum
IDENTIFICATION - Name in English: Black lancer catfish
BIOLOGY - Max. total length (cm): 31
BIOLOGY - Max. standard length (cm): 25
BIOLOGY - Length at maturity (cm): 15.7

BIOLOGY - Food: plants/detritus+animals
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Kottelat, 1985
ECOLOGY - All MFD information: Migration: A black fish species (Bardach 1959). Spawning: Spawns in the beginning of the rainy season and utilizes the flooded riparian forests. Juveniles begin to appear in August (Rainboth 1996); However females with eggs have also been found in August (Baird and Phylavanh 1999). . Distribution: Occurs in the Mekong Basin in Laos where it has been collected from Tha Ngon (DoF 1987), Hatsalao (DoF 1987) and Ban Hat (Ferraris 2001); and just below Khone Falls (Roberts 1993); In Thailand at Ubon Ratchathani, and in Roi Et Province (ICLARM 2001); In Cambodia in the Tonle Sap River and at Stung Treng (Kottelat 1985). Feeding: It feeds on crustaceans, other small benthic animals (Taki, 1978), insects, earthworms, roots, and vegetal matter, may consume fruits and vegetation from flooded forests (Baird and Phylavanh 1999); It also scavenges (Roberts 1989).
ECOLOGY - Migration type: Displays longitudinal as well as lateral migrations.
ECOLOGY - Status: Native
ECOLOGY - Habitat: Demersal
ECOLOGY - Resilience: High

Bagrichthys macropterus (Baird, I.G.)

IDENTIFICATION - Family: **Bagridae** (Bagrid catfishes)
IDENTIFICATION - Species name: ***Bagrichthys macropterus***
IDENTIFICATION - Author: Bleeker, 1853
IDENTIFICATION - Name in English: False black lancer
BIOLOGY - Max. total length (cm): 30
BIOLOGY - Length at maturity (cm): 18.5
BIOLOGY - Food: zoobenthos mainly animals
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Kottelat, 1985
ECOLOGY - Migration type: No information on migration type
ECOLOGY - Status: Native
ECOLOGY - Habitat: Demersal
ECOLOGY - Resilience: High

Bagrichthys obscurus (Chavalit Vidthayanon)

IDENTIFICATION - Family: **Bagridae** (Bagrid catfishes)
IDENTIFICATION - Species name: ***Bagrichthys obscurus***
IDENTIFICATION - Author: Ng, 1999
IDENTIFICATION - Name in Khmer: ត្រីចេកទុំ
IDENTIFICATION - Name in Khmer (roman): Cheik tum
BIOLOGY - Max. standard length (cm): 24.9

BIOLOGY - Length at maturity (cm): 15.7
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: MFD occurence map
ECOLOGY - All MFD information: Migration: A black fish species (Bardach 1959). Spawning: Spawns in the beginning of the rainy season and utilizes flooded forests along the river edge. Juveniles appear in August (Rainboth 1996). . Distribution: Occurs at Ubon Ratchathani, and in the Mekong just below Khone Falls, and in the Basaac River adjacent to Dong Phu in Phong Dinh Province (Ng 1999). Feeding: Feeds on small fishes, benthic invertebrates (Rainboth 1996), and large amounts of plant detritus (Rainboth 1996, Baird and Phylavanh 1999).
ECOLOGY - Status: Native
ECOLOGY - Habitat: No information
ECOLOGY - Resilience: Medium

Hemibagrus filamentus (Chavalit Vidthayanon)

IDENTIFICATION - Family: **Bagridae** (Bagrid catfishes)
IDENTIFICATION - Species name: ***Hemibagrus filamentus***
IDENTIFICATION - Author: Fang and Chaux, 1949
IDENTIFICATION - Name in Khmer: ត្រីតាឆែល
IDENTIFICATION - Name in Khmer (roman): Tanel
BIOLOGY - Max. total length (cm): 50
BIOLOGY - Length at maturity (cm): 29
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: Water level variation is a migration trigger
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: MFD occurence map
ECOLOGY - All MFD information: Migration: Undertakes shorter local migrations within the Mekong mainstream at the onset of the flood season and, as the water level rises (Poulsen and Valbo-Jørgensen 2000, Singanouvong et al. 1996), it continues into small seasonal Mekong tributaries (Singanouvong et al. 1996, Poulsen and Valbo-Jørgensen 2000) and flooded forests (Rainboth 1996) in large numbers during the early wet season. The purpose of the migration is reproduction, and it has moderate to heavy fat deposits around the viscera during the time of migration (Singanouvong et al. 1996). The fish returns to the main river channel when water levels start to recede at the end of the flood season, and it spends the dry season here (Poulsen and Valbo-Jørgensen 2000). Spawning: Carries eggs year round, but most commonly from April to July; Spawning occurs on the floodplain (Poulsen and Valbo-Jørgensen 2000) in late May-July/August (Singanouvong et al. 1996).Distribution: Occurs throughout the Mekong mainstream, from the Mekong Delta to Chiang Saen. Many fishers report that the species is very common and occurs all year round (Poulsen and Valbo-Jørgensen 2000); is common in the Great Lake (Rainboth 1996); Larvae/juveniles have been recorded from the drift in both the Mekong and Bassac Rivers in An Giang (Nguyen et al. 2002). Feeding: Feeds on fishes and crustaceans (Rainboth 1996) including crabs, shrimps (Singanouvong et al. 1996), and planktonic crustaceans; It also eats aquatic insect larvae, mud, and plant fragments (Bardach 1959).
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: Medium

Hemibagrus nemurus (Warren, T.)

IDENTIFICATION - Family: **Bagridae** (Bagrid catfishes)
IDENTIFICATION - Species name: ***Hemibagrus nemurus***
IDENTIFICATION - Author: Valenciennes, 1840
IDENTIFICATION - Name in English: Asian redtail catfish
BIOLOGY - Max. total length (cm): 80
BIOLOGY - Max. standard length (cm): 65
BIOLOGY - Length at maturity (cm): 36.6
BIOLOGY - Food: zoobenthos mainly animals
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Thuok, N and L. Sina, 1997
ECOLOGY - Migration type: No information on migration type
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: Medium

Hemibagrus spilopterus (Rainboth W.)

IDENTIFICATION - Family: **Bagridae** (Bagrid catfishes)
IDENTIFICATION - Species name: ***Hemibagrus spilopterus***
IDENTIFICATION - Author: Ng and Rainboth, 1999
IDENTIFICATION - Name in Khmer: ត្រីឆ្លាំង
IDENTIFICATION - Name in Khmer (roman): Chhlang
BIOLOGY - Max. standard length (cm): 30.9
BIOLOGY - Length at maturity (cm): 19
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Spawns in streams / inlets (% respondents): 100
REPRODUCTION - Date of spawning (% respondents): Jun 7.7%, Jun-Jul 59%, May-Jul 2.6%, May-Jun 30.8%
REPRODUCTION - Nurses in floodplain (% respondents): 100
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: MFD occurence map
ECOLOGY - All MFD information: Migration: A black fish species (Bardach 1959), which moves into flooded forests to spawn and the young are usually first seen in August. In the Tonle Sap, maximum numbers are found as it returns to rivers in November and December (Rainboth 1996).. Spawning: Spawns in March, April, September and October, and maybe all the year in Cambodia (Bardach 1959). . Distribution: Found basin wide in tributaries (Pantulu 1986); and mainstream of the Lower Mekong Basin from upland areas down to the estuary (Rainboth 1996); also recorded from the Xe Bangfai Basin (Kottelat 1998). Feeding: Its diet includes terrestrial insects, aquatic insect larvae, shrimps (Rainboth 1996), and other crustaceans, as well as fishes (Rainboth 1996, Bardach 1959); but it also eats mud (Bardach 1959).
ECOLOGY - Migration type: Displays longitudinal as well as lateral migrations.
ECOLOGY - Feeds in floodplains (% respondents): 100
ECOLOGY - Status: No information
ECOLOGY - Habitat: Demersal

ECOLOGY - Resilience: Medium
GUILD - Grey fish guild (% respondents): 100

Hemibagrus wyckii (Baird, I.G.)

IDENTIFICATION - Family: **Bagridae** (Bagrid catfishes)
IDENTIFICATION - Species name: ***Hemibagrus wyckii***
IDENTIFICATION - Author: Bleeker, 1858
IDENTIFICATION - Name in Khmer: ត្រីខ្មៅ
IDENTIFICATION - Name in Khmer (roman): Chhlang khmao
BIOLOGY - Max. total length (cm): 87
BIOLOGY - Max. standard length (cm): 71
BIOLOGY - Length at maturity (cm): 39.6
BIOLOGY - Food: zoobenthos mainly animals
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Spawns in streams / inlets (% respondents): 100
REPRODUCTION - Date of spawning (% respondents): Jun 7.7%, Jun-Jul 59%, May-Jul 2.6%, May-Jun 30.8%
REPRODUCTION - Nurses in floodplain (% respondents): 100
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Lim et al. 1999
ECOLOGY - All MFD information: Migration: Migrates for reproduction in the wet season (Singanouvong et al. 1996). Spawning: 0 . Distribution: Found basin wide in the mainstream of the Mekong (Pantulu 1986). Feeding: Feeds on large crustaceans (Bardach 1959) including prawns (Rainboth 1996, Lim et al. 1999, Baird and Phylavanh 1999) crabs (Baird and Phylavanh 1999); fishes (Rainboth 1996, Lim et al. 1999, Baird and Phylavanh 1999, Bardach 1959), insects (Rainboth 1996, Lim et al. 1999), aquatic insect larvae (Bardach 1959), earthworms (Baird and Phylavanh 1999), and to some extent mud and planktonic crustaceans (Bardach 1959).
ECOLOGY - Migration type: Displays longitudinal as well as lateral migrations.
ECOLOGY - Feeds in floodplains (% respondents): 100
ECOLOGY - Status: Native
ECOLOGY - Habitat: Demersal
ECOLOGY - Resilience: Medium
GUILD - Grey fish guild (% respondents): 100

Hemibagrus wyckioides (Warren, T.)

IDENTIFICATION - Family: **Bagridae** (Bagrid catfishes)
IDENTIFICATION - Species name: ***Hemibagrus wyckioides***
IDENTIFICATION - Author: Fang and Chaux, 1949
IDENTIFICATION - Name in Khmer: ត្រីខ្យា
IDENTIFICATION - Name in Khmer (roman): Khya
BIOLOGY - Max. total length (cm): 130
BIOLOGY - Length at maturity (cm): 67.5
BIOLOGY - Food: zoobenthos mainly animals
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information

REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Lim et al. 1999
ECOLOGY - All MFD information: Migration: Although Bardach (Bardach 1959) indicated that it is a black fish species it has been found to migrate upstream from July-September (Singanouvong et al. 1996), it also enters inundated areas (Baird and Phylavanh 1999); migratory activity is mainly concentrated in early to the mid June and again towards the end of the month. The purpose of the migration seems to be dispersal and feeding, although heavy fat deposits were found around the viscera during the migration period (Singanouvong et al. 1996).. Spawning: 0 . Distribution: Occurs in large upland rivers and sometimes in the Tonle Sap and floodplain rivers of the Lower Mekong (Rainboth 1996); Recorded from the Nam Theun basin (Kottelat 1998). Feeding: Feeds on shrimp, fish (Singanouvong et al. 1996, Lim et al. 1999, Baird and Phylavanh 1999) crabs (Singanouvong et al. 1996, Baird and Phylavanh 1999), insects (Lim et al. 1999, Baird and Phylavanh 1999) earthworms, and snails (Baird and Phylavanh 1999).
ECOLOGY - Migration type: Displays longitudinal as well as lateral migrations.
ECOLOGY - Status: Native
ECOLOGY - Habitat: Demersal
ECOLOGY - Resilience: Low

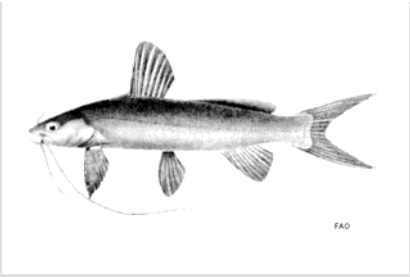
Mystus albolineatus (Baird, I.G.)

IDENTIFICATION - Family: **Bagridae** (Bagrid catfishes)
IDENTIFICATION - Species name: ***Mystus albolineatus***
IDENTIFICATION - Author: Roberts, 1994
IDENTIFICATION - Name in Khmer: ត្រីកញ្ឆុះចាយ
IDENTIFICATION - Name in Khmer (roman): Kanhchos bai
BIOLOGY - Max. total length (cm): 43
BIOLOGY - Max. standard length (cm): 35
BIOLOGY - Length at maturity (cm): 21.2
BIOLOGY - Food: zooplankton mainly animals
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Spawns in streams / inlets (% respondents): 100
REPRODUCTION - Date of spawning (% respondents): May 2.6% Jul 2.6%, Jul-Aug 7.7%, Jun-Jul 56.4% May-Jun 28.2%, May-Sep 2.6%
REPRODUCTION - Nurses in floodplain (% respondents): 100
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Lim et al. 1999
ECOLOGY - All MFD information: Migration: 0. Spawning: Spawns just prior to, or at the onset of the rainy season and its young are first seen in July and August (Rainboth 1996) . Distribution: 0. Feeding: Feeds on insect larvae, including chironomids, as well as zooplankton and fishes (Rainboth 1996).
ECOLOGY - Feeds in floodplains (% respondents): 100
ECOLOGY - Status: Native
ECOLOGY - Habitat: Demersal
ECOLOGY - Resilience: Medium
GUILD - Grey fish guild (% respondents): 100

Mystus bocourti (Baird, I.G.)

IDENTIFICATION - Family: **Bagridae** (Bagrid catfishes)
IDENTIFICATION - Species name: ***Mystus bocourti***

IDENTIFICATION - Author: Bleeker, 1864
IDENTIFICATION - Remark: Formerly Heterobagrus bocourti
BIOLOGY - Max. total length (cm): 30
BIOLOGY - Max. standard length (cm): 24
BIOLOGY - Length at maturity (cm): 15.2
BIOLOGY - Food: Mainly animals
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: MFD occurence map
ECOLOGY - All MFD information: Migration: A black fish species (Bardach 1959). Spawning: 0 . Distribution: Common in the Tonle Sap near the Great Lake (Rainboth 1996); Larvae/juveniles have been recorded from the drift in the Mekong River in An Giang (Nguyen et al. 2002). Feeding: Feeds on crustaceans and benthic invertebrates (Rainboth 1996)
ECOLOGY - Migration type: Displays longitudinal as well as lateral migrations.
ECOLOGY - Status: Native
ECOLOGY - Habitat: Demersal
ECOLOGY - Resilience: High



Mystus micracanthus (FAO)

IDENTIFICATION - Family: **Bagridae** (Bagrid catfishes)
IDENTIFICATION - Species name: ***Mystus micracanthus***
IDENTIFICATION - Author: Bleeker, 1846
IDENTIFICATION - Name in English: Twospot catfish
BIOLOGY - Max. total length (cm): 15
BIOLOGY - Length at maturity (cm): 10
BIOLOGY - Food: Mainly animals
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Kottelat, 1985
ECOLOGY - All MFD information: Migration: 0. Spawning: 0 . Distribution: Found in large rivers of the Lower Mekong (Rainboth 1996); Recorded from Cambodia (Desoutter 1975); Reported from the Great Lake (Rainboth 1996). Feeding: Feeds on insect larvae and zooplankton (Rainboth 1996)
ECOLOGY - Status: Native
ECOLOGY - Habitat: Demersal
ECOLOGY - Resilience: High


Mystus multiradiatus (Rainboth W.)

IDENTIFICATION - Family: **Bagridae** (Bagrid catfishes)
IDENTIFICATION - Species name: ***Mystus multiradiatus***
IDENTIFICATION - Author: Roberts, 1992
IDENTIFICATION - Name in Khmer: ត្រីកញ្ជុះឆ្នូត
IDENTIFICATION - Name in Khmer (roman): Kanhchos chnot

BIOLOGY - Max. total length (cm): 16
BIOLOGY - Max. standard length (cm): 12.8
BIOLOGY - Length at maturity (cm): 8.7
BIOLOGY - Food: zooplankton mainly animals
BIOLOGY - Notes: Often found in mixed schools with M. mysticetus which congregate around tree limbs and other solid objects, browsing the hard surfaces (Rainboth 1996).
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Lamberts and Sarath, 1997
ECOLOGY - All MFD information: Migration: Moves into the flooded forest during the flood season (Rainboth 1996). Spawning: 0 . Distribution: 0. Feeding: Feeds on zooplankton, crustaceans, aquatic insects, and some plant debris (Rainboth 1996).
ECOLOGY - Status: Native
ECOLOGY - Habitat: Demersal
ECOLOGY - Resilience: High

Mystus mysticetus (Rainboth W.)

IDENTIFICATION - Family: **Bagridae** (Bagrid catfishes)
IDENTIFICATION - Species name: ***Mystus mysticetus***
IDENTIFICATION - Author: Roberts, 1992
IDENTIFICATION - Name in Khmer: ត្រីកញ្ជុះឆ្នូត
IDENTIFICATION - Name in Khmer (roman): Kanhchos chnot
BIOLOGY - Max. total length (cm): 16
BIOLOGY - Max. standard length (cm): 13
BIOLOGY - Length at maturity (cm): 8.8
BIOLOGY - Food: zooplankton mainly animals
BIOLOGY - Notes: Often found in mixed schools with M. multiradiatus, which congregate around tree limbs and other solid objects, browsing the hard surfaces (Rainboth 1996).
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Lim et al. 1999
ECOLOGY - All MFD information: Migration: Moves into flooded forests during the rainy season and returns to rivers in November and December (Rainboth 1996). Spawning: The spawning period of the fish is from April to August. The eggs are spherical, yellow in colour, demersal and attach to the substrate (Pongsirijun et al. 2002). . Distribution: Recorded from Mun River (Pongsirijun et al. 2002), and Xe Bangfai Basin (Kottelat 1998); Larvae/juveniles have been recorded from the drift in both the Mekong and Bassac Rivers in An Giang (Nguyen et al. 2002). Feeding: Feeds on insect larvae, worms, freshwater prawns, small fishes (Pongsirijun et al. 2002), zooplankton, aquatic insects, crustaceans, and rotifers (Rainboth 1996).
ECOLOGY - Status: Native
ECOLOGY - Habitat: Demersal
ECOLOGY - Resilience: High

Mystus wolffii (Chavalit Vidthayanon)

IDENTIFICATION - Family: **Bagridae** (Bagrid catfishes)
IDENTIFICATION - Species name: ***Mystus wolffii***
IDENTIFICATION - Author: Bleeker, 1851
IDENTIFICATION - Name in Khmer: ត្រីកញ្ឆុះ
IDENTIFICATION - Name in Khmer (roman): Kanhchos
BIOLOGY - Max. total length (cm): 20
BIOLOGY - Length at maturity (cm): 12.9
BIOLOGY - Food: zoobenthos mainly animals
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Lim et al. 1999; Kottelat, 1985
ECOLOGY - All MFD information: Migration: It may utilize the seasonally inundated areas as seen in other species of Mystus (Rainboth 1996). Spawning: 0 . Distribution: It is found in fresh water well upstream in the Tonle Sap (Rainboth 1996). Feeding: Diet consists primarily on insects and crustaceans (Rainboth 1996).
ECOLOGY - Status: Native
ECOLOGY - Habitat: Demersal
ECOLOGY - Resilience: High

Pseudomystus siamensis (Baird, I.G.)

IDENTIFICATION - Family: **Bagridae** (Bagrid catfishes)
IDENTIFICATION - Species name: ***Pseudomystus siamensis***
IDENTIFICATION - Author: Regan, 1913
IDENTIFICATION - Remark: Formerly Leiocassis siamensis
IDENTIFICATION - Name in English: Asian bumblebee catfish
BIOLOGY - Max. total length (cm): 20
BIOLOGY - Length at maturity (cm): 12.9
BIOLOGY - Food: zoobenthos mainly animals
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: MFD occurence map
ECOLOGY - All MFD information: Migration: A black fish species (Bardach 1959). Spawning: Adult females has well-developed ova in February, and spawning takes place at the beginning of the rainy season, with the young appearing in fishing nets during August (Rainboth 1996); However the presence of eggs in specimens in July and August indicates that the spawning season is much more protracted; Sexually mature at 13 cm and 20 g (Baird and Phylavanh 1999). . Distribution: Found basin wide in tributaries of the Lower Mekong (Pantulu 1986); Recorded from the Nam Theun and Xe Bangfai Basins (Kottelat 1998); Larvae/juveniles have been recorded from the drift in both the Mekong and Bassac Rivers in An Giang (Nguyen et al. 2002). Feeding: Feeds on insects (Baird and Phylavanh 1999, Bardach 1959), aquatic insect larvae (Rainboth 1996, Bardach 1959), including odonatans (Rainboth 1996); fish and large crustaceans (Bardach 1959), earthworms, snails, roots, fruits, and detritus (Baird and Phylavanh 1999).
ECOLOGY - Status: Native
ECOLOGY - Habitat: Demersal
ECOLOGY - Resilience: High

Nemacheilus pallidus (Baird, I.G.)

IDENTIFICATION - Family: **Balitoridae** (River loaches)
IDENTIFICATION - Species name: ***Nemacheilus pallidus***
IDENTIFICATION - Author: Kottelat, 1990
BIOLOGY - Max. total length (cm): 18
BIOLOGY - Max. standard length (cm): 14
BIOLOGY - Length at maturity (cm): 9.4
BIOLOGY - Food: plants/detritus+animals
BIOLOGY - Notes: Known to congregate in areas receiving direct sunlight (Rainboth 1996).
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Motomura et al. 2002
ECOLOGY - All MFD information: Migration: 0. Spawning: 0 . Distribution: Occurs from northern Thailand to Cambodia. It has been collected from the Siem Reap River (Rainboth 1996); Also occurs in the Xe Bangfai Basin (Kottelat 1998). Feeding: Feeds primarily on insects and some algae (Rainboth 1996).
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: Medium

Schistura pellegrini (Baird, I.G.)

IDENTIFICATION - Family: **Balitoridae** (River loaches)
IDENTIFICATION - Species name: ***Schistura pellegrini***
IDENTIFICATION - Author: Rendahl, 1944
BIOLOGY - Max. total length (cm): 6.5
BIOLOGY - Length at maturity (cm): 4.8
BIOLOGY - Food: plants/detritus+animals
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Rainboth, 1996
ECOLOGY - Migration type: No information on migration type
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: High

Tuberoschistura cambodgiensis (Rainboth W.)

IDENTIFICATION - Family: **Balitoridae** (River loaches)
IDENTIFICATION - Species name: T***uberoschistura cambodgiensis***
IDENTIFICATION - Author: Kottelat, 1990
BIOLOGY - Max. total length (cm): 4
BIOLOGY - Length at maturity (cm): 3.1
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: CNMC 1998, Scott and Crossman 1973
ECOLOGY - All MFD information: Migration: 0. Spawning: 0 . Distribution: Previously found in a flowing stream with sandy bottom between Siem Reap and Kompong Thom near the Great Lake. Also found in sandy bottomed streams south of Phnom Penh (Rainboth 1996). Feeding: 0

ECOLOGY - Status: Native
ECOLOGY - Habitat: Demersal
ECOLOGY - Resilience: High

Xenentodon cancila (Chavalit Vidthayanon)

IDENTIFICATION - Family: **Belonidae** (Needlefishes)
IDENTIFICATION - Species name: ***Xenentodon cancila***
IDENTIFICATION - Author: Hamilton, 1822
IDENTIFICATION - Name in Khmer: ត្រីផ្ទោង
IDENTIFICATION - Name in Khmer (roman): Phtoung
IDENTIFICATION - Name in English: Freshwater garfish
BIOLOGY - Max. total length (cm): 40
BIOLOGY - Length at maturity (cm): 23.8
BIOLOGY - Food: Nekton mainly animals
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Spawns in streams / inlets (% respondents): 100
REPRODUCTION - Date of spawning (% respondents): Jul-Aug 5.3%, July-Sep 2.6%, Jun-Jul 63.2% May-Jun 28.9%
REPRODUCTION - Nurses in floodplain (% respondents): 100
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Motomura et al. 2002; Lim et al. 1999
ECOLOGY - All MFD information: Migration: 0. Spawning: Fish measuring 16.2-23.5 cm have about 203-1,458 eggs with a diameter of 1.50-2.48 mm (Krachangdara 1994). . Distribution: Found basin wide in tributaries of the Mekong (Pantulu 1986). Feeding: Feeds on small fishes (Rainboth 1996, Pethiyagoda 1991, NIFI 1993), crustaceans (Pethiyagoda 1991) including shrimps (NIFI 1993); insects (Rainboth 1996, NIFI 1993), and zooplankton (Krachangdara 1994).
ECOLOGY - Feeds in floodplains (% respondents): 100
ECOLOGY - Status: Native
ECOLOGY - Habitat: pelagic
ECOLOGY - Resilience: High
GUILD - Grey fish guild (% respondents): 100

Xenentodon canciloides (FAO)

IDENTIFICATION - Family: **Belonidae** (Needlefishes)
IDENTIFICATION - Species name: ***Xenentodon canciloides***
IDENTIFICATION - Author: Bleeker, 1853
BIOLOGY - Max. total length (cm): 37
BIOLOGY - Max. standard length (cm): 30
BIOLOGY - Length at maturity (cm): 18.5
BIOLOGY - Food: Nekton mainly animals
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Lim et al. 1999
ECOLOGY - All MFD information: Migration: 0. Spawning: 0 . Distribution: Mekong Basin in Laos, Thailand, Cambodia and Viet Nam (Kottelat 2001). Feeding: 0
ECOLOGY - Status: Native
ECOLOGY - Habitat: pelagic
ECOLOGY - Resilience: High

No picture available
IDENTIFICATION - Family: **Callionymidae**
IDENTIFICATION - Species name: T***onlesapia tsukawakii***
IDENTIFICATION - Author: Motomura and Mukai, 2006
BIOLOGY - Max. total length (cm): 5
BIOLOGY - Max. standard length (cm): 3.4
BIOLOGY - Length at maturity (cm): 2.6
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: No information


Rhizoprionodon acutus (Randall, J.E.)

IDENTIFICATION - Family: **Carcharhinidae** (Requiem sharks)
IDENTIFICATION - Species name: ***Rhizoprionodon acutus***
IDENTIFICATION - Author: Rüppell, 1837
IDENTIFICATION - Name in English: Milk shark
BIOLOGY - Max. total length (cm): 175
BIOLOGY - Length at maturity (cm): 87.8
BIOLOGY - Food: Nekton mainly animals
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Reproductive guild: Bearers: Internal live bearers
REPRODUCTION - Fecundity: 3
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: CNMC 1998, Scott and Crossman 1973; Rainboth, 1996
ECOLOGY - All MFD information: Migration: 0. Spawning: 0 . Distribution: Recorded several times from Cambodia as far upstream as the Great Lake (Rainboth 1996). Feeding: Both juveniles and adults feed on fish (Cortés 1999, Salini et al. 1992, Rainboth 1996, Salini et al.1994, Compagno 1984); mainly small pelagic and benthic bony fishes; It also takes cephalopods and other invertebrates (Compagno 1984) including crustaceans (Rainboth 1996).
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: Very low


Lates calcarifer (Jean-Francois Helias / Fishing Adventures Thailand)

IDENTIFICATION - Family: **Centropomidae** (Snooks)
IDENTIFICATION - Species name: ***Lates calcarifer***
IDENTIFICATION - Author: Bloch, 1790
IDENTIFICATION - Name in English: Barramundi
BIOLOGY - Max. total length (cm): 200
BIOLOGY - Length at maturity (cm): 72
BIOLOGY - Food: Nekton mainly animals
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Reproductive guild: Nonguarders: Open water/substratum egg scatterers
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: MFD occurence map

ECOLOGY - All MFD information: Migration: A white fish species (Bardach 1959); A diadromous fish, inhabiting rivers before returning to the estuaries to spawn (Kailola et al. 1993); Frequents estuaries for feeding during the dry season and returns to marine environments for spawning during the rainy season (Rainboth 1996); The post larvae (and possibly larvae) move from spawning areas to brackish water seasonal habitat (Russell and Garrett 1985). Spawning: 0 . Distribution: Occurs in the Mekong Delta and tidal reaches (Rainboth 1996). Feeding: Feeds on fishes (Salini et al Scott and Crossman 1973, Rainboth 1996, Hora and Pillay 1962) and crustaceans (Rainboth 1996, Hora and Pillay 1962).
ECOLOGY - Migration type: Only seems to display Longitudinal migrations.
ECOLOGY - Status: Native
ECOLOGY - Habitat: Demersal
ECOLOGY - Resilience: Low

Channa gachua (Chavalit Vidthayanon)

IDENTIFICATION - Family: **Channidae** (Snakeheads)
IDENTIFICATION - Species name: ***Channa gachua***
IDENTIFICATION - Author: Hamilton, 1822
IDENTIFICATION - Name in Khmer: ត្រីក្សាន
IDENTIFICATION - Name in Khmer (roman): Kasan
BIOLOGY - Max. standard length (cm): 20
BIOLOGY - Length at maturity (cm): 11.1
BIOLOGY - Food: Mainly animals (troph. 2.8 and up)
BIOLOGY - Notes: Can tolerate very stagnant, poorly oxygenated and turbid water, and even very foul water (Rahman 1989); and temperatures up to 36.5º C (Talwar and Jhingran 1992).
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Spawns in rivers (% respondents): 100
REPRODUCTION - Date of spawning (% respondents): May 23.1%, Jun 30.8%, Jul 15.4% Jun-Jul 7.7% May-Jun 23.1%
REPRODUCTION - Fecundity: 910
REPRODUCTION - Nurses in floodplain (% respondents): 100
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: MFD occurence map
ECOLOGY - All MFD information: Migration: 0. Spawning: Spawns in shallow water with a silt or gravel substrate (Talwar and Jhingran 1992). . Distribution: 0. Feeding: Feeds largely on crustaceans (Talwar and Jhingran 1992) including prawns and shrimps (Rainboth 1996) as well as insects and some small fishes (Talwar and Jhingran 1992, Rainboth 1996).
ECOLOGY - Feeds in floodplains (% respondents): 100
ECOLOGY - Status: No information
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: Medium
GUILD - Black fish guild (% respondents): 2.5
GUILD - White fish guild (% respondents): 97.5

Channa lucius (Chavalit Vidthayanon)

IDENTIFICATION - Family: **Channidae** (Snakeheads)
IDENTIFICATION - Species name: ***Channa lucius***
IDENTIFICATION - Author: Cuvier, 1831

IDENTIFICATION - Name in Khmer: ត្រីកញ្ឆេនជ័យ
IDENTIFICATION - Name in Khmer (roman): Kanhchoun chey
BIOLOGY - Max. total length (cm): 49
BIOLOGY - Max. standard length (cm): 40
BIOLOGY - Length at maturity (cm): 23.8
BIOLOGY - Food: Nekton mainly animals
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Kottelat, 1985; Lim et al. 1999
ECOLOGY - All MFD information: Migration: A black fish species (Bardach 1959). Spawning: Spawns during April-May and November. Fish of 14 - 30 cm body length and 134-268 g have about 1,650-21,300 eggs. The average number of egg is about 7,900. The average egg diameter is 1.29 mm (Duangsawasdi et al. 1988). . Distribution: 0. Feeding: predatory on fishes, prawns, and crabs and slightly less on shrimps (Rainboth 1996).
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: Medium

Channa micropeltes (Rainboth W.)

IDENTIFICATION - Family: **Channidae** (Snakeheads)
IDENTIFICATION - Species name: ***Channa micropeltes***
IDENTIFICATION - Author: Cuvier, 1831
IDENTIFICATION - Name in Khmer: ត្រីឆ្ពោ
IDENTIFICATION - Name in Khmer (roman): Chhdau
IDENTIFICATION - Name in English: Giant snakehead
BIOLOGY - Max. total length (cm): 159
BIOLOGY - Max. standard length (cm): 130
BIOLOGY - Length at maturity (cm): 67.5
BIOLOGY - Food: Nekton mainly animals
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Thuok, N and L. Sina, 1997; CNMC 1998 Scott and Crossman 1973
ECOLOGY - All MFD information: Migration: A black fish species (Bardach 1959); This species enters seasonally inundated areas during the rainy season (Baird and Phylavanh 1999). Spawning: Spawn in April (Duangsawasdi and Krachangdara 1994). Guards its nest and eggs vigorously and will even attack humans (Smith 1945). . Distribution: Larvae/juveniles recorded from the drift in the Bassac River in An Giang (Nguyen et al. 2002); Reported from the Xe Bangfai Basin (Mohsin and Ambak 1983). Feeding: A predator mostly on fishes (Rainboth 1996, Baird and Phylavanh 1999, 4931), it consumes fishes of all kinds and sizes and also kills far in excess of its natural needs (Smith 1945); but feeds also on some crustaceans (Rainboth 1996, 4931).
ECOLOGY - Migration type: Displays longitudinal as well as lateral migrations.
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: Low

Channa striata (Rainboth W.)

IDENTIFICATION - Family: **Channidae** (Snakeheads)
IDENTIFICATION - Species name: ***Channa striata***
IDENTIFICATION - Author: Bloch, 1793
IDENTIFICATION - Name in Khmer: ត្រីរ៉ស់
IDENTIFICATION - Name in Khmer (roman): Ros / Phtuk
IDENTIFICATION - Name in English: Snakehead murrel
BIOLOGY - Max. total length (cm): 122
BIOLOGY - Max. standard length (cm): 100
BIOLOGY - Length at maturity (cm): 53.5
BIOLOGY - Food: Nekton mainly animals
BIOLOGY - Notes: Survives dry season by burrowing in bottom mud of lakes, canals and swamps as long as skin and breathing apparatus remain moist (Davidson 1975), and subsisting on stored fat, during this time its flesh is heavily infested by a larval trematode Isoparorchis hypsilobargi, other parasites infecting this fish include Pallisentis ophicephali in the intestine and Neocamallanus ophicepahli in the pyloric caecae. (Rahman 1989). Several countries report adverse ecological impact after introduction (Talwar and Jhingran 1992); .
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Reproductive guild: Guarders: Clutch tenders
REPRODUCTION - Fecundity: 7733
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Thuok, N and L. Sina, 1997
ECOLOGY - All MFD information: Migration: A black fish species (Bardach 1959); The species does not undertake longitudinal migrations within the Mekong, but it makes lateral migrations from the main river, or any other permanent water body, to flooded areas (Poulsen and Valbo-Jørgensen 2000) including flooded forest (Roberts 1993) during the flood season and returns to the permanent water body at the beginning of the dry season (Poulsen and Valbo-Jørgensen 2000). Spawning: Carries eggs, and (Poulsen and Valbo-Jørgensen 2000), except maybe for the very driest period in April/May (Bardach 1959), probably also spawns, year round with a peak from March to June (Poulsen and Valbo-Jørgensen 2000); It spawns in flooded areas such as swamps and rice fields, but also in slow flowing parts rivers; The parent fish makes up the spawning ground and guards the young for about a month (Poulsen and Valbo-Jørgensen 2000). . Distribution: Occurs from Chiang Saen to the Mekong Delta (Poulsen and Valbo-Jørgensen 2000); Larvae/juveniles recorded from the drift in the Mekong and Bassac Rivers in An Giang (Nguyen et al. 2002). Feeding: Feeds on fish (Rahman 1989, Baird and Phylavanh 1999, Bardach 1959, Rainboth 1996, NIFI 1993), smaller herbivorous fishes (Roberts 1993), crustaceans (Allen 1991, Bardach 1959, Rainboth 1996), including shrimps (NIFI 1993), snakes, tadpoles (Rahman 1989), frogs, insects, earthworms (Rahman 1989, Baird and Phylavanh 1999) detritus (Baird and Phylavanh 1999); and occasionally on plant fragments (Bardach 1959); Juveniles feed on fish (Yap 1988).
ECOLOGY - Migration type: Displays longitudinal as well as lateral migrations.
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: Medium

Clarias batrachus (CAFS)

IDENTIFICATION - Family: **Clariidae** (Airbreathing catfishes)
IDENTIFICATION - Species name: ***Clarias batrachus***
IDENTIFICATION - Author: Linnaeus, 1758
IDENTIFICATION - Name in Khmer: ត្រីអណ្តែងវែង
IDENTIFICATION - Name in Khmer (roman): Andaeng reung
IDENTIFICATION - Name in English: Walking catfish
BIOLOGY - Max. total length (cm): 47
BIOLOGY - Length at maturity (cm): 30.7
BIOLOGY - Food: zoobenthos mainly animals
BIOLOGY - Notes: Can walk and leave the water to migrate to other water bodies using its auxiliary breathing organs (Ukkatawewat 9999, Talwar and Jhingran 1992, Smith 1945); It moves on land by wriggling from side to side on its erect pectoral fins (Rainboth 1996, Smith 1945); Several countries report adverse ecological impact after introduction (Kottelat 1998).
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Reproductive guild: Guarders: Nesters
REPRODUCTION - Fecundity: 2005
REPRODUCTION - Nurses in floodplain (% respondents):
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Lim et al. 1999
ECOLOGY - All MFD information: Migration: It mainly undertakes lateral migrations from the main river, or any other permanent water body, to flooded areas during the flood season and returns to permanent water bodies at the beginning of the dry season (Poulsen and Valbo-Jørgensen 2000). Spawning: It becomes adult at 20 cm length (Bardach 1959); Mainly carries eggs from March to July; Reported to spawn in paddy fields in April to May (Poulsen and Valbo-Jørgensen 2000); and in June and October below Quatre Bras (Bardach 1959). . Distribution: Found basin wide in tributaries of the Lower Mekong (Pantulu 1986); and from Chiang Saen in the north to the Mekong Delta in the south in the mainstream (Poulsen and Valbo-Jørgensen 2000); Recorded from the Xe Bangfai and Nam Theun Basins (Kottelat 1998); Larvae/juveniles have been recorded from the drift in both the Mekong and Bassac Rivers in An Giang (Nguyen et al. 2002). Feeding: Feeds on fishes (Rainboth 1996, Ukkatawewat 9999, Bardach 1959), molluscs (Rainboth 1996), zoobenthos, insects (Yap 1988), insect larvae, earthworms, shells, shrimps, aquatic plants and debris (Ukkatawewat 9999), earthworms, and insects (Baird and Phylavanh 1999), and fleshy fruits (Baird et al. 2001); Consumes mud, plant fragments, planktonic crustaceans, aquatic insect larvae, fish and large crustaceans, seeds, flying insects, and molluscs and snails, in that order (Bardach 1959).
ECOLOGY - Migration type: Displays longitudinal as well as lateral migrations.
ECOLOGY - Status: Native
ECOLOGY - Habitat: Demersal
ECOLOGY - Resilience: High

Clarias macrocephalus (Rainboth W.)

IDENTIFICATION - Family: **Clariidae** (Airbreathing catfishes)
IDENTIFICATION - Species name: ***Clarias macrocephalus***
IDENTIFICATION - Author: Günther, 1864
IDENTIFICATION - Name in Khmer: ត្រីអណ្តែងទន់
IDENTIFICATION - Name in Khmer (roman): Andaeng toun
IDENTIFICATION - Name in English: Broadhead catfish
BIOLOGY - Max. total length (cm): 120
BIOLOGY - Length at maturity (cm): 62.9
BIOLOGY - Food: Nekton mainly animals
BIOLOGY - Notes: Can like the walking catfish (*C. batrachus*) move out of the water using its extended fins (Frimodt 1995), It is nearly as common as the walking catfish (Rainboth 1996).
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Motomura et al. 2002; Lim et al., 1999
ECOLOGY - All MFD information: Migration: 0. Spawning: Spawns in small streams (Frimodt 1995). . Distribution: Not common in Laos but common in Thailand (Davidson 1975). Feeding: Feeds on aquatic insects, young shrimps (Ukkatawewat 9999) and small fishes (Ukkatawewat 9999, Rainboth 1996).
ECOLOGY - Migration type: Displays longitudinal as well as lateral migrations.
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: High

Clarias meladerma (Chavalit Vidthayanon)

IDENTIFICATION - Family: **Clariidae** (Airbreathing catfishes)
IDENTIFICATION - Species name: ***Clarias meladerma***
IDENTIFICATION - Author: Beeker, 1846
IDENTIFICATION - Name in Khmer: ត្រីអណ្តែងទន់
IDENTIFICATION - Name in Khmer (roman): Andaeng toun
IDENTIFICATION - Name in English: Blackskin catfish
BIOLOGY - Max. total length (cm): 34
BIOLOGY - Length at maturity (cm): 20.7
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: possible; found in the delta and in Cambodia
ECOLOGY - All MFD information: Migration: 0. Spawning: 0 . Distribution: Collected in the Mekong Delta of Viet Nam, but doubtful to occur in Thailand (Smith 1945). Feeding: Carnivorous (Rainboth 1996); Feeds on small animals (Krachangdara 1994).
ECOLOGY - Status: Native
ECOLOGY - Habitat: Demersal
ECOLOGY - Resilience: Medium

Clarias nieuhofii (IFReDI collection)

IDENTIFICATION - Family: **Clariidae** (Airbreathing catfishes)
IDENTIFICATION - Species name: ***Clarias nieuhofii***
IDENTIFICATION - Author: Valenciennes, 1840
IDENTIFICATION - Name in Khmer: ត្រីអណ្តែងងាំង
IDENTIFICATION - Name in Khmer (roman): Andaeng ngang
BIOLOGY - Max. total length (cm): 50
BIOLOGY - Length at maturity (cm): 29
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Kottelat, M., 1985
ECOLOGY - All MFD information: Migration: 0. Spawning: 0 . Distribution: Known from the coastal side of the Cardamom range, and probably also from the Mekong side (Rainboth 1996). Feeding: Carnivorous (Rainboth 1996).
ECOLOGY - Status: Native
ECOLOGY - Habitat: Demersal
ECOLOGY - Resilience: Medium

Tenualosa toli (Randall J.E.)

IDENTIFICATION - Family: **Clupeidae**
IDENTIFICATION - Species name: T***enualosa toli***
IDENTIFICATION - Author: Valenciennes, 1847
IDENTIFICATION - Name in English: Toli shad
BIOLOGY - Max. total length (cm): 60
BIOLOGY - Length at maturity (cm): 38.5
BIOLOGY - Food: zooplankton plants/detritus+animals
ECOLOGY - Tonle Sap distribution: Lim et al. 1999
ECOLOGY - Status: Native
ECOLOGY - Habitat: pelagic
ECOLOGY - Resilience: Medium

Clupeichthys aesarnensis (Rainboth W.)

IDENTIFICATION - Family: **Clupeidae** (Herrings, shads, sardines, menhadens)
IDENTIFICATION - Species name: ***Clupeichthys aesarnensis***
IDENTIFICATION - Author: Wongratana, 1983
IDENTIFICATION - Name in Khmer: ត្រីបណ្តូលអំពៅ
IDENTIFICATION - Name in Khmer (roman): Bandol ampov
IDENTIFICATION - Name in English: Thai river sprat
BIOLOGY - Max. total length (cm): 9
BIOLOGY - Max. standard length (cm): 7
BIOLOGY - Length at maturity (cm): 5.1
BIOLOGY - Food: zooplankton mainly animals
BIOLOGY - Notes: A short-lived, pelagic and semi-pelagic species, which can form huge populations in standing water bodies (Warren 2000); Feeding patterns appear to be affected by

stage of lunar cycle (Warren 2000); Which may explain why Rainboth (1996) states that it is nocturnally active (Rainboth 1996), while Sirimongkontavon (1994) found that it is a daytime feeder that can feed at all depths (Sirimongkontavon 1994).
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Spawns in floodplain lakes / rice field (% respondents): 95
REPRODUCTION - Spawns in streams / inlets (% respondents): 5
REPRODUCTION - Date of spawning (% respondents): Jun-Jul 70%, May-Jul 2.5%, May-Jun 27.5%
REPRODUCTION - Nurses in floodplain (% respondents): 100
REPRODUCTION - Breeds in reservoirs: Can breed in reservoirs
ECOLOGY - Tonle Sap distribution: Lim et al. 1999
ECOLOGY - All MFD information: Migration: Appears to undertake nocturnal vertical migrations during certain periods of the lunar cycle (Warren 2000). Spawning: Spawning in reservoirs may occur weekly and consistently all year round. (Sirimongkontavon 1994, Sriputinipon et al. 1986.); with peaks in April to June, and September to November (Phuriphong and Ukkatawewat 1992); or throughout the rainy season from May to October (Chukajon et al. 1977) possibly affected by the stage of the lunar cycle (Warren 2000)
It spawns pelagically probably in upper water column close to the water surface (Warren et al. Scott and Crossman 1973) although earlier reported to spawn at stumps, plant roots and grasses (Soemarwotto and Costa-Pierce 1988); The eggs of the Thai river sprat are of the floating or pelagic type (Sriputinipon et al. 1986.) with a diameter of 0.27-0.4 mm. Ovaries start to develop when the fish reach a size of 13 mm and 0.025 g (Sirimongkontavon 1994); At a length of 20.3 – 46.0 mm (0.175–1.34 g), the fish carry 72-2,245 eggs with an average fecundity of 442 and 871 eggs per female in March and November, respectively (Sirimongkontavon 1994). . Distribution: Occurs in the Xe Bangfai Basins (Kottelat 1998), and in many impoundments including Ubolratana, Sirindhorn and Nam Ngum reservoirs (Leelapatra et al. 2000). Feeding: Feeds on a variety of zooplankton (Sirimongkontavon 1994), especially crustaceans (Sirimongkontavon 1994, Warren 2000, Phuriphong and Ukkatawewat 1992, Rainboth 1996), which are smaller than 500 µm; Miscellaneous phytoplankton (Costa-Pierce 1988, Phuriphong and Ukkatawewat 1992); Insects (Sirimongkontavon 1994), aquatic insect larvae (Sriputinipon et al. 1986.); Larger individuals mat become cannibalistic (Phuriphong and Ukkatawewat 1992) and feed on fry of its own species (Sirimongkontavon 1994), however there exists some controversy over whether this species actually feeds on pelagic eggs of other fish species (Warren 2000).
ECOLOGY - Feeds in floodplains (% respondents): 100
ECOLOGY - Status: Native
ECOLOGY - Habitat: pelagic
ECOLOGY - Resilience: High
GUILD - Black fish guild (% respondents): 97.5
GUILD - Grey fish guild (% respondents): 2.5

Clupeichthys goniognathus (Chavalit Vidthayanon)

IDENTIFICATION - Family: **Clupeidae** (Herrings, shads, sardines, menhadens)
IDENTIFICATION - Species name: ***Clupeichthys goniognathus***
IDENTIFICATION - Author: Bleeker, 1855
IDENTIFICATION - Name in Khmer: ត្រីបណ្តូលអំពៅ
IDENTIFICATION - Name in Khmer (roman): Bandol ampov
IDENTIFICATION - Name in English: Sumatran river sprat
BIOLOGY - Max. total length (cm): 11
BIOLOGY - Max. standard length (cm): 9
BIOLOGY - Length at maturity (cm): 6.4
BIOLOGY - Food: zooplankton mainly animals
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information

REPRODUCTION - Spawns in floodplain lakes / rice field (% respondents): 95
REPRODUCTION - Spawns in streams / inlets (% respondents): 5
REPRODUCTION - Date of spawning (% respondents): Jun-Jul 70%, May-Jul 2.5%, May-Jun 27.5%
REPRODUCTION - Nurses in floodplain (% respondents): 100
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Kottelat, 1985; Lim et al. 1999
ECOLOGY - All MFD information: Migration: A white fish species (Bardach 1959). Spawning: 0 . Distribution: Found basin wide in the mainstream of the Lower Mekong (Pantulu 1986). Also reported from lakes and reservoirs in the basin. (Rainboth 1996). Feeding: probably feeds on planktonic crustaceans (Rainboth 1996)
ECOLOGY - Feeds in floodplains (% respondents): 100
ECOLOGY - Status: Native
ECOLOGY - Habitat: pelagic
ECOLOGY - Resilience: High
GUILD - Black fish guild (% respondents): 97.5
GUILD - Grey fish guild (% respondents): 2.5

Clupeoides borneensis (Rainboth W.)

IDENTIFICATION - Family: **Clupeidae** (Herrings, shads, sardines, menhadens)
IDENTIFICATION - Species name: ***Clupeoides borneensis***
IDENTIFICATION - Author: Bleeker, 1851
IDENTIFICATION - Name in Khmer: ត្រីបណ្តូលអំពៅ
IDENTIFICATION - Name in Khmer (roman): Bandol ampov
IDENTIFICATION - Name in English: Borneo river sprat
BIOLOGY - Max. total length (cm): 10
BIOLOGY - Max. standard length (cm): 8
BIOLOGY - Length at maturity (cm): 5.8
BIOLOGY - Food: zooplankton mainly animals
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Spawns in floodplain lakes / rice field (% respondents): 95
REPRODUCTION - Spawns in streams / inlets (% respondents): 5
REPRODUCTION - Date of spawning (% respondents): Jun-Jul 70%, May-Jul 2.5%, May-Jun 27.5%
REPRODUCTION - Nurses in floodplain (% respondents): 100
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: CNMC 1998, Scott and Crossman 1973
ECOLOGY - All MFD information: Migration: A white fish species (Bardach 1959), which does not move very far (Blache and Goossens 1954), but it may move short distances away from the main river channels during high water periods (Rainboth 1996). Spawning: 0 . Distribution: In the Mekong Basin, it commonly occurs upstream at least as far as the Great Lake (Rainboth 1996); Recorded from the Xe Bangfai Basin (Kottelat 1998); Larvae/juveniles recorded from the drift in the Mekong and Bassac Rivers in An Giang (Nguyen et al. 2002). Feeding: Feeds primarily on planktonic crustaceans (Rainboth 1996).
ECOLOGY - Feeds in floodplains (% respondents): 100
ECOLOGY - Status: Native
ECOLOGY - Habitat: pelagic
ECOLOGY - Resilience: High
GUILD - Black fish guild (% respondents): 97.5
GUILD - Grey fish guild (% respondents): 2.5

Corica laciniata (Rainboth W.)

IDENTIFICATION - Family: **Clupeidae** (Herrings, shads, sardines, menhadens)
IDENTIFICATION - Species name: ***Corica laciniata***
IDENTIFICATION - Author: Fowler, 1935
IDENTIFICATION - Name in Khmer: ត្រីបណ្ដូលអំពៅ
IDENTIFICATION - Name in Khmer (roman): Bandol ampov
IDENTIFICATION - Name in English: Bangkok river sprat
BIOLOGY - Max. standard length (cm): 7
BIOLOGY - Length at maturity (cm): 5.1
BIOLOGY - Notes: It is a schooling species (188), which can form huge populations in standing water bodies (Warren 2000).
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Spawns in floodplain lakes / rice field (% respondents): 95
RODUCTION - Date of spawning (% respondents): Jun-Jul 70%, May-Jul 2.5%, May-Jun 27.5%
REPRODUCTION - Nurses in floodplain (% respondents): 100
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: possible (Larvae/juveniles recorded from the drift in the Mekong and Bassac Rivers in An Giang (Nguyen et al. 2002).)
ECOLOGY - All MFD information: Migration: Migrates vertically in the water column (Warren 2000). Spawning: It probably spawns at regular intervals throughout the year in the upper water column close to water surface; The eggs are small and planktonic (Warren 2000). . Distribution: Larvae/juveniles recorded from the drift in the Mekong and Bassac Rivers in An Giang (Nguyen et al. 2002). Feeding: planktivorous (Warren 2000).
ECOLOGY - Feeds in floodplains (% respondents): 100
ECOLOGY - Status: Native
ECOLOGY - Habitat: pelagic
ECOLOGY - Resilience: High
GUILD - Black fish guild (% respondents): 97.5
GUILD - Grey fish guild (% respondents): 2.5

Tenualosa thibaudeaui (Roberts, T.R.)

IDENTIFICATION - Family: **Clupeidae** (Herrings, shads, sardines, menhadens)
IDENTIFICATION - Species name: T***enualosa thibaudeaui***
IDENTIFICATION - Author: Durand, 1940
IDENTIFICATION - Name in Khmer: ត្រីក្បាក
IDENTIFICATION - Name in Khmer (roman): Kbork
IDENTIFICATION - Name in English: Laotian shad
BIOLOGY - Max. total length (cm): 37
BIOLOGY - Max. standard length (cm): 30
BIOLOGY - Length at maturity (cm): 18.5
BIOLOGY - Food: plants mainly plants/detritus
BIOLOGY - Notes: A short-lived species (Warren 2000), which numbers are declining drastically (Rainboth 1996, Roberts 1993), the reason for this is unknown, although it may be due to multiple factors including dam construction and over-fishing (Rainboth 1996); including certain traps used at Khone Falls (Roberts 1993).
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information

ECOLOGY vs. HYDROLOGY - Water level as migration trigger: Water level variation is a migration trigger
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Thuok, N and L. Sina, 1997
ECOLOGY - All MFD information: Migration: Above the Khone Falls it migrates upstream from March to June (Poulsen and Valbo-Jørgensen 2000); below the Khone Falls the fish is migrating downstream from the Falls from April to July (Poulsen and Valbo-Jørgensen 2000, Rainboth 1996) or July-August (Baird et al. 1999); It may follow the turbid floodwaters all the way to the Tonle Sap, perhaps moving into the Great Lake as it fills with water from the Mekong. As water levels in the Great Lake fall, it migrates back down the Tonle Sap to the Mekong, where it begins the movement upstream toward Khone Falls (Rainboth 1996) which continues from October or November through February (Chantepha 1972, Poulsen and Valbo-Jørgensen 2000); with a peak during November-December (Poulsen and Valbo-Jørgensen 2000) or January-February (Baird et al. 1999); No large migrations have been reported for this species for the past 15 years. The migrations that do still exist pass upstream to Thailand and the Lao PDR from Cambodia around the time of the lunar dependent Chinese New Year (Roberts 1993).
The main factors triggering the migrations were reported to be a combination of the first rain, increased water levels and increased turbidity. The fish does not seem to migrate in the Mekong Delta where it appears to be present year round; it is reported to undertake local migrations into, and out of, small streams and flooded areas too during rising and receding water levels, respectively (Poulsen and Valbo-Jørgensen 2000). Spawning: Developed eggs occur in March-June (Poulsen and Valbo-Jørgensen 2000); The fish may spawn during December-January in the Cambodian Great Lake (Janesirisak and Rungtongbaisuree 1996); and in the Middle Mekong along the Thai-Lao border, young of the year of 40 to 50 mm total length were first encountered in the middle of April (Rainboth et al. 1975); but the abundance of juveniles increases during the onset of the rising water levels when the suspended solids increase (Rainboth 1996); It spawns pelagic in open water; the eggs are buoyant, small, and planktonic (Warren 2000). . Distribution: Found basin wide in the mainstream (Pantulu 1986) and large rivers (Rainboth 1996) of the Mekong Basin; Recorded from Luang Prabang (Rainboth 1996, Kottelat 1998), Nong Khai (Roberts 1993, Kottelat 1998), Vientiane, Pakse, Hatsalao, Tha Ngon and Tha Bo, also Cambodia (Kottelat 1998) where it is known from the Bassac (Rainboth 1996), it has been collected often in the delta (Roberts 1993), however it is apparently confined to fresh water (Rainboth 1996).It is also known from the Lower Xe Bangfai in Laos (Kottelat 1998) and the Chi (Leelapatra 1977) and Mun Rivers (Kottelat 1998 , Janesirisak and Rungtongbaisuree 1996), its presence has been reported from Nam Song and small juveniles have been collected in Songkhram River (Valbo-Jørgensen 2001). Feeding: Specializing in microscopic food such as phytoplankton or bacteria found on particulate matter (Rainboth 1996, Warren 2000).
ECOLOGY - Migration type: Displays longitudinal as well as lateral migrations.
ECOLOGY - Status: Native
ECOLOGY - Habitat: pelagic
ECOLOGY - Resilience: Medium

Syncrossus beauforti (Rainboth W.)

IDENTIFICATION - Family: **Cobitidae**
IDENTIFICATION - Species name: ***Botia beauforti***
IDENTIFICATION - Author: Smith, 1931
IDENTIFICATION - Remark: Recently renamed as Syncrossus beauforti
IDENTIFICATION - Name in Khmer: ត្រីកញ្ជ្រុក
IDENTIFICATION - Name in Khmer (roman): Kanhchrouk
IDENTIFICATION - Name in English: Chameleon loach
BIOLOGY - Max. total length (cm): 31
BIOLOGY - Max. standard length (cm): 25
BIOLOGY - Length at maturity (cm): 15.7
BIOLOGY - Food: Mainly animals

ECOLOGY - Tonle Sap distribution: Kottelat, 1985
ECOLOGY - Status: Native
ECOLOGY - Habitat: Demersal
ECOLOGY - Resilience: Medium

Acantopsis dialuzona (Sheremetyev, I.)

IDENTIFICATION - Family: **Cobitidae** (Loaches)
IDENTIFICATION - Species name: ***Acantopsis dialuzona***
IDENTIFICATION - Author: Van Hasselt, 1823
BIOLOGY - Max. total length (cm): 31
BIOLOGY - Max. standard length (cm): 25
BIOLOGY - Length at maturity (cm): 15.7
BIOLOGY - Food: Mainly animals
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Kottelat, 1985
ECOLOGY - Migration type: No information on migration type
ECOLOGY - Status: Native
ECOLOGY - Habitat: Demersal
ECOLOGY - Resilience: Medium

Syncrossus helodes (Rainboth W.)

IDENTIFICATION - Family: **Cobitidae** (Loaches)
IDENTIFICATION - Species name: **Botia helodes**
IDENTIFICATION - Author: Sauvage, 1876
IDENTIFICATION - Remark: Recently renamed as Syncrossus helodes
IDENTIFICATION - Name in Khmer: ត្រីកញ្ជ្រោងឆ្នូត
IDENTIFICATION - Name in Khmer (roman): Kanhchrouk chnot
IDENTIFICATION - Name in English: Tiger botia
BIOLOGY - Max. total length (cm): 37
BIOLOGY - Max. standard length (cm): 30
BIOLOGY - Length at maturity (cm): 18.5
BIOLOGY - Food: zoobenthos mainly animals
BIOLOGY - Notes: A nocturnal or crepuscular fish (Rainboth 1996), which hides itself in mud, rocks, and logs (1038297).
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Kottelat, 1985; Lim et al. 1999
ECOLOGY - All MFD information: Migration: A white fish species (Bardach 1959), which moves into flooded areas during the rainy season and returns to rivers during November and December (Rainboth 1996). Spawning: 0 . Distribution: Found in small upland streams with fast currents, as

well as at bottom depths in the Great Lake (Rainboth 1996); Reported from the Xe Bangfai Basin (Kottelat 1998); Larvae/juveniles recorded from the drift in the Mekong and Bassac Rivers in An Giang (Nguyen et al. 2002). Feeding: Feeds on molluscs, worms (Rainboth 1996), benthic insect larvae (Rainboth 1996, Bardach 1959) and planktonic crustaceans (Bardach 1959).
ECOLOGY - Migration type: Displays longitudinal as well as lateral migrations.
ECOLOGY - Status: Native
ECOLOGY - Habitat: Demersal
ECOLOGY - Resilience: Medium


Yasuhikotakia lecontei (Rainboth W.)

IDENTIFICATION - Family: **Cobitidae** (Loaches)
IDENTIFICATION - Species name: ***Botia lecontei***
IDENTIFICATION - Author: Fowler, 1937
IDENTIFICATION - Remark: Recently renamed as Yasuhikotakia lecontei
IDENTIFICATION - Name in Khmer: ត្រីកញ្ជ្រុកលឿង
IDENTIFICATION - Name in Khmer (roman): Kanhchrouk leung
IDENTIFICATION - Name in English: Silver loach
BIOLOGY - Max. total length (cm): 19
BIOLOGY - Max. standard length (cm): 15
BIOLOGY - Length at maturity (cm): 10
BIOLOGY - Food: zoobenthos mainly animals
BIOLOGY - Notes: Like other members of the genus, this species takes shelter during the day in crevices and under rocks, tree limbs, or other objects (Rainboth 1996, 1038297), and comes out to forage during dusk and night (Rainboth 1996).
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: MFD occurence map
ECOLOGY - All MFD information: Migration: The young of the year return to the river from the floodplain in November and December (Rainboth 1996). Spawning: 0 . Distribution: Mekong Basin in Laos and Thailand (Kottelat 2001); Recorded from the Xe Bangfai Basin (Kottelat 1998). Feeding: Feeds on molluscs and other benthic invertebrates (Rainboth 1996).
ECOLOGY - Status: Native
ECOLOGY - Habitat: Demersal
ECOLOGY - Resilience: Medium


Yasuhikotakia modesta (Plistil, J.)

IDENTIFICATION - Family: **Cobitidae** (Loaches)
IDENTIFICATION - Species name: **Botia modesta**
IDENTIFICATION - Author: Bleeker, 1865
IDENTIFICATION - Remark: Recently renamed as Yasuhikotakia modesta
IDENTIFICATION - Name in Khmer: ត្រីកញ្ជ្រុកក្រហម
IDENTIFICATION - Name in Khmer (roman): Kanhchrouk krohorm
IDENTIFICATION - Name in English: Redtail botia
BIOLOGY - Max. total length (cm): 31

BIOLOGY - Max. standard length (cm): 25
BIOLOGY - Length at maturity (cm): 15.7
BIOLOGY - Food: zoobenthos mainly animals
BIOLOGY - Notes: It is always living in a group with the leader in front of the group (Khamtorn 1999); Takes cover in holes under rocks or in crevices under tree limbs or other objects during the day (Rainboth 1996) and comes out to forage at night (Rainboth 1996, Mills and Vevers 1989, Khamtorn 1999).
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: Water level variation is a migration trigger
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: CNMC 1998, Scott and Crossman 1973; Lim et al. 1999
ECOLOGY - All MFD information: Migration: A white fish species (Bardach 1959), which is known to participate in large migrations during January in upland areas of the Mekong (Rainboth 1996); There is an upstream migration from around the saline intrusion zone in the Delta to just below the Khone Falls from November to March. From May to July, the species migrates the opposite way apparently to flooded areas in Southern Cambodia and the Mekong Delta. Above the Khone Falls, it migrates upstream during February to May (Poulsen and Valbo-Jørgensen 2000). It moves into small streams (Poulsen and Valbo-Jørgensen 2000) and inundated areas during high water periods and returns to rivers as water levels decline (Rainboth 1996). Spawning: Eggs are reported to occur from February to July throughout the distribution range. There is a strong peak around May-June, indicating that spawning takes place during this period (Poulsen and Valbo-Jørgensen 2000); In the Songkhram River, the species spawns at the onset of the floods, and is believed to spawn on, or near floodplain areas (Vidthayanon 2001); Spawning period is from March to July, the eggs are grey-green and are semibouyant, spawning takes place in flooded areas with water plants or algae; after hatching, larvae live and forage near the hatching area but will move to small canals and then to large rivers (Khamtorn 1999); A brood fish of about 130 g and 19.5 cm in length spawn 60,000-80,000 eggs (Prugsachok et al. 1989). . Distribution: Found in flowing waters of all sizes in most rivers of the Mekong Basin (Rainboth 1996); Larvae/juveniles recorded from the drift in both the Mekong and Bassac Rivers in An Giang (Nguyen et al. 2002); Reported from the Xe Bangfai Basin (Kottelat 1989). Feeding: primarily a mollusc eater (Rainboth 1996, Mills and Vevers 1989), but also feeds on benthic insect larvae (Rainboth 1996, Mills and Vevers 1989, Bardach 1959, Khamtorn 1999, Prugsachok et al. 1989), worms (Rainboth 1996, Mills and Vevers 1989, Prugsachok et al. 1989); crustaceans (Bardach 1959, Mills and Vevers 1989), zooplankton (Khamtorn 1999), and scavenges (Khamtorn 1999, Prugsachok et al. 1989).
ECOLOGY - Migration type: Displays longitudinal as well as lateral migrations.
ECOLOGY - Status: Native
ECOLOGY - Habitat: Demersal
ECOLOGY - Resilience: Medium

Botia morleti (Rainboth W.)

IDENTIFICATION - Family: **Cobitidae** (Loaches)
IDENTIFICATION - Species name: ***Botia morleti***
IDENTIFICATION - Author: Tirant, 1885
IDENTIFICATION - Name in Khmer: ត្រីកញ្ជ្រោក
IDENTIFICATION - Name in Khmer (roman): Kanhchrouk
BIOLOGY - Length at maturity (cm): 7
BIOLOGY - Food: Mainly animals
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Likely (present in Laos and in the delta)
ECOLOGY - All MFD information: Migration: probably moves into temporarily flooded areas during high water levels. Young of the year return to rivers in November and December (Rainboth 1996).

Spawning: 0 . Distribution: 0. Feeding: Feeds on molluscs and benthic invertebrates (Rainboth 1996).
ECOLOGY - Status: No information
ECOLOGY - Habitat: No information
ECOLOGY - Resilience: No information


Datnioides polota (JJPhoto)

IDENTIFICATION - Family: **Coiidae**
IDENTIFICATION - Species name: ***Datnioides polota***
IDENTIFICATION - Author: Hamilton, 1822
IDENTIFICATION - Remark: Formerly Datnioides quadrifasciatus
IDENTIFICATION - Name in English: Four-barred tigerfish
BIOLOGY - Max. standard length (cm): 30
BIOLOGY - Length at maturity (cm): 18.5
BIOLOGY - Food: Mainly animals
ECOLOGY - Tonle Sap distribution: possible (upper distribution range = Phnom Penh)
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: No information


Cynoglossus cynoglossus (FAO)

IDENTIFICATION - Family: **Cynoglossidae**
IDENTIFICATION - Species name: ***Cynoglossus cynoglossus***
IDENTIFICATION - Author: Hamilton, 1822
IDENTIFICATION - Name in English: Bengal tongue sole
BIOLOGY - Max. total length (cm): 20
BIOLOGY - Length at maturity (cm): 12.9
BIOLOGY - Food: zoobenthos mainly animals
ECOLOGY - Tonle Sap distribution: Lim et al. 1999
ECOLOGY - Status: Native
ECOLOGY - Habitat: Demersal
ECOLOGY - Resilience: Medium


Cynoglossus feldmanni (Chavalit Vidthayanon)

IDENTIFICATION - Family: **Cynoglossidae** (Tonguefishes)
IDENTIFICATION - Species name: ***Cynoglossus feldmanni***
IDENTIFICATION - Author: Bleeker, 1853
IDENTIFICATION - Name in Khmer: ត្រីអណ្តាតឆ្កែ

IDENTIFICATION - Name in Khmer (roman): Andat chhkae
IDENTIFICATION - Name in English: River tonguesole
BIOLOGY - Max. total length (cm): 31
BIOLOGY - Max. standard length (cm): 25
BIOLOGY - Length at maturity (cm): 15.7
BIOLOGY - Food: zoobenthos mainly animals
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Date of spawning (% respondents): May 14.3%, Jun 57.1%, Jun-Jul 28.6%
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Kottelat, 1985
ECOLOGY - All MFD information: Migration: 0. Spawning: 0 . Distribution: A fresh-water species found well above the tidal zone in Cambodia (Prek Tasom) (Rainboth 1996); Larvae/juveniles have been recorded from the drift in the Mekong River in An Giang (Nguyen et al. 2002). Feeding: Feeds on benthic invertebrates (Rainboth 1996).
ECOLOGY - Status: Native
ECOLOGY - Habitat: Demersal
ECOLOGY - Resilience: Medium


Cynoglossus microlepis (Chavalit Vidthayanon)

IDENTIFICATION - Family: **Cynoglossidae** (Tonguefishes)
IDENTIFICATION - Species name: ***Cynoglossus microlepis***
IDENTIFICATION - Author: Bleeker, 1851
IDENTIFICATION - Name in Khmer: ត្រីអណ្តាតវែង
IDENTIFICATION - Name in Khmer (roman): Andat chhkae
IDENTIFICATION - Name in English: Smallscale tonguesole
BIOLOGY - Max. total length (cm): 40
BIOLOGY - Max. standard length (cm): 32.5
BIOLOGY - Length at maturity (cm): 19.8
BIOLOGY - Food: Mainly animals
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Spawns in rivers (% respondents): 97.5
REPRODUCTION - Spawns in streams / inlets (% respondents): 2.5
REPRODUCTION - Date of spawning (% respondents): May 14.3%, Jun 57.1%, Jun-Jul 28.6%
REPRODUCTION - Nurses in floodplain (% respondents): 100
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Kottelat, 1985
ECOLOGY - All MFD information: Migration: A white fish species (Bardach 1959). Spawning: It becomes adult at a size of 35 cm (Bardach 1959). . Distribution: Is relatively common just below the Khone Falls (Baird et al. 1999); Larvae/juveniles has been recorded from the drift in both the Mekong and Bassac Rivers in An Giang (Nguyen et al. 2002). Feeding: Feeds on benthic invertebrates (Rainboth 1996) and insects (Baird and Phylavanh 1999).
ECOLOGY - Migration type: Only seems to display Longitudinal migrations.
ECOLOGY - Feeds in floodplains (% respondents): 100
ECOLOGY - Status: Native
ECOLOGY - Habitat: Demersal
ECOLOGY - Resilience: Medium
GUILD - White fish guild (% respondents): 100

No picture available
IDENTIFICATION - Family: **Cyprinidae**
IDENTIFICATION - Species name: ***Amblyrhynchichthys micracanthus***
IDENTIFICATION - Author: Ng and Kottelat, 2004
BIOLOGY - Max. total length (cm): 24
BIOLOGY - Max. standard length (cm): 19.7

BIOLOGY - Length at maturity (cm): 12.8
ECOLOGY - Tonle Sap distribution: From FishBase
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: Medium

Cirrhinus caudimaculatus (Chavalit Vidthayanon)

IDENTIFICATION - Family: **Cyprinidae**
IDENTIFICATION - Species name: ***Cirrhinus caudimaculatus***
IDENTIFICATION - Author: Fowler, 1934
IDENTIFICATION - Remark: Formerly Henicorhynchus caudimaculatus
IDENTIFICATION - Name in Khmer (roman): Riel thmor
BIOLOGY - Max. total length (cm): 13
BIOLOGY - Length at maturity (cm): 8.8
BIOLOGY - Food: plants, plants/detritus + animals
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Most likely to occur in Cambodian rivers that flow into the western end of the Great Lake (Rainboth, 1996)
ECOLOGY - All MFD information: Migration: Migrations up small rivers and streams and out onto floodplains are well-known in Thailand. Returns to permanent waters from October with migration peaking in November and December (Rainboth 1996). Spawning: 0 . Distribution: Most likely to occur in Cambodian rivers that flow into the western end of the Great Lake (Rainboth 1996); Larvae/juveniles have been recorded from the drift in both the Mekong and Bassac Rivers in An Giang (Nguyen et al. 2002). Feeding: Its diet consisting of phytoplankton, periphyton, bottom algae, detritus, and some zooplankton (Rainboth 1996).
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: High

Hypophthalmichthys molitrix (Chavalit Vidthayanon)

IDENTIFICATION - Family: **Cyprinidae**
IDENTIFICATION - Species name: ***Hypophthalmichthys molitrix***
IDENTIFICATION - Author: Valenciennes, 1944
IDENTIFICATION - Name in Khmer: ត្រីការ៉ាបស
IDENTIFICATION - Name in Khmer (roman): Karb sor
IDENTIFICATION - Name in English: Silver carp
BIOLOGY - Max. total length (cm): 10.5
BIOLOGY - Length at maturity (cm): 61.9
BIOLOGY - Food: plants, mainly plants/detritus
ECOLOGY - Tonle Sap distribution: MFD occurence map
ECOLOGY - Status: No information
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: Medium

Poropuntius malcolmi (Warren, T.)

IDENTIFICATION - Family: **Cyprinidae**
IDENTIFICATION - Species name: ***Poropuntius malcolmi***
IDENTIFICATION - Author: Smith, 1945
IDENTIFICATION - Remark: Foremerly Hypsibarbus malcolmi
IDENTIFICATION - Name in English: Goldfin tinfoil barb
BIOLOGY - Max. standard length (cm): 50
BIOLOGY - Length at maturity (cm): 29
BIOLOGY - Food: Mainly animals
ECOLOGY - Tonle Sap distribution: MFD occurence map
ECOLOGY - Status: No information
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: Low

Albulichthys albuloides (Rainboth W.)

IDENTIFICATION - Family: **Cyprinidae** (Minnows or carps)
IDENTIFICATION - Species name: ***Albulichthys albuldoides***
IDENTIFICATION - Author: Bleeker, 1855
IDENTIFICATION - Name in Khmer: ត្រីឆ្កោកទីទុយ
IDENTIFICATION - Name in Khmer (roman): Chkaok tytuy
BIOLOGY - Max. standard length (cm): 30
BIOLOGY - Length at maturity (cm): 18.5
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: MFD occurence map
ECOLOGY - All MFD information: Migration: A white fish species (Bardach 1959). Spawning: Spawns from April to July in Cambodia (Bardach 1959). Distribution: Adults are common in the Great Lake and are seen sporadically downstream. Juveniles may be found as far downstream as the upper tidal zone of the Mekong Delta in Viet Nam (Rainboth 1996); Larvae/juveniles have been recorded from the drift in the Mekong River in An Giang (Nguyen et al. 2002). Feeding: Omnivorous, with a preference for vegetal matter (Rainboth 1996, Lim et al. 1999).
ECOLOGY - Migration type: Displays longitudinal as well as lateral migrations.
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: Low

Amblyrhynchichthys truncatus (Warren, T.)

IDENTIFICATION - Family: **Cyprinidae** (Minnows or carps)
IDENTIFICATION - Species name: ***Amblyrhynchichthys truncatus***
IDENTIFICATION - Author: Bleeker, 1851
IDENTIFICATION - Name in Khmer: ត្រីកំបុតច្រមុះ
IDENTIFICATION - Name in Khmer (roman): Kambot chramos
IOLOGY - Max. total length (cm): 49
BIOLOGY - Max. standard length (cm): 40
BIOLOGY - Length at maturity (cm): 23.8
BIOLOGY - Food: plants plants/detritus+animals
BIOLOGY - Notes: It is a it is a benthopelagic riverine species, but is also found in standing water bodies. It is medium to long-lived (Warren 2000).
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Thuok, N and L. Sina, 1997
ECOLOGY - All MFD information: Migration: A white fish species (Bardach 1959), which moves into inundated forests during the flood season and returns to the rivers in October and November as floodwaters recede (Rainboth 1996) in November-December (Baird et al. 1999). It migrates up from Cambodia to Laos in January and February, and it returns to Cambodia in June-July (Baird et al. 1999). Spawning: pelagic spawner, producing buoyant or semi-buoyant eggs; Spawns in floodplains and mainstreams of large rivers during the wet-season (Warren 2000) in July (Baird et al. 1999). . Distribution: Mainstream and tributaries in Lao PDR, Tonle Sap in Cambodia (Baird et al. 1999). Larvae/juveniles have been recorded from the drift in the Mekong River in An Giang (Nguyen et al. 2002). Feeding: Feeds on algae (Lieng et al. 1995, Baird et al. 1999); detritus (Baird and Phylavanh 1999), periphyton, phytoplankton, benthic algae, small zooplankton (Rainboth 1996, 10616, Warren 2000) and small insects (Baird et al. 1999).
ECOLOGY - Migration type: Only seems to display Longitudinal migrations.
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: Low

Balantiocheilos melanopterus (Chavalit Vidthayanon)

IDENTIFICATION - Family: **Cyprinidae** (Minnows or carps)
IDENTIFICATION - Species name: ***Balantiocheilos melanopterus***
IDENTIFICATION - Author: Bleeker, 1851
IDENTIFICATION - Name in Khmer: ត្រីគៀតស្រង
IDENTIFICATION - Name in Khmer (roman): Keat srang
IDENTIFICATION - Name in English: Tricolor sharkminnow
BIOLOGY - Max. total length (cm): 43
BIOLOGY - Max. standard length (cm): 35
BIOLOGY - Length at maturity (cm): 21.2
BIOLOGY - Food: plants/detritus+animals
BIOLOGY - Notes: Generally intolerant of habitat alterations, it has completely disappeared in Thailand and should receive special listing by the IUCN (Rainboth 1996).
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Heemstra, and Smith, 1986
ECOLOGY - All MFD information: Migration: A white fish species (Bardach 1959), which moves into flooded forests during high water levels and returns to the rivers in December (Rainboth 1996). Spawning: The fish reaches adult size at 35 cm (Bardach 1959). . Distribution: It occurred regularly in rivers downstream from the Great Lake in the 1950s, but the species has become rare in recent years, perhaps due to human activities. It now occurs in a few rivers flowing through relatively

pristine inundated forest at the eastern end of the Great Lake (Rainboth 1996). Feeding: Feeds on plant fragments (Bardach 1959), phytoplankton (Rainboth 1996, Baird et al. 1999), shrimp (Baird et al. 1999) small crustaceans and rotifers (Vaas 1953) as well as insects and their larvae (Vaas 1953, Baird et al. 1999).
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: Medium

Barbichthys nitidus (Baird, I.G.)

IDENTIFICATION - Family: **Cyprinidae** (Minnows or carps)
IDENTIFICATION - Species name: ***Barbichthys nitidus***
IDENTIFICATION - Author: Sauvage, 1878
BIOLOGY - Max. total length (cm): 31
BIOLOGY - Max. standard length (cm): 25
BIOLOGY - Length at maturity (cm): 15.7
BIOLOGY - Food: Mainly plants/detritus
BIOLOGY - Notes: Not known to persist in impoundments (Rainboth 1996).
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Rainboth, 1996
ECOLOGY - All MFD information: Migration: A white fish species (Bardach 1959); Migrates up small streams, and canals to ponds, swamps and floodplains in the rain season to spawn (Baird et al. 1999). Spawning: 0 . Distribution: Found in large and medium-sized rivers (Rainboth 1996, Baird et al. 1999) in Laos, Thailand, Cambodia and Viet Nam (Kottelat 2001). In Tonle Sap it is seen from October through December as flood waters recede, but fishermen now report it as rare (Rainboth 1996); Juveniles found in the Songkhram river (Termvichakorn 2001). Feeding: Feeds on algae and phytoplankton (Rainboth 1996).
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: Medium

Barbonymus altus (Warren, T.)

IDENTIFICATION - Family: **Cyprinidae** (Minnows or carps)
IDENTIFICATION - Species name: ***Barbonymus altus***
IDENTIFICATION - Author: Günther, 1868
IDENTIFICATION - Name in Khmer: ត្រីកាហែក្រហម
IDENTIFICATION - Name in Khmer (roman): Kahe krohorm
IDENTIFICATION - Name in English: Red tailed tinfoil
BIOLOGY - Max. total length (cm): 25
BIOLOGY - Max. standard length (cm): 20
BIOLOGY - Length at maturity (cm): 12.9
BIOLOGY - Food: plants mainly plants/detritus
BIOLOGY - Notes: It is semi-pelagic and appears to thrive in standing waters, but it has a requirement to return to flowing water to spawn. It is medium to long-lived (Warren 2000).

ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Thuok, N and L. Sina, 1997
ECOLOGY - All MFD information: Migration: A white fish species (Bardach 1959); Undertakes annual upstream and downstream non-reproductive and reproductive migrations (Roberts 1993, Warren 2000); Migrates up from Cambodia to Southern Lao PDR in January-February, and migrate back to Cambodia in May-June (Baird et al. 1999); Colonises inundated forest from where the adults migrate back to the river in October. Young of the year follow in the next few months as water levels recede (Rainboth 1996). Spawning: Bardach (1959) mentioned that it becomes adult at 25 cm (Bardach 1959), however, recent research has shown that it matures already at a length of 13 cm (Duangsawasdi et al. 1989, Duangsawasdi et al. 1989., Leelapatra et al. 2000); Fish of body length of 19-21 cm may carry 24,673 eggs (Duangsawasdi et al. 1989, Duangsawasdi et al. 1989.). It spawns in July-August (Baird et al. 1999); However the species appears to have a protracted spawning season (Warren 2000) with a peak in the late rainy season in September (Duangsawasdi et al. 1989); It spawns pelagically in floodplains and flooded forest (Warren 2000), or among flooded vegetation (Baird et al. 1999); and has buoyant or semi-buoyant eggs, with an initial diameter of 0.74 mm (Duangsawasdi et al. 1989), which hatch 12 hours after fertilization at 28ºC (Vongsongsang 1999). Although the species appears to thrive in standing waters, it has a requirement to return to flowing water to spawn (Warren 2000). . Distribution: Found basin wide in the mainstream of the Lower Mekong (Pantulu 1986, Kottelat 2001); also reported from the Xe Bangfai basin (Kottelat 1998); Larvae/juveniles have been recorded from the drift in the Mekong and Bassac Rivers in An Giang (Nguyen et al. 2002). Feeding: Feeds on a wide variety of animal and plant matter (Rainboth 1996), gastropod snails, earthworms, shrimp, and fine green algae (Baird and Phylavanh 1999), filamentous algae (Warren 2000), detritus (Vongsongsang 1999, Warren 2000), and terrestrial fruits and plants falling in the water (Baird et al. 1999).
ECOLOGY - Migration type: Displays longitudinal as well as lateral migrations.
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: Medium


Barbonymus gonionotus (Warren, T.)

IDENTIFICATION - Family: **Cyprinidae** (Minnows or carps)
IDENTIFICATION - Species name: ***Barbonymus gonionotus***
IDENTIFICATION - Author: Bleeker, 1850
IDENTIFICATION - Name in Khmer: ត្រីឆ្ពិនប្រាក់
IDENTIFICATION - Name in Khmer (roman): Chpin prak
IDENTIFICATION - Name in English: Java barb
BIOLOGY - Max. total length (cm): 40.5
BIOLOGY - Length at maturity (cm): 24.1
BIOLOGY - Food: plants plants/detritus+animals
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: Water level variation is a migration trigger
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Thuok, N and L. Sina, 1997
ECOLOGY - All MFD information: Migration: A migratory species (Bardach 1959, Welcomme 1988); However it is not considered to be a long-distance migratory species. Most fishers report that it is a local migrant migrating from the Mekong up into small streams and canals and onto flooded areas during the rainy season, and back again when the water recedes (Poulsen and Valbo-Jørgensen 2000); during the rainy season it migrates upstream Sekong, Sesan and Srepok (Baird et al. 1999). Spawning: It is an opportunistic spawner, in which developed eggs were

reported from March to June (Poulsen and Valbo-Jørgensen 2000); It spawns in the rainy season between May and June (Janesirisak 1971), May to July (Sangkagul and Srisuwantach 1973) or July to August (Baird et al. 1999) depending on environmental factors such as rainfall and water current spawning season (Janesirisak 1971), It appears that spawning is highly synchronised with the occurrence of rainfall (Sukumasavin and Leelapatra 1994). The species normally reach maturity after one year (Anon 1997), but it can reach this stage only eight (Paohorm 19697) or ten (Khanh et al. 1999.) months old with a body length of 8-8.5 cm, and a weight of 9-20 g (Paohorm 19697, Khanh et al. 1999.); The species is known to have a high fecundity (Amatyakul et al. 1995, Leelapatra et al. 2000) with 200,000-300,000 eggs/kg (CTU, FD 1997, CTU, FD 1994) or 600,000-800,000 eggs/kg (Khanh et al. 1999.). The eggs are semi-buoyant (Leelapatra et al. 2000, Khanh et al. 1999.), with an initial size of 0.5-0.8 mm. The maximum size after water absorption is 2.5-3.5 mm (Leelapatra et al. 2000, Khanh et al. 1999.); Hatching occurs 12 hr after fertilization at 25ºC (Leelapatra et al. 2000, Khanh et al. 1999.); Total length of the larva at hatching time is 2-3 mm (Leelapatra et al. 2000, Khanh et al. 1999.). . Distribution: Occurs throughout the whole freshwater stretch on the Mekong, from the delta around the saline intrusion zone to at least Chiang Khong and Bokeo, in Thailand and Lao PDR respectively (Poulsen and Valbo-Jørgensen 2000); it is also found basin wide in tributaries (Pantulu 1986); for example recorded from the Xe Bangfai basin (Kottelat 1998); Larvae/juveniles have been sampled from the drift in the Mekong River in An Giang (Nguyen et al. 2002). Feeding: Omnivorous (Rainboth 1996): Feeds on plant matter and invertebrates (Mohsin and Ambak 1983); plants, insects and detritus (Yap 1988); Larvae to 3 inches fingerlings are plankton feeders, and 3 inches to adults are herbivorous (Leelapatra et al. 2000); Fish smaller than 10 cm feed on detritus, aquatic plants and algae; Fish bigger than 10 cm feed more on plants, organic matter and algae (Anon 1997).
ECOLOGY - Migration type: Displays longitudinal as well as lateral migrations.
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: Medium


Barbonymus schwanenfeldii (Baird, I.G.)

IDENTIFICATION - Family: **Cyprinidae** (Minnows or carps)
IDENTIFICATION - Species name: ***Barbonymus schwanenfeldii***
IDENTIFICATION - Author: Bleeker, 1853
IDENTIFICATION - Name in Khmer: ត្រីកាហែលឿង
IDENTIFICATION - Name in Khmer (roman): Kahe lueung
IDENTIFICATION - Name in English: Tinfoil barb
BIOLOGY - Max. total length (cm): 43
BIOLOGY - Max. standard length (cm): 35
BIOLOGY - Length at maturity (cm): 21.2
BIOLOGY - Food: zoobenthos mainly animals
BIOLOGY - Notes: A temperature range of 20.4-33.7C has been recorded for this species (6129).
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Kottelat, M., 1985
ECOLOGY - All MFD information: Migration: 0. Spawning: 0 . Distribution: Reported from the Xe Bangfai Basin (Kottelat 1998). Xe Pian, Xe Kamane, Houay Ka Liang and Sekong (Baird et al. 1999). Feeding: Consumes aquatic macrophytes, submerged land plants, filamentous algae, small fishes (Rainboth 1996, Baird et al. 1999), insects (Rainboth 1996, Mills and Vevers 1989, Yap 1988, Baird et al. 1999), worms, crustaceans (Mills and Vevers 1989) and zoobenthos (Yap 1988).
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: High

Barilius pulchellus (CAFS)

IDENTIFICATION - Family: **Cyprinidae** (Minnows or carps)
IDENTIFICATION - Species name: ***Barilius pulchellus***
IDENTIFICATION - Author: Smith, 1931
BIOLOGY - Max. total length (cm): 14
BIOLOGY - Max. standard length (cm): 11
BIOLOGY - Length at maturity (cm): 7.6
BIOLOGY - Food: zoobenthos mainly animals
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Lim et al. 1999
ECOLOGY - All MFD information: Migration: 0. Spawning: 0 . Distribution: Thailand, Laos, Yunnan (Kottelat 2001); Reported from Xe Bangfai and Nam Theun basins (Kottelat 1998). Feeding: Diet consists of insect larvae (Rainboth 1996, Kottelat 1989, Baird et al. 1999), especially odonatans (Rainboth 1996, Kottelat 1989).
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: High

Catlocarpio siamensis (IGFA)

IDENTIFICATION - Family: **Cyprinidae** (Minnows or carps)
IDENTIFICATION - Species name: ***Catlocarpio siamensis***
IDENTIFICATION - Author: Boulenger, 1898
IDENTIFICATION - Name in Khmer: ត្រីគល់រាំង
IDENTIFICATION - Name in Khmer (roman): Kulreang
IDENTIFICATION - Name in English: Giant barb
BIOLOGY - Max. total length (cm): 300
BIOLOGY - Length at maturity (cm): 141.4
BIOLOGY - Food: plants mainly plants/detritus
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Hill, and Hill, 1994; Roberts and Warren, 1994
ECOLOGY - All MFD information: Migration: A white fish species (Bardach 1959); Juveniles enter inundated areas during the rainy season (Baird and Phylavanh 1999). Spawning: Eggs are seen from January to August, but most fishers report eggs from May to July (Poulsen and Valbo-Jørgensen 2000); It spawns in the rainy season between June to July (Baird et al. 1999) or July to August (Leelapatra et al. 2000) in swamps which receives water from the river (Smith 1945); and two to four centimetres long juveniles appears from July to November (Poulsen and Valbo-Jørgensen 2000). The giant barb reaches maturity at an age of 7 years, and a body weight of 9 kg (Sukumasavin 1996.); A 60 kg female sheds about 400,000 (Tangtrongpiros et al. 1986) semi-buoyant eggs, that are dark brown in colour and has an initial size of 1 mm expanding to 3 mm

after water absorption (Leelapatra et al. 2000); Hatching occurs 20-22 hr after fertilization at 28-29ºC; Larva length at hatching is about 6 mm (Unakornsawat and Aupakaratna 1996). . Distribution: Found basin wide in the mainstream of the Mekong (Pantulu 1986); Known from large rivers and seasonally in canals and floodplains. It is now almost never seen in the Great Lake, and has become quite rare throughout Cambodia (Rainboth 1996); It has been recorded from Se Kong, Xe Lamphao, Xe Khamphor and Xe Pian (Baird et al. 1999). The species seem to be encountered regularly at several localities from Nong Khai and further north up to Chiang Saen, both on the Thai and the Lao side of the river. It is also recorded at stations in Nakhon Phanom and Ubon Ratchathani. It is more common in Cambodia and Viet Nam, where it is encountered all the year at many stations (Poulsen and Valbo-Jørgensen 2000). Feeding: Diet consists mainly of algae (Rainboth 1996, Leelapatra et al. 2000, Baird et al. 1999), phytoplankton (Rainboth 1996, Leelapatra et al. 2000), and during the high water season fruits of terrestrial plants (Rainboth 1996, Leelapatra et al. 2000, Baird and Phylavanh 1999, Baird et al. 1999) and vegetation (Baird and Phylavanh 1999, Baird et al. 1999); It is also known to eat fish (Baird and Phylavanh 1999).
ECOLOGY - Migration type: Displays longitudinal as well as lateral migrations.
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: Low

Cirrhinus jullieni (Baird, I.G.)

IDENTIFICATION - Family: **Cyprinidae** (Minnows or carps)
IDENTIFICATION - Species name: ***Cirrhinus jullieni***
IDENTIFICATION - Author: Sauvage, 1878
IDENTIFICATION - Name in Khmer: ត្រីផ្ការ
IDENTIFICATION - Name in Khmer (roman): Phkar ko
BIOLOGY - Max. total length (cm): 25
BIOLOGY - Max. standard length (cm): 20
BIOLOGY - Length at maturity (cm): 12.9
BIOLOGY - Food: Mainly plants/detritus
BIOLOGY - Notes: This is a diurnal species (NIFI 1993).
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: Can breed in reservoirs
ECOLOGY - Tonle Sap distribution: Kottelat, 1985
ECOLOGY - All MFD information: Migration: A white fish species (Bardach 1959); Migrates up the Mekong River from Cambodia to southern Lao PDR in January-February (Baird et al. 1999). Spawning: The spawning season is between April and June (Duangsawasdi et al. 1989.) or April and September (Watanadirokul K et al. 1987) depending on environmental factors such as rainfall and water current (Watanadirokul K et al. 1987); Bardach (1959) suggested that it spawns in lakes (Bardach 1959), It has been found however that fishes in some reservoirs migrate upstream the inflowing rivers for spawning (Leelapatra et al. 2000). Length at maturity is 9-13 cm. (Duangsawasdi et al. 1989., 1036798, Duangsawasdi et al. 1989.); Fish with body length of 12-21 cm are found to have 23,550-117,000 eggs (Watanadirokul K et al. 1987, Duangsawasdi et al. 1989.); The eggs are semi-buoyant, and hatching occurs 13 hr after fertilization at 27ºC; The total length of the larvae at hatching is about 2 mm (Leelapatra et al. 2000). . Distribution: Found basin wide in the mainstream of the Lower Mekong (Pantulu 1986); Found only downstream Khone Falls (Kottelat 2001). Feeding: Feeds on algae, detritus, occasional benthic invertebrates (Rainboth 1996, Leelapatra et al. 2000, Baird et al. 1999); phytoplankton and plant litter (NIFI 1993).
ECOLOGY - Migration type: Only seems to display Longitudinal migrations.
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: Medium

Cirrhinus microlepis (Rainboth W.)

IDENTIFICATION - Family: **Cyprinidae** (Minnows or carps)
IDENTIFICATION - Species name: ***Cirrhinus microlepis***
IDENTIFICATION - Author: Sauvage, 1878
IDENTIFICATION - Name in Khmer: ត្រី ព្រួល/ក្រឡង់
IDENTIFICATION - Name in Khmer (roman): Pruol / Krolang
IDENTIFICATION - Name in English: Small scale mud carp
BIOLOGY - Max. total length (cm): 80
BIOLOGY - Max. standard length (cm): 65
BIOLOGY - Length at maturity (cm): 36.6
BIOLOGY - Food: plants mainly plants/detritus
BIOLOGY - Notes: It is a long-lived, benthopelagic, riverine species (Warren 2000), which is not known to persist in impoundments (Rainboth 1996); It is a fast swimmer, and a nervous and lively fish, which will jump many feet into the air in order to clear obstacles. The fish schools appear in certain definite periods and are captured in large amounts in only a few locations; There are reports that this fish shows four year cycles of abundance (Bardach 1959).
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Hill, and Hill, 1994; Rainboth, 1996
ECOLOGY - All MFD information: Migration: A white fish species (Bardach 1959); Above the Khone Falls it migrates downstream in June (Singanouvong et al. 1996, Bouakhamvongsa et al. 1994) or July and August (Warren 2000) to spawn at a site 48-52 km south of Pakse (Bouakhamvongsa et al. 1994, Warren 2000) possibly from as far upstream as Khammuan (Bouakhamvongsa et al. 1994); After spawning, adults and juveniles move downstream and out onto floodplains where they stay during the flood season, when the water begins to recede at the end of the flood season, the fishes move back into rivers (Poulsen and Valbo-Jørgensen 2000); In Cambodia the fish moves into the Tonle Sap when the water level increases in order to feed in the rich feeding grounds of the inundated forests (Bardach 1959), at the descent of the waters they leave the Great Lake (Rainboth 1996, Bardach 1959) and the Tonle Sap regions in waves and migrate up the Mekong, like in the case with all Cambodian migrating fishes this coincides with the waxing moon, that is, it occurs between the fifth and the fifteenth day of the Vietnamese calendar (Bardach 1959); During late December or early January large individuals (2-3 kg), and some smaller individuals begin arriving in the Mekong mainstream of southern Lao PDR on their upstream dry-season migration. They appear to congregate over shallow, rocky ground where they graze on areas of filamentous algae developing on rock surfaces. Towards the middle of the dry-season, and particularly around the time of the new moon phase of the first and second lunar cycles after the winter solstice, large numbers of small individuals begin appearing in fish landings. The exact purpose of this upstream, dry-season movement is unknown but likely involves dispersal and feeding (Warren et al. Scott and Crossman 1973). Spawning: It spawns in the Mekong mainstream (Warren 2000, Poulsen and Valbo-Jørgensen 2000, Bardach 1959); for example in the rapids between Sambor to Khone Falls (Bardach 1959), and at Phatomphone, 48 km south of Pakse, where they are caught in considerable numbers in full spawning condition (Warren 2000). It spawns during the wet-season (Warren 2000), in May-June (Baird et al. 1999); June to August (Kantejit 1979, Poulsen and Valbo-Jørgensen 2000); or June to July (Bardach 1959); It is a pelagic spawner and the eggs are buoyant or semi-buoyant (Warren 2000, Pinyoying 1970) and drift downstream and out onto flooded areas (Poulsen and Valbo-Jørgensen 2000). It is sexually mature when 17 cm long (Smith 1945); Females of 47-65 cm total length and weighing 1.8-2.9 kg may bear 131,290-271,040 eggs (Pinyoying 1970, Kantejit 1979); The diameter of the egg is about 2 mm (Kantejit 1979). . Distribution: Found basin wide in the mainstream of the Lower Mekong (Pantulu 1986); from the Delta to Chiang Saen (Poulsen and Valbo-Jørgensen 2000); also reported from the Xe Bangfai (Kottelat 1998), Mun (Leelapatra et al. 2000), Se Kong, Xe Pian, Xe Kamanh, and Xe Sou (Baird et al. 1999); Larvae/juveniles have been recorded from the drift in both the Mekong and Bassac Rivers in An Giang (Nguyen et al. 2002).There seem to be at least two

populations: One population from Loei to Chiang Saen and another from Boulikhamxay in the North to the Mekong Delta (Poulsen and Valbo-Jørgensen 2000). Feeding: Feeds on phytoplankton (Rainboth 1996, Pothipituk 1970), plant fragments (Bardach 1959, Warren 2000, Baird et al. 1999) and detritus (Warren 2000); It grazes on filamentous algae (Warren 2000, Bardach 1959, Baird and Phylavanh 1999, Singanouvong et al. 1996) especially during the clear water dry season (Singanouvong et al. 1996); With the flood it moves into the flooded forest where it feeds on leaves (Rainboth 1996, Baird and Phylavanh 1999, Baird et al. 1999) wood and lichens (Baird et al. 1999); Although it is mainly a herbivorous fish (Smith 1945), it also feeds on zooplankton (Pothipituk 1970) and insects (Rainboth 1996, Warren 2000, Baird et al. 1999).
ECOLOGY - Migration type: Displays longitudinal as well as lateral migrations.
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: Medium

Cirrhinus molitorella (IFReDI collection)

IDENTIFICATION - Family: **Cyprinidae** (Minnows or carps)
IDENTIFICATION - Species name: ***Cirrhinus molitorella***
IDENTIFICATION - Author: Valenciennes, 1844
IDENTIFICATION - Remark: Formerly Cirrhinus prosemion
IDENTIFICATION - Name in Khmer: ត្រីផ្ការ៉ាត
IDENTIFICATION - Name in Khmer (roman): Phkar ko
IDENTIFICATION - Name in English: Mud carp
BIOLOGY - Max. total length (cm): 55
BIOLOGY - Length at maturity (cm): 31.6
BIOLOGY - Food: plants mainly plants/detritus
BIOLOGY - Notes: It is a riverine benthopelagic species (Warren 2000), which is not known to persist in impoundments (Rainboth 1996). It is medium to long-lived (Warren 2000).
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: Can breed in reservoirs
ECOLOGY - Tonle Sap distribution: Lim et al. 1999
ECOLOGY - All MFD information: Migration: Wild stocks are strongly migratory, while the cultivated stocks probably have lost the migratory behaviour (Roberts 1997); Engages in upstream dry-season migrations in the Mekong mainstream of southern Lao PDR (Baird et al. 1999) in January-February (Baird et al. 1999) and either enters tributaries, or remains in the Mekong mainstream for spawning during the wet-season months (Warren 2000), also known to migrate into floodplains (Baird et al. 1999). Spawning: It spawns in floodplains and mainstreams of large rivers during wet-season (Warren 2000, Baird et al. 1999); It is a pelagic spawner, which produces buoyant or semi-buoyant eggs (Warren 2000). . Distribution: Occurs in Middle and Upper Mekong (Rainboth 1996); has also been reported from the Nam Theun, Xe Bangfai (Kottelat 1998), Nam Sekong and tributaries, Xe Kamanh, Xe Pian and Xe Sou (Baird et al. 1999). Feeding: Feeds on algae (Singanouvong et al. 1996, Baird and Phylavanh 1999, Warren 2000) including filamentous algae, periphyton and also other plant material and detritus (Warren 2000); Juveniles feed on aquatic and terrestrial plants (Dudgeon 1983); Lim et al. (1999) however postulated that it is omnivorous (Lim et al. 1999).
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: Low

Cosmochilus harmandi (Warren, T.)

IDENTIFICATION - Family: **Cyprinidae** (Minnows or carps)
IDENTIFICATION - Species name: ***Cosmochilus harmandi***
IDENTIFICATION - Author: Sauvage, 1878
IDENTIFICATION - Name in Khmer: ត្រីកំពូលចាយ
IDENTIFICATION - Name in Khmer (roman): Chhkok Kda / Kampoul Bai
BIOLOGY - Max. total length (cm): 100
BIOLOGY - Length at maturity (cm): 53.5
BIOLOGY - Food: plants mainly plants/detritus
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Spawns in rivers (% respondents): 97.5
REPRODUCTION - Spawns in streams / inlets (% respondents): 2.5
REPRODUCTION - Nurses in floodplain (% respondents): 100
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Hill and Hill, 1994
ECOLOGY - All MFD information: Migration: A white fish species (Bardach 1959); Found in the clear waters of the main channels during the dry season and moves to floodplains and riparian forests during the rainy season. Returns to the Tonle Sap fairly early, usually during October (Rainboth 1996); Migrates upstream for spawning in June-July (Baird et al. 1999). Spawning: A female of 5,2 kg was found to be full of eggs in August (Baird and Phylavanh 1999). . Distribution: Found basin wide in the Mekong mainstream (Pantulu 1986, Kottelat 2001); The species is relatively common in the upland river habitat of the Middle Mekong until water levels begin to rise (Rainboth 1996). Feeding: Feeds on plant matter (Lim et al. 1999), algae (Baird and Phylavanh 1999, Baird et al. 1999), eggs, detritus, earthworms, roots, bark (Baird and Phylavanh 1999), small gastropod snails (Baird and Phylavanh 1999, Baird et al. 1999) and zooplankton (Baird et al. 1999).
ECOLOGY - Migration type: Only seems to display Longitudinal migrations.
ECOLOGY - Feeds in floodplains (% respondents): 100
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: Low
GUILD - White fish guild (% respondents): 100

Crossocheilus reticulatus (Bui, H.M.)

IDENTIFICATION - Family: **Cyprinida**e (Minnows or carps)
IDENTIFICATION - Species name: ***Crossocheilus reticulatus***
IDENTIFICATION - Author: Fowler, 1934
IDENTIFICATION - Name in Khmer: ត្រីចង្វាជញ្ជក់
IDENTIFICATION - Name in Khmer (roman): Changva chunchuk
BIOLOGY - Max. total length (cm): 21
BIOLOGY - Max. standard length (cm): 17
BIOLOGY - Length at maturity (cm): 11.2
BIOLOGY - Food: plants/detritus+animals
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs

ECOLOGY - Tonle Sap distribution: Hill, and Hill, 1994, Rainboth, 1996
ECOLOGY - All MFD information: Migration: Migrates in schools from Cambodia to southern Laos in December to January. The fish species migrates into tributaries (Baird et al. 1999) and floodplains during high water (Rainboth 1996, Baird et al. 1999) in June-July and migrate back to the mainstream at the end of the flood season (Baird et al. 1999). Spawning: Spawns in floodplains in June to July (Baird et al. 1999). . Distribution: Mekong Basin in Laos, Yunnan, Thailand, Cambodia and Viet Nam (Kottelat 2001); Recorded from the Xe Bangfai Basin (Kottelat 1998); Larvae/juveniles recorded from the drift in the Mekong and Bassac Rivers in An Giang (Nguyen et al. 2002). Feeding: Feeds on algae, periphyton, phytoplankton, and some zooplankton (Rainboth 1996).
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: Medium

Cyclocheilichthys apogon (Rainboth W.)

IDENTIFICATION - Family: **Cyprinidae** (Minnows or carps)
IDENTIFICATION - Species name: ***Cyclocheilichthys apogon***
IDENTIFICATION - Author: Valenciennes, 1842
IDENTIFICATION - Name in Khmer: ត្រីស្រកាក្តាម
IDENTIFICATION - Name in Khmer (roman): Sraka kdam
IDENTIFICATION - Name in English: Beardless barb
BIOLOGY - Max. total length (cm): 25
BIOLOGY - Length at maturity (cm): 17.7
BIOLOGY - Food: zoobenthos plants/detritus+animals
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: Can breed in reservoirs
ECOLOGY - Tonle Sap distribution: Rainboth, 1996
ECOLOGY - All MFD information: Migration: A white fish species (Bardach 1959), which moves into flooded forests and also non-forested floodplains (Rainboth 1996); Migrates upstream to spawn in August-September (Baird et al. 1999). Spawning: It is known to breed late in the high-water season from September to October as water levels peak and begin to decline (Rainboth 1996, Bardach 1959); However in reservoirs, spawning may occur all year round with peaks during December to January and July to August (Sukomon 1970); In reservoirs it may spawn at the inflow of rivers (Dumrongtripob et al. 1997). Females reach maturity at 10.3 cm while males are mature at 9.7 cm; The average fecundity in 150 mm fish is 3,943 eggs. The smallest fry is 17 mm total length and 0.33 g. (Sukomon 1970); Fish of 10.4-17.7 cm long have about 1,157--11,328 eggs of 0.8-1.1 mm diameter (Krachangdara 1994). . Distribution: A common species in the Mekong (Rainboth 1996); and found basin wide in tributaries of the Lower Basin (Pantulu 1986). Feeding: Feeds on planktonic crustaceans (Bardach 1959, Leelapatra et al. 2000, Rainboth 1996), mainly Cladocera and a few Copepoda; It also feeds on diatoms, green algae, blue green algae and detritus (Sukomon 1970); Both juveniles and adults feed on zoobenthos, and insects (Yap 1988).
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: Medium

Cyclocheilichthys armatus (Warren, T.)

IDENTIFICATION - Family: **Cyprinidae** (Minnows or carps)
IDENTIFICATION - Species name: ***Cyclocheilichthys armatus***
IDENTIFICATION - Author: Valenciennes, 1842
IDENTIFICATION - Name in Khmer: ត្រីស្រកាក្តាម
IDENTIFICATION - Name in Khmer (roman): Sraka kdam
BIOLOGY - Max. total length (cm): 29
BIOLOGY - Max. standard length (cm): 23
BIOLOGY - Length at maturity (cm): 14.6
BIOLOGY - Food: zooplankton mainly animals
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Thuok, N and L. Sina, 1997
ECOLOGY - All MFD information: Migration: A white fish species (Bardach 1959), which lives in rivers during the dry season and migrates to floodplains to spawn in the rainy season (Rainboth 1996). Spawning: Reproduction takes place relatively late in the high-water season during September and October (Bardach 1959, Rainboth 1996, Baird et al. 1999). . Distribution: A common species in the Mekong (Rainboth 1996) which is found basin wide in the mainstream (Pantulu 1986); and also recorded in the Xe Bangfai Basin (Kottelat 1998). Feeding: Diet consists of zooplankton, small crustaceans, chironomids, and other insect larvae (Rainboth 1996).
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: Medium

Cyclocheilichthys enoplus (Baird,I.)

IDENTIFICATION - Family: **Cyprinidae** (Minnows or carps)
IDENTIFICATION - Species name: ***Cyclocheilichthys enoplos***
IDENTIFICATION - Author: Bleeker, 1850
IDENTIFICATION - Name in Khmer: ត្រីឆ្កោក
IDENTIFICATION - Name in Khmer (roman): Chhkaok
BIOLOGY - Max. total length (cm): 91
BIOLOGY - Max. standard length (cm): 74
BIOLOGY - Length at maturity (cm): 41.1
BIOLOGY - Food: zooplankton mainly animals
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: Water level variation is a migration trigger
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Thuok, N and L. Sina, 1997
ECOLOGY - All MFD information: Migration: A white fish species (Bardach 1959); which migrates upstream as a response to the first rainfall at the end of the dry season as well as rising water levels and higher turbidity (Poulsen and Valbo-Jørgensen 2000), it returns to the rivers from October to December (Blache and Goossens 1954). Spawning: It probably spawns in the early

flood season (Poulsen and Valbo-Jørgensen 2000, Rainboth 1996) July-August (Suntornratana 2001); Females reach sexual maturity at a length of 10.3 cm, while males reach this stage at 9.7 cm, the average fecundity in 150 mm fish is 3,943 eggs (Sukomon 1970); It is a total spawner (Suntornratana 2001), which spawns on floodplains, inundated riparian forests (Rainboth 1996) or in the main river channel (Poulsen and Valbo-Jørgensen 2000), eggs and larvae are pelagic (Suntornratana 2001), and drift from the spawning ground onto flooded areas or stagnant, shallow segments of the mainstream (Poulsen and Valbo-Jørgensen 2000). Distribution: Common in the Mekong (Rainboth 1996) which is found basin wide in the mainstream (Pantulu 1986); from Bokeo in the north to the Mekong Delta in the south (Poulsen and Valbo-Jørgensen 2000); Larvae/juveniles have been recorded from the drift in the Mekong and Bassac Rivers in An Giang (Nguyen et al. 2002). Feeding: Feeds on snails, fine algae, earthworms, detritus (Baird and Phylavanh 1999), roots (Baird and Phylavanh 1999, Ukkatawewat 9999), insect larvae, crustaceans, and fish (Rainboth 1996), bivalves, and green algae (Ukkatawewat 9999); Young feed on zooplankton (Rainboth 1996, Ukkatawewat 9999).
ECOLOGY - Migration type: Displays longitudinal as well as lateral migrations.
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: Very low

Cyclocheilichthys furcatus (Warren, T.)

IDENTIFICATION - Family: **Cyprinidae** (Minnows or carps)
IDENTIFICATION - Species name: ***Cyclocheilichthys furcatus***
IDENTIFICATION - Author: Sontirat, 1989
IDENTIFICATION - Name in Khmer: ត្រីឆ្កោកភ្លើង
IDENTIFICATION - Name in Khmer (roman): Chhkaok phleung
BIOLOGY - Max. total length (cm): 74
BIOLOGY - Max. standard length (cm): 60
BIOLOGY - Length at maturity (cm): 34.1
BIOLOGY - Food: Mainly animals
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: CNMC 1998, Scott and Crossman 1973
ECOLOGY - All MFD information: Migration: This fish migrates up the mainstream from Cambodia to Lao in two periods first time in January-February and second time in May-July (Baird et al. 1999). Probably migrates into flooded riparian forests and smaller streams during the rainy season (Rainboth 1996). Spawning: This fish species spawning between on July-August (Baird et al. 1999). . Distribution: Known from the Middle Mekong along the Thai-Lao border to the Tonle Sap (Rainboth 1996); Recorded from the confluence between the Mun and the Mekong Rivers and from the Mekong at Ban Tha Kai 21 kilometres downstream from Mukdaharn. Feeding: Feeds on juvenile insects, shrimps, crabs and fish (Baird et al. 1999).
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: Low

Cyclocheilichthys heteronema (Chavalit Vidthayanon)

IDENTIFICATION - Family: **Cyprinidae** (Minnows or carps)
IDENTIFICATION - Species name: ***Cyclocheilichthys heteronema***
IDENTIFICATION - Author: Bleeker, 1853

IDENTIFICATION - Name in Khmer: ត្រីឆ្កោកពុកមាត់បី

IDENTIFICATION - Name in Khmer (roman): Chhkaok pukmotbai
BIOLOGY - Max. total length (cm): 15
BIOLOGY - Max. standard length (cm): 12
BIOLOGY - Length at maturity (cm): 8.2
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Rainboth, 1996
ECOLOGY - All MFD information: Migration: Typically found in the Mekong mainstream during the dry season and moves into flooded forests during high water periods (Rainboth 1996). Spawning: Fish of approx. 12.2 cm long have eggs of 0.5-0.7 mm diameter (Krachangdara 1994). . Distribution: An uncommon fish in the Mekong. Occurs just upstream from Khone Falls at the mouth of the Mun River. Also recorded from the Great Lake (Rainboth 1996). Feeding: Herbivorous (Krachangdara 1994).
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: High

Cyclocheilichthys lagleri (Rainboth W.)

IDENTIFICATION - Family: **Cyprinidae** (Minnows or carps)
IDENTIFICATION - Species name: ***Cyclocheilichthys lagleri***
IDENTIFICATION - Author: Sontirat, 1989

IDENTIFICATION - Name in Khmer: ត្រីស្រកាក្តាម

IDENTIFICATION - Name in Khmer (roman): Sraka kdam
BIOLOGY - Max. total length (cm): 19
BIOLOGY - Max. standard length (cm): 15
BIOLOGY - Length at maturity (cm): 10
BIOLOGY - Food: zoobenthos mainly animals
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Lim et al. 1999
ECOLOGY - All MFD information: Migration: A longitudinal migrant (Baird et al. 1999). Spawning: It presumably forms schools and reproduces during the rainy season as do other members of the genus (Sontirat 1985). . Distribution: The species has a restricted range; it has been found in Kompong Chhnang, and Chao Doc (Sontirat 1985).
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: Medium

Cyclocheilichthys repasson (Martin-Smith, K.)

IDENTIFICATION - Family: **Cyprinidae** (Minnows or carps)
IDENTIFICATION - Species name: ***Cyclocheilichthys repasson***
IDENTIFICATION - Author: Bleeker, 1853
IDENTIFICATION - Name in Khmer: ត្រីស្រកាក្តាម
IDENTIFICATION - Name in Khmer (roman): Sraka kdam
BIOLOGY - Max. total length (cm): 35
BIOLOGY - Max. standard length (cm): 28
BIOLOGY - Length at maturity (cm): 17.4
BIOLOGY - Food: Mainly animals
BIOLOGY - Notes: Known to proliferate in Mekong impoundments (Rainboth 1996).
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Kottelat, 1985
ECOLOGY - All MFD information: Migration: Migrates upstream during the wet season (Singanouvong et al. 1996) and out into the flooded forest during the high-water season (Rainboth 1996); The migrations are both for reproduction and dispersal and feeding purposes (Singanouvong et al. 1996); The precise timing of its movements is not known (Rainboth 1996). Spawning: Spawns in the rainy season (Baird et al. 1999). . Distribution: Found basin wide in tributaries of the Mekong (Pantulu 1986); it has been recorded from the Xe Bangfai and Nam Theun Basins (Kottelat 1998); Larvae/juveniles have been collected from the drift in the Mekong River in An Giang (Nguyen et al. 2002). Feeding: Diet consists primarily of insects with some aquatic macrophytes (Rainboth 1996).
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: Medium

Cyprinus carpio carpio (Rainboth, W.)

IDENTIFICATION - Family: **Cyprinidae (**Minnows or carps)
IDENTIFICATION - Species name: ***Cyprinus carpio carpio***
IDENTIFICATION - Author: Linnaeus, 1758
IDENTIFICATION - Name in Khmer: ត្រីកាបសមញ្ញ
IDENTIFICATION - Name in Khmer (roman): Karp samanh
IDENTIFICATION - Name in English: Common carp
BIOLOGY - Max. total length (cm): 147
BIOLOGY - Max. standard length (cm): 120
BIOLOGY - Length at maturity (cm): 15
BIOLOGY - Food: zoobenthos plants/detritus+animals
BIOLOGY - Notes: Occur at a temperature range of 14-35º C (Locicero 1992); In cool waters, these fish are extremely tolerant of turbidity and stream contamination (Rainboth 1996). Feeds mainly by grubbing in sediments (Scott and Crossman 1973); whereby it often uproots aquatic plants and stir up mud (Rainboth 1996).

ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: Discharge variation is a migration trigger
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Reproductive guild: Nonguarders: Open water/substratum egg scatterers
REPRODUCTION - Fecundity: 281936
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Lim et al. 1999
ECOLOGY - All MFD information: Migration: Migrates upstream at the Khone Falls in May-July. As flow volumes increase rapidly in June, migratory activity intensifies and become more regular. The purpose of this migration is mainly for dispersal and feeding. Local fishers claim that the small individuals that move upstream at this time do so to feed on eggs released by native spawners (Singanouvong et al. 1996). Spawning: It spawns in spring and summer (Skelton 1993); January to June in shallow water with fairly dense of aquatic plants (Sihapitukgiat et al. 1992); June-August (Singanouvong et al. 1996); It seems to be capable of reproducing in cooler waters within the Mekong basin (Rainboth 1996); A 47 cm female about 300,000 (Hart 1973); sticky eggs, which are shed in shallow vegetation (Skelton 1993). . Distribution: Recorded from Chi, Mun and Mekong Rivers (Sihapitukgiat et al. 1992); Larvae/juveniles recorded from the drift in the Bassac River in An Giang (Nguyen et al. 2002). Feeding: Consumes a wide variety of plant and animal matter (Rainboth 1996), aquatic (Bisht and Das 1981, Scott and Crossman 1973, Maitland and Campbell 1992, Singanouvong et al. 1996, Sihapitukgiat et al. 1992) and terrestrial plants (Bisht and Das 1981), bark (Baird and Phylavanh 1999), weed and tree seeds, wild rice (Scott and Crossman 1973), detritus (Maitland and Campbell 1992, Singanouvong et al. 1996, Baird and Phylavanh 1999, Jørgensen 1979), zoobenthos (Maitland and Campbell 1992, Specziar et al. 1997), benthic crustaceans (Maitland and Campbell 1992), benthic algae/weeds (Maitland and Campbell 1992), molluscs (Singanouvong et al. 1996, Specziar et al. 1997, Scott and Crossman 1973) including bivalves (Specziar et al. 1997), fish (Singanouvong et al. 1996), aquatic insects, crustaceans, annelids (Scott and Crossman 1973), and algae (Scott and Crossman 1973, Sihapitukgiat et al. 1992), zooplankton, and aquatic snails (Sihapitukgiat et al. 1992).
ECOLOGY - Migration type: Only seems to display Longitudinal migrations.
ECOLOGY - Feeds in floodplains (% respondents):
ECOLOGY - Status: Introduced
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: Low

Dischérodontus schroederi (Chavalit Vidthayanon)

IDENTIFICATION - Family: **Cyprinidae** (Minnows or carps)
IDENTIFICATION - Species name: ***Dischérodontus schroederi***
IDENTIFICATION - Author: Smith, 1945
IDENTIFICATION - Name in Khmer: ត្រីកន្ទុយក្រហម
IDENTIFICATION - Name in Khmer (roman): Kantuy krohorm
BIOLOGY - Max. total length (cm): 4
BIOLOGY - Length at maturity (cm): 3.1
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: MFD occurence map
ECOLOGY - All MFD information:Migration: 0. Spawning: 0 . Distribution:0. Feeding: 0
ECOLOGY - Status: No information
ECOLOGY - Habitat: No information

Epalzeorhynchos frenatum (Chavalit Vidthayanon)

IDENTIFICATION - Family: **Cyprinidae** (Minnows or carps)
IDENTIFICATION - Species name: ***Epalzeorhynchos frenatum***
IDENTIFICATION - Author: Fowler, 1934
IDENTIFICATION - Name in Khmer: ត្រីគល់ចេក
IDENTIFICATION - Name in Khmer (roman): Kul chek
IDENTIFICATION - Name in English: Rainbow sharkminnow
BIOLOGY - Max. total length (cm): 15
BIOLOGY - Length at maturity (cm): 10
BIOLOGY - Food: plants/detritus+animals
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Kottelat, 1985
ECOLOGY - All MFD information:Migration: The species migrates up from Cambodia to southern Lao in January-February (Baird et al. 1999); and moves into seasonally flooded habitats and returns to the rivers as floodwaters recede (Rainboth 1996, Baird et al. 1999). Spawning: Spawns in floodplains (Baird et al. 1999). . Distribution:Mekong Basin in Laos and Thailand (Kottelat 2001); Recorded from the Xe Bangfai Basin (Kottelat 1998). Feeding: Feeds on algae, periphyton, phytoplankton, and some zooplankton (Rainboth 1996).
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: High

Epalzeorhynchos munense (Rainboth W.)

IDENTIFICATION - Family: **Cyprinidae** (Minnows or carps)
IDENTIFICATION - Species name: ***Epalzeorhynchos munense***
IDENTIFICATION - Author: Smith, 1934
BIOLOGY - Max. total length (cm): 12
BIOLOGY - Max. standard length (cm): 9.3
BIOLOGY - Length at maturity (cm): 6.5
BIOLOGY - Food: plants/detritus+animals
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Rainboth, 1996
ECOLOGY - All MFD information:Migration: During the flood season, it moves into inundated forests and returns to the river as water levels recede (Rainboth 1996). Spawning: 0 . Distribution:Known from the Mekong and Xe Bangfai Basins (Kottelat 1998); Larvae/juveniles have been recorded from the drift in the Bassac River in An Giang (Nguyen et al. 2002). Feeding: Diet consists of phytoplankton and zooplankton (Rainboth 1996).
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: High

Esomus longimanus (Chavalit Vidthayanon)

IDENTIFICATION - Family: **Cyprinidae** (Minnows or carps)
IDENTIFICATION - Species name: ***Esomus longimanus***
IDENTIFICATION - Author: Lunel, 1881
IDENTIFICATION - Name in Khmer: ត្រីចង្វាភ្លៀង
IDENTIFICATION - Name in Khmer (roman): Changva phleang
IDENTIFICATION - Name in English: Mekong flying barb
BIOLOGY - Max. standard length (cm): 8
BIOLOGY - Length at maturity (cm): 5.8
BIOLOGY - Food: zooplankton mainly animals
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: CNMC 1998, Scott and Crossman 1973
ECOLOGY - All MFD information:Migration: 0. Spawning: 0 . Distribution:Found in the Mekong from the Khorat Plateau in Thailand to the Great Lake (Rainboth 1996); and also recorded from the Xe Bangfai Basin (Kottelat 1989). Feeding: Diet consists of zooplankton, occasionally insects (Rainboth 1996), and algae (Bardach 1959).
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: High

Hampala dispar (Freyhof, J.)

IDENTIFICATION - Family: **Cyprinidae** (Minnows or carps)
IDENTIFICATION - Species name: ***Hampala dispar***
IDENTIFICATION - Author: Smith, 1934
IDENTIFICATION - Name in Khmer: ត្រីខ្មាន់
IDENTIFICATION - Name in Khmer (roman): Khman
BIOLOGY - Max. total length (cm): 43
BIOLOGY - Max. standard length (cm): 35
BIOLOGY - Length at maturity (cm): 21.2
BIOLOGY - Food: zoobenthos mainly animals
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Lim et al. 1999
ECOLOGY - All MFD information:Migration: 0. Spawning: Breeds in the beginning of the rainy season (Rainboth 1996) in April May (Baird et al. 1999) and the young are found in seasonally flooded habitats in June (Rainboth 1996). . Distribution:Mekong Basin in Laos, Yunnan, Thailand, Cambodia and Viet Nam (Kottelat 2001); Found basin wide in tributaries of the Lower Mekong (Pantulu 1986); Reported from the Xe Bangfai Basin (Kottelat 1998), and the Nam Se (Baird et al. 1999). Feeding: Feeds on some fishes, but mostly prawns, crabs, and shrimps, along with some insect larvae (Rainboth 1996, Baird et al. 1999).
ECOLOGY - Migration type:Displays longitudinal as well as lateral migrations.
ECOLOGY - Status: Native

ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: Medium

Hampala macrolepidota (Freyhof, J.)

IDENTIFICATION - Family: **Cyprinidae (**Minnows or carps)
IDENTIFICATION - Species name: ***Hampala macrolepidota***
IDENTIFICATION - Author: Valenciennes, 1842
IDENTIFICATION - Name in Khmer: **ត្រីខ្លាន់**
IDENTIFICATION - Name in Khmer (roman): Khman
IDENTIFICATION - Name in English: Hampala barb
BIOLOGY - Max. total length (cm): 86
BIOLOGY - Max. standard length (cm): 70
BIOLOGY - Length at maturity (cm): 28
BIOLOGY - Food: nekton mainly animals
BIOLOGY - Notes: Diurnally active (Pupipat et al. 1987).
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Fecundity: 21033
REPRODUCTION - Breeds in reservoirs: Can breed in reservoirs
ECOLOGY - Tonle Sap distribution: Kottelat, 1985; Lim et al. 1999
ECOLOGY - All MFD information:Migration: A white fish species (Bardach 1959); May enter flooded streams and forested habitat in the high-water season (Baird and Phylavanh 1999). Spawning: Migrates into streams during the rainy season to spawn (Baird et al. 1999); Breeds throughout the rainy season (Rainboth 1996); In reservoirs spawn during January and June (Pupipat et al. 1987); In June-July and September-October south of Quatre Bras (Bardach 1959); Fish measuring 25.9-35.2 cm have about 13,325-33,052 eggs (Krachangdara 1994); 30-40 cm fish have 58,573-131,060 eggs the average number is approximately 68,902 (Duangsawasdi et al. 1992); Egg diameter is 0.91 mm (Duangsawasdi et al. 1992), 1 mm (Pupipat et al. 1987), or 1.0-1.1 mm (Krachangdara 1994). The smallest fish that was found to be spawning is 24.5 cm in length with about 210 g weight (Pupipat et al. 1987). Distribution:Mekong Basin in Laos, Yunnan, Thailand, Cambodia and Viet Nam (Kottelat 2001); Found basin wide in tributaries of the Lower Mekong (Pantulu 1986); Not as common as H. dispar in the Middle Mekong, but more common in the Lower Mekong (Rainboth 1996); Abundant in the Mekong and in the Nam Ngum Reservoir (Kottelat et al. 1993); Recorded from the Xe Bangfai Basin (Kottelat 1998); Larvae/juveniles have been recorded from the drift in the Mekong River in An Giang (Nguyen et al. 2002). Feeding: Feeds on fish (Pupipat et al. 1987, Duangsawasdi et al. 1992, NIFI 1993), prawns, insects (Hardjamulia et al. 1988, Baird and Phylavanh 1999, Baird et al. 1999, Krachangdara 1994, Pupipat et al. 1987), insect larvae (Hardjamulia et al. 1988), detritus (Baird and Phylavanh 1999, Duangsawasdi et al. 1992); Zooplankton (NIFI 1993); Becomes piscivorous upon reaching 20 cm (Hardjamulia et al. 1988); Adults feed almost exclusively on fish (Rainboth 1996, Kottelat et al. 1993, Bardach 1959, Yap 1988); with some aquatic insects (Kottelat et al. 1993); and large crustaceans (Bardach 1959) shellfish, and worms (Pupipat et al. 1987).
ECOLOGY - Migration type:Displays longitudinal as well as lateral migrations.
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: Medium

Henicorhynchus cryptopogon (Warren, T.)

IDENTIFICATION - Family: **Cyprinidae** (Minnows or carps)
IDENTIFICATION - Species name: ***Henicorhynchus cryptopogon***
IDENTIFICATION - Author: Fowler, 1935
IDENTIFICATION - Name in Khmer: ត្រីរៀលអង្គាម
IDENTIFICATION - Name in Khmer (roman): Riel anhkam
BIOLOGY - Max. total length (cm): 15
BIOLOGY - Length at maturity (cm): 10
BIOLOGY - Food: plants mainly plants/detritus
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Lim et al. 1999
ECOLOGY - Migration type:No information on migration type
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: High

Henicorhynchus siamensis (Warren, T.)

IDENTIFICATION - Family: **Cyprinidae** (Minnows or carps)
IDENTIFICATION - Species name: ***Henicorhynchus siamensis***
IDENTIFICATION - Author: Sauvage, 1881
IDENTIFICATION - Name in Khmer: ត្រីរៀលតុប
IDENTIFICATION - Name in Khmer (roman): Riel top
IDENTIFICATION - Name in English: Siamese mud carp
BIOLOGY - Max. total length (cm): 25
BIOLOGY - Max. standard length (cm): 20
BIOLOGY - Length at maturity (cm): 12.9
BIOLOGY - Food: plants mainly plants/detritus
BIOLOGY - Notes: Not known to prosper in impoundments (Rainboth 1996).
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Lim et al. 1999
ECOLOGY - All MFD information:Migration: From Xayaboury to Chiang Khong, the fish migrates upstream from March to July, first the juveniles, later followed by the adults.
At Khone Falls medium sized fish migrate downstream, while large individuals migrate upstream during the wet season. These migrations are for reproductive purposes, and during the migration the fish feeds very little relying on fat deposits around the viscera (Singanouvong et al. 1996).
From the Khone Falls the fish migrate downstream from May to July, towards the large floodplains located north and south of Phnom Penh and all the way to the Mekong Delta. Here, the fish migrate out of the Mekong into canals and flooded areas during August-September (Poulsen and Valbo-Jørgensen 2000)
When the water recedes it enters the Tonle Sap from the flooded areas along the river and the Great Lake (Lieng et al. 1995, Poulsen and Valbo-Jørgensen 2000, Rainboth 1996), when in the Tonle Sap, they migrate down to the Mekong (Lieng et al. 1995) and from October to February

continue their journey upstream the Mekong, at least until they reach the Khone Falls (Lieng et al. 1995, Poulsen and Valbo-Jørgensen 2000). Spawning: Mature eggs are reported from April to July with a strong peak during May-June (Poulsen and Valbo-Jørgensen 2000, Singanouvong et al. 1996); Spawns in the rainy season (Baird et al. 1999). . Distribution:Occurs from the Mekong Delta all the way along the Mekong mainstream to Chiang Khong (Poulsen and Valbo-Jørgensen 2000); also recorded from the Xe Bangfai Basin (Roberts 1997). Feeding: Feeds on algae, periphyton and phytoplankton (Rainboth 1996); Filamentous chlorophytes (Singanouvong et al. 1996).
ECOLOGY - Migration type: Displays longitudinal as well as lateral migrations.
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: Medium

Hypsibarbus lagleri (Baird, I.G.)

IDENTIFICATION - Family: **Cyprinidae** (Minnows or carps)
IDENTIFICATION - Species name: ***Hypsibarbus lagleri***
IDENTIFICATION - Author: Rainboth, 1996
IDENTIFICATION - Name in Khmer: ត្រីឆ្ពិន
IDENTIFICATION - Name in Khmer (roman): Chhpin
BIOLOGY - Max. total length (cm): 49
BIOLOGY - Max. standard length (cm): 40
BIOLOGY - Length at maturity (cm): 23.8
BIOLOGY - Food: plants/detritus+animals
BIOLOGY - Notes: Not known to persist in impoundments (Rainboth 1996).
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Rainboth, 1996
ECOLOGY - All MFD information: Migration: Occurs in large rivers in the dry season and moves to medium-sized rivers in the wet season. May migrate into flooded forest immediately adjacent to rivers, but does not occur over fine-grained sediments, preferring rocks instead (Rainboth 1996). The species migrates up from Cambodia to southern Lao PDR in January-February, and migrates back to Cambodia in June-July; It sometimes enters the tributaries Sekong, Sesan, and Srepok (Baird et al. 1999). Spawning: 0 . Distribution: Occurs in large and medium sized rivers in the Middle Mekong Basin (Rainboth 1996, Kottelat 2001). It is not found in the Tonle Sap or the Great Lake (Rainboth 1996). Feeding: Feeds on green leaves and bark (Baird and Phylavanh 1999, Baird et al. 1999); This species probably consumes considerable amounts of plant matter from seasonally inundated forests during the rainy season (Baird and Phylavanh 1999); Also consumes zooplankton, worms, and algae (Rainboth 1996, Baird et al. 1999).
ECOLOGY - Migration type: Only seems to display Longitudinal migrations.
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: Low

Hypsibarbus pierrei (Baird, I.G.)

IDENTIFICATION - Family: **Cyprinidae** (Minnows or carps)
IDENTIFICATION - Species name: ***Hypsibarbus pierrei***

IDENTIFICATION - Author: Sauvage, 1880
IDENTIFICATION - Name in Khmer: ត្រីឆ្ពិន
IDENTIFICATION - Name in Khmer (roman): Chhpin
BIOLOGY - Max. total length (cm): 37
BIOLOGY - Max. standard length (cm): 30
BIOLOGY - Length at maturity (cm): 18.5
BIOLOGY - Notes: It is not likely to persist in impoundments (Rainboth 1996).
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Kottelat, 1985
ECOLOGY - All MFD information: Migration: This fish species migrate up the Mekong River in southern Lao PDR in March-April (Baird et al. 1999). Spawning: 0 . Distribution: Mekong Basin in Laos, Cambodia and Viet Nam (Kottelat 2001); Possibly occurs in the Middle Mekong of Cambodia or rivers coming from the Viet Nam highlands, but not yet recorded from there (Rainboth 1996). Feeding: Feeds on snails, leaves, bark and seeds; Snails are believed to be its main source of food during the low-water season (Baird and Phylavanh 1999).
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: Medium


Hypsibarbus wetmorei (Jean-Francois Helias / Fishing Adventures Thailand)

IDENTIFICATION - Family: **Cyprinidae** (Minnows or carps)
IDENTIFICATION - Species name: ***Hypsibarbus wetmorei***
IDENTIFICATION - Author: Smith, 1931
IDENTIFICATION - Name in Khmer: ត្រីឆ្ពិនក្រហម
IDENTIFICATION - Name in Khmer (roman): Chhpin krohorm
BIOLOGY - Max. total length (cm): 25
BIOLOGY - Length at maturity (cm): 15.7
BIOLOGY - Notes: Does not tolerate impoundments (Rainboth 1996).
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: MFD occurence map
ECOLOGY - All MFD information: Migration: According to Rainboth not known to migrate, but may move upstream during periods of high water levels (Rainboth 1996); However Baird et al states that it migrates up from Cambodia to southern Lao PDR in May - June (Baird et al. 1999). Spawning: A 42 cm female weighing 1,300 g examined in February was full of eggs (Baird and Phylavanh 1999). . Distribution: Occurs in the Sekong Basin (Baird et al. 1999). Feeding: Feeds on filamentous algae, leaves, bark, and roots (Baird and Phylavanh 1999), grasses, (Baird and Phylavanh 1999, Baird et al. 1999), fruits, flowers of trees, fish, shrimps, snails, small molluscs, and worms (Baird et al. 1999); This species certainly relies heavily on forest leaves for food in the rainy season, and is probably mainly an algae feeder in the dry season (Baird and Phylavanh 1999).
ECOLOGY - Status: No information
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: Medium

Labeo chrysophekadion (Baird, I.G.)

IDENTIFICATION - Family: **Cyprinidae** (Minnows or carps)
IDENTIFICATION - Species name: ***Labeo chrysophekadion***
IDENTIFICATION - Author: Bleeker, 1850
IDENTIFICATION - Name in Khmer: ត្រីកែ្អក
IDENTIFICATION - Name in Khmer (roman): Ka-ek
IDENTIFICATION - Name in English: Black sharkminnow
BIOLOGY - Max. total length (cm): 90
BIOLOGY - Length at maturity (cm): 48.8
BIOLOGY - Food: plants mainly plants/detritus
BIOLOGY - Notes: A long-lived, riverine, benthopelagic species, which is also found in standing water bodies (Warren 2000). It has an inferior mouth (Boonmon and Kantejit 1977), which it uses to suck food from the bottom (Boonmon and Kantejit 1977, Leelapatra et al. 2000).
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: Water level variation is a migration trigger
REPRODUCTION - Spawns in rivers (% respondents): 97.5
REPRODUCTION - Spawns in streams / inlets (% respondents): 2.5
REPRODUCTION - Date of spawning (% respondents): Apr 5.6%, May 27.8%, Jun 5.6%, Jul 11.1% Apr-May 11.1% Feb-Mar 5.6% Jun-Jul 5.6% Mar-Apr 11.1% May-Jun 16.7%
REPRODUCTION - Nurses in floodplain (% respondents): 100
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Thuok, N and L. Sina, 1997
ECOLOGY - All MFD information: Migration: Fishers in Lao PDR and Thailand agree that it migrates upstream from March to August, it apparently starts migrating, when the water changes colour from clear to reddish-brown (when the rainy season starts) or when the water starts rising (Poulsen and Valbo-Jørgensen 2000). They continue into tributaries, small streams and canals (Poulsen and Valbo-Jørgensen 2000) and seasonally flooded areas (Rainboth 1996), where it probably spawns (Poulsen and Valbo-Jørgensen 2000). The fry immediately move into inundated grasses along the bank and continue to follow the leading edge of the advancing water as floodwaters spread over the land.
They to return to rivers, including the Tonle Sap, from October to December. By this time the young of the year have attained a length of about 10 cm (Rainboth 1996). Spawning: Reported to carry eggs from February to October, however, there are significantly more reports on eggs from April to July (Poulsen and Valbo-Jørgensen 2000); Spawning begins after the first thunderstorms of the coming rainy season (Rainboth 1996) and peaks in June-July in the Mekong River (Bardach 1959, Baird et al. 1999), where 2-4 cm juveniles are reported year round (Poulsen and Valbo-Jørgensen 2000); Spawning takes place later in reservoirs July – October (Chabjinda et al. 1992, Boonmon and Kantejit 1977, Kamonrat et al. 1972, Watanadirokul et al. 1983); It is reported to spawn in swamps (Smith 1945), flooded areas (Poulsen and Valbo-Jørgensen 2000, Baird et al. 1999), or just upstream from shallow sandbars that line long river bends (Rainboth 1996).
It can reproduce when two years old (Kotaban and Benjakarn 1988, Chabjinda et al. 1992); at a length of around 40 cm (Kamonrat et al. 1972); or 62 cm and 3 kg and (Chabjinda et al. 1992);
Fecundity estimates are highly variable from 10,000-300,000 (Boonmon and Kantejit 1977) up to 1,090,000 in a 49 cm female (Kamonrat et al. 1972); The eggs are semi-buoyant (Leelapatra et al. 2000, Watanadirokul et al. 1983, Tiencharoen and Oonsrisong 1990) and will hatch in 14-16 hrs at 28ºC (Leelapatra et al. 2000, Watanadirokul et al. 1983); The newly hatched larvae are 6 – 7 mm long (Watanadirokul et al. 1983). . Distribution: Found basin wide in the mainstream of the Mekong (Pantulu 1986); Recorded from the Xe Bangfai (Kottelat 1998), Mun (Duangsawasdi and Chukajorn 1991. , Duangsawasdi and Duangsawasdi 1992, Tantong and Siripan 1968, Boonmon and Kantejit 1977), Chi (Duangsawasdi and Duangsawasdi 1992, Leelapatra 1977) and Pong Rivers

(Duangsawasdi and Duangsawasdi 1992); In Sirindhorn (Dumrongtripob and Janesirisak 1996) and Ubolratana Reservoirs (Veravute and Jaiyen 1970); and in Sapang (Dumrongtripob et al. 1998) and Kwan Phayao Swamps (Jaiyen et al. 1997); Larvae/juveniles have been recorded from the drift in both the Mekong and Bassac Rivers in An Giang (Nguyen et al. 2002); There seem to be multiple populations along the Mekong River (Poulsen and Valbo-Jørgensen 2000). Feeding: Feeds mainly on algae (Watanadirokul et al. 1983, Rainboth 1996, Warren 2000, Baird and Phylavanh 1999, Baird et al. 1999) including green algae, diatoms (Veravute and Jaiyen 1970, Pothipituk 1970, Boonmon and Kantejit 1977), blue-green algae and desmids (Veravute and Jaiyen 1970), periphyton and phytoplankton (Rainboth 1996); and also plant roots (Pothipituk 1970) and other plant material (Warren 2000, Bardach 1959, Baird et al. 1999), detritus (Warren 2000, Veravute and Jaiyen 1970, Rainboth 1996, Baird et al. 1999) and mud (Bardach 1959); and some protozoan and crustaceans (Veravute and Jaiyen 1970).
ECOLOGY - Migration type: Displays longitudinal as well as lateral migrations.
ECOLOGY - Feeds in floodplains (% respondents): 100
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: Very low
GUILD - Grey fish guild (% respondents): 2.5
GUILD - White fish guild (% respondents): 97.5

Labeo dyocheilus (Jean-Francois Helias / Fishing Adventures Thailand)

IDENTIFICATION - Family: **Cyprinidae** (Minnows or carps)
IDENTIFICATION - Species name: ***Labeo dyocheilus***
IDENTIFICATION - Author: McClelland, 1839
IDENTIFICATION - Name in Khmer (roman): Pava mouk mouy
BIOLOGY - Max. total length (cm): 90
BIOLOGY - Length at maturity (cm): 48.8
BIOLOGY - Notes: Long-lived, benthopelagic, riverine species (Warren 2000), which is known to proliferate in impoundments (Rainboth 1996).
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Kottelat, 1985
ECOLOGY - All MFD information: Migration: A white fish species (Bardach 1959); In the rainy season it moves into the floodplain (Baird et al. 1999), where it enters flooded forests, preferring areas with at least some current (Rainboth 1996). The species migrates up from Cambodia to southern Lao PDR in January-February; Small individuals migrate upstream in May-July (Baird et al. 1999). Spawning: The fish species spawning on August-September (Baird et al. 1999); It spawns pelagically in the mainstream in the wet season the eggs are buoyant or semi-buoyant (Warren 2000). . Distribution: Found basin wide in the mainstream (Pantulu 1986); and large rivers in the Lower Mekong Basin, including the upper edge of the freshwater tidal zone, and also known from the Tonle Sap (Rainboth 1996, Warren 2000), Sekong Basin, Xe Pian, Xe Kamanh, and Xe Sou (Baird et al. 1999); According to Warren (2000) absent from lower section of the Cambodian Mekong (Warren 2000); However larvae/juveniles have been recorded from the drift in both the Mekong and Bassac Rivers in An Giang (Nguyen et al. 2002). Feeding: Feeds on algae (Singanouvong et al. 1996, Baird et al. 1999); fine and filamentous algae (Baird and Phylavanh 1999, Warren 2000), bottom algae, phytoplankton, periphyton (Rainboth 1996), and detritus (Rainboth 1996, Warren 2000, Baird et al. 1999).
ECOLOGY - Migration type: Only seems to display Longitudinal migrations.
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: Very low

Labeo erythropterus (Warren, T.)

IDENTIFICATION - Family: **Cyprinidae** (Minnows or carps)
IDENTIFICATION - Species name: ***Labeo erythropterus***
IDENTIFICATION - Author: Valenciennes, 1842
BIOLOGY - Max. total length (cm): 86
BIOLOGY - Max. standard length (cm): 70
BIOLOGY - Length at maturity (cm): 39.1
BIOLOGY - Food: Mainly plants/detritus
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Rainboth, 1996
ECOLOGY - Migration type: No information on migration type
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: Very low

Labiobarbus leptocheila (Warren, T.)

IDENTIFICATION - Family: **Cyprinidae** (Minnows or carps)
IDENTIFICATION - Species name: ***Labiobarbus leptocheila***
IDENTIFICATION - Author: Valenciennes, 1842
IDENTIFICATION - Remark: Formerly recorded as Labiobarbus kuhli
IDENTIFICATION - Name in Khmer: ត្រីខ្នងវែង
IDENTIFICATION - Name in Khmer (roman): Khnorng veng
BIOLOGY - Max. total length (cm): 37
BIOLOGY - Max. standard length (cm): 30
BIOLOGY - Length at maturity (cm): 18.5
BIOLOGY - Food: plants mainly plants/detritus
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Kottelat, 1985; Lim et al. 1999
ECOLOGY - Migration type: No information on migration type
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: Medium

Labiobarbus lineatus (CAFS)

IDENTIFICATION - Family: **Cyprinidae** (Minnows or carps)
IDENTIFICATION - Species name: ***Labiobarbus lineatus***
IDENTIFICATION - Author: Sauvage, 1878
IDENTIFICATION - Name in Khmer: ត្រីខ្នងវែង
IDENTIFICATION - Name in Khmer (roman): Khnorng veng
BIOLOGY - Max. total length (cm): 27
BIOLOGY - Length at maturity (cm): 0.9
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Ng and Rainboth, 2005
ECOLOGY - All MFD information: Migration: A white fish species (Bardach 1959). The species migrates from Cambodia to Lao PDR in January-February, in June -July it moves into the floodplains for spawning. After spawning, the fish migrates down the Mekong River again (Baird et al. 1999). Spawning: It spawns in June, August and possibly September (Bardach 1959); Spawns in floodplains in June-July (Baird et al. 1999). . Distribution: Found basin wide in tributaries of the Mekong (Pantulu 1986); Reported from the Cambodian Mekong, but its populations may be localized (Rainboth 1996); Also reported from the Xe Bangfai Basin (Kottelat 1998). Feeding: Feeds on aquatic animals, small water plant and algae (Baird et al. 1999).
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: Medium

Labiobarbus siamensis (Chavalit Vidthayanon)

IDENTIFICATION - Family: **Cyprinidae** (Minnows or carps)
IDENTIFICATION - Species name: ***Labiobarbus siamensis***
IDENTIFICATION - Author: Sauvage, 1881
IDENTIFICATION - Name in Khmer: ត្រីអាចម៍កុក
IDENTIFICATION - Name in Khmer (roman): Arch kok
BIOLOGY - Max. total length (cm): 22
BIOLOGY - Length at maturity (cm): 14.1
BIOLOGY - Food: plants/detritus+animals
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Thuok, N and L. Sina, 1997
ECOLOGY - All MFD information: Migration: A white fish species (Bardach 1959); The species migrates from Cambodia to Lao PDR in January-February, in June -July it moves into the floodplains for spawning. After spawning, the fish migrates down the Mekong River again (Baird et al. 1999). Spawning: It becomes adult at 20.0 cm (Bardach 1959); Spawns in floodplains in June-July (Baird et al. 1999). . Distribution: In Laos, Thailand and Cambodia (Kottelat 2001). Feeding: Feeds on aquatic animals, small water plant and algae (Baird et al. 1999).

ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: Medium

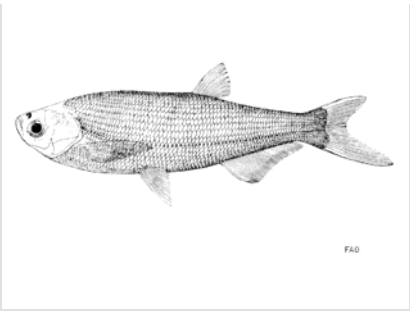
Leptobarbus hoevenii (Chavalit Vidthayanon)

IDENTIFICATION - Family: **Cyprinidae** (Minnows or carps)
IDENTIFICATION - Species name: ***Leptobarbus hoevenii***
IDENTIFICATION - Author: Bleeker, 1851
IDENTIFICATION - Name in Khmer: ត្រីព្រលុង/ច្រឡឹង
IDENTIFICATION - Name in Khmer (roman): Proloung / Chroloeung
IDENTIFICATION - Name in English: Mad barb
BIOLOGY - Max. total length (cm): 122
BIOLOGY - Max. standard length (cm): 100
BIOLOGY - Length at maturity (cm): 53.5
BIOLOGY - Food: plants mainly animals
BIOLOGY - Notes: It is a long-lived species, which is either bottom dwelling or semi-pelagic (Warren 2000); Swims in shoals (Roberts 1989). Reported to become intoxicated and behave in a peculiar manner when feeding on toxic fruits and seeds (Roberts 1989, Leelapatra et al. 2000).
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: MFD occurence map
ECOLOGY - All MFD information: Migration: Non-migratory (Blache and Goossens 1954, Roberts 1993); but participates in local trophic migrations to and from inundated forests (Rainboth 1996, Warren 2000); Other authors state that it is migratory (Schouten et al. 2000) and that it migrates upstream during January and February and downstream in May-June (Baird et al. 1999). Spawning: It is a pelagic spawner (Warren 2000), which spawns in floodplains during the wet-season (Warren 2000) from May to September (Watanadirokul and Kongship 1987, Meanakarn 1985), mainly June-July (Baird et al. 1999); The eggs semi-buoyant, the fertilized eggs hatch within 15-18 hours at 26-29ºC. (Meanakarn 1985), and the newly hatched larvae are about 5 mm long (Kongratanakosol and Chesoh 1995). Fishes with body weight 0.5-0.6 kg are mature (Leelapatra et al. 2000), and a 1 kg mature female may carry 50,000 – 70,000 eggs (Meanakarn 1985). . Distribution: Mekong Basin in Laos, Thailand, Cambodia and Viet Nam (Kottelat 2001). Feeding: Juveniles feed on terrestrial insects, tubificid worms, and zooplankton; Adults consume more plant matter (Rainboth 1996, Leelapatra et al. 2000, Baird et al. 1999); Soft vegetation (Warren 2000, Roberts 1989), fruits (Warren 2000, Smith 1945, Roberts 1993) and seeds of terrestrial plants that fall into the water (Warren 2000, Roberts 1993, Smith 1945, Roberts 1989); Feeds on insects and zooplankton (Lim et al. 1999).
ECOLOGY - Migration type: Only seems to display Longitudinal migrations.
ECOLOGY - Status: Native
ECOLOGY - Habitat: pelagic
ECOLOGY - Resilience: Medium

Lobocheilos melanotaenia (Warren, T.)

IDENTIFICATION - Family: **Cyprinidae (**Minnows or carps)
IDENTIFICATION - Species name: Lobocheilos melanotaenia

IDENTIFICATION - Author: Fowler, 1935
IDENTIFICATION - Name in Khmer: ត្រីចង្វារនោង
IDENTIFICATION - Name in Khmer (roman): Changva ronoung
BIOLOGY - Max. total length (cm): 25
BIOLOGY - Max. standard length (cm): 20
BIOLOGY - Length at maturity (cm): 12.9
BIOLOGY - Food: plants mainly plants/detritus
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Lim et al. 1999
ECOLOGY - All MFD information: Migration: The fish migrates up from Cambodia to southern Lao PDR in January-February and downstream in November-December (Baird et al. 1999); It moves into the inundated areas during the flood season (Rainboth 1996) in June-July (Baird et al. 1999) and returns to the river from November with numbers peaking in December (Rainboth 1996, Baird et al. 1999). Spawning: Based on the size of the young of the year found in January, the species probably spawns at the onset of the rainy season (Rainboth 1996). . Distribution: Mekong Basin in Laos, Yunnan, Thailand and Cambodia (Kottelat 2001); Recorded from the Xe Bangfai Basin (Kottelat 1998). Feeding: Feeds on phytoplankton and periphyton which it scrapes from rocks. In the Mekong of northern Cambodia schools of this species were observed to make scrape marks on rocks about 1 cm wide and 7 or 8 cm long. These marks begin at about a depth of 20 cm and become more and more dense on deeper surfaces. In captivity it sometimes feeds on scales of its tank mates (Rainboth 1996).
ECOLOGY - Status: Native
ECOLOGY - Habitat: Demersal
ECOLOGY - Resilience: Medium



Longiculter siahi (FAO)

IDENTIFICATION - Family: **Cyprinidae** (Minnows or carps)
IDENTIFICATION - Species name: ***Longiculter siahi***
IDENTIFICATION - Author: Fowler, 1937
BIOLOGY - Max. total length (cm): 25
BIOLOGY - Max. standard length (cm): 20
BIOLOGY - Length at maturity (cm): 12.9
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Kottelat, 1985
ECOLOGY - All MFD information: Migration: 0. Spawning: 0 . Distribution: It is apparently uncommon or at least localized in distribution (Rainboth 1996). Feeding: Filter-feeder (Rainboth 1996).
ECOLOGY - Status: Native
ECOLOGY - Habitat: pelagic
ECOLOGY - Resilience: Medium

Luciosoma bleekeri (Baird, I.G.)

IDENTIFICATION - Family: **Cyprinidae** (Minnows or carps)
IDENTIFICATION - Species name: ***Luciosoma bleekeri***
IDENTIFICATION - Author: Steindachner, 1878
IDENTIFICATION - Name in Khmer: ត្រីបង្គួយ ឬ ដងដារ
IDENTIFICATION - Name in Khmer (roman): Bangkouy/Dorng Darv
BIOLOGY - Max. total length (cm): 31
BIOLOGY - Max. standard length (cm): 25
BIOLOGY - Length at maturity (cm): 15.7
BIOLOGY - Food: zoobenthos mainly animals
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Kottelat, 1985
ECOLOGY - All MFD information: Migration: A white fish species (Bardach 1959), which inhabits flooded forests and moves into permanent water in November and December as flood waters rapidly recede (Rainboth 1996). Migrates up from Cambodia to Laos during January and February and migrates back to Cambodia in the beginning of the rainy season around June-July (Baird et al. 1999). Spawning: A female weighing 200 g was full of eggs in May (Baird and Phylavanh 1999). . Distribution: Recorded from Srepok, and Tonle Sap in Cambodia (Kottelat 1985).Collected from Nam Ngum dam site, Tha Ngon, Tha Bo, Sai Fong, Sithan Tay, Pakse and Hatsalao in the Mekong basin (DoF 1987) and in the mainstream at Ban Hang Khone just below the Khone Falls (Ferraris 2001); Found in Mekong Delta (Khoa and Huong 1993); Larvae/juveniles have been recorded from the drift in the Mekong River in An Giang (Nguyen et al. 2002). Feeding: Diet includes small crustaceans, fish (Rainboth 1996, Baird et al. 1999) and especially terrestrial insects (Rainboth 1996, Baird et al. 1999) particularly mosquitoes (Bardach 1959); However it is believed, by local people, to be at least an occasional consumer of forest fruits and vegetation (Baird and Phylavanh 1999), and it also eats leaves (Baird et al. 1999).
ECOLOGY - Status: Native
ECOLOGY - Habitat: pelagic
ECOLOGY - Resilience: Medium

Luciosoma setigerum (Rainboth W.)

IDENTIFICATION - Family: **Cyprinidae** (Minnows or carps)
IDENTIFICATION - Species name: ***Luciosoma setigerum***
IDENTIFICATION - Author: Valenciennes, 1842
IDENTIFICATION - Name in English: Apollo sharkminnow
BIOLOGY - Max. total length (cm): 33
BIOLOGY - Max. standard length (cm): 26.5
BIOLOGY - Length at maturity (cm): 16.5
BIOLOGY - Food: Nekton mainly animals
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Thuok, N and L. Sina, 1997
ECOLOGY - All MFD information: Migration: 0. Spawning: 0 . Distribution: Collected from Nam Ngum dam site and Tha Ngon (DoF 1987), and at Ban Hang Khone just below Khone falls (Anon

1993); Found around the Tonle Sap river and Great Lake (Thuok, N and L. Sina, 1997). Feeding: piscivorous (Rainboth 1996).
ECOLOGY - Status: Native
ECOLOGY - Habitat: pelagic
ECOLOGY - Resilience: Medium

Macrochirichthys macrochirus (Warren, T.)

IDENTIFICATION - Family: **Cyprinidae** (Minnows or carps)
IDENTIFICATION - Species name: ***Macrochirichthys macrochirus***
IDENTIFICATION - Author: Valenciennes, 1844
IDENTIFICATION - Name in Khmer: ត្រីឆងខ្ទែង
IDENTIFICATION - Name in Khmer (roman): Dong khteng
BIOLOGY - Max. total length (cm): 100
BIOLOGY - Length at maturity (cm): 53.5
BIOLOGY - Food: Nekton mainly animals
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: Water level variation is a migration trigger
REPRODUCTION - Spawns in rivers (% respondents): 2.4390243902439
REPRODUCTION - Spawns in streams / inlets (% respondents): 97.5609756097561
REPRODUCTION - Date of spawning (% respondents): Jun 3.3%, Feb-Mar 3.3% Jun-Jul 53.3%, May-Jul 3.3%, May-Jun 36.7%
REPRODUCTION - Nurses in floodplain (% respondents): 100
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Thuok, N and L. Sina, 1997.
ECOLOGY - All MFD information: Migration: A white fish species (Bardach 1959), which moves out into the flooded forest during high water and returns to the river as soon as water levels begin to subside. Usually moves on the fourth or fifth day before full moon in October and November (Rainboth 1996). Spawning: It becomes adult at a length of 50 cm (Bardach 1959). . Distribution: Found basin wide in the mainstream of the Mekong (Pantulu 1986, Kottelat 2001); It is now very rare in the Mekong River in southern Laos (Baird et al. 1999). Feeding: Juveniles feed on insects, and adults on fishes (Rainboth 1996, Baird et al. 1999).
ECOLOGY - Feeds in floodplains (% respondents): 100
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: Very low
GUILD - Grey fish guild (% respondents): 100

Mekongina erythrospila (Warren, T.)

IDENTIFICATION - Family: **Cyprinidae** (Minnows or carps)
IDENTIFICATION - Species name: ***Mekongina erythrospila***
IDENTIFICATION - Author: Fowler, 1937
IDENTIFICATION - Name in Khmer: ត្រីចាំសេអ៊ី
IDENTIFICATION - Name in Khmer (roman): Pase ee
BIOLOGY - Max. total length (cm): 55

BIOLOGY - Max. standard length (cm): 45
BIOLOGY - Length at maturity (cm): 26.5
BIOLOGY - Food: Mainly plants/detritus
BIOLOGY - Notes: Migrates in big schools with several hundred fish, and often together with other species such as Hypsibarbus spp., Scaphognathops spp., Henicorhynchus siamensis and Botia modesta. The juveniles are also migratory (Poulsen and Valbo-Jørgensen 2000).
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Kottelat, 1985
ECOLOGY - All MFD information: Migration: South of Khone Falls upstream migrations were generally reported to occur from November to February, while the fish were moving downstream from April to June. Migrates upstream from Pak Lay to Chiang Khong from March to May. Migrations start when the first heavy rains of the rainy season fall, or when the river changes colour from relatively clear to reddish or brown (Poulsen and Valbo-Jørgensen 2000).
In the Mun River, the species migrates upstream from the beginning of the rainy season to the end of August and move back downstream from late September to November (Schouten et al. 2000). Spawning: Spawning take place in the middle of raining season, from June to September (Benjakarn et al. 1979, Poulsen and Valbo-Jørgensen 2000); The eggs are semi-buoyant, and hatching occurs within 16 hours at 27ºC. . Distribution: Occurs from Chiang Saen to Pak Lay, however from Chiang Khan to Paksan the species was not reported. Occurs again at Thakhek and downstream to Sambor (Poulsen and Valbo-Jørgensen 2000); The southern distribution limit for this species is at Sambor (Roberts and Warren 1994); Also recorded from Xe Bangfai, Nam Theun (Kottelat 1998), and Chi (Leelapatra 1977) Rivers. Feeding: Herbivorous (Pongsirijun et al. 2001, Benjakarn et al. 1979), or algivorous (Singanouvong et al. 1996, Baird and Phylavanh 1999); Feeding on green algae (Baird and Phylavanh 1999), periphyton and phytoplankton (Rainboth 1996, Benjakarn et al. 1979).
ECOLOGY - Migration type: Displays longitudinal as well as lateral migrations.
ECOLOGY - Feeds in floodplains (% respondents):
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: Low

Mystacoleucus marginatus (Chavalit Vidthayanon)

IDENTIFICATION - Family: **Cyprinidae** (Minnows or carps)
IDENTIFICATION - Species name: ***Mystacoleucus marginatus***
IDENTIFICATION - Author: Valenciennes, 1842
BIOLOGY - Max. total length (cm): 20
BIOLOGY - Length at maturity (cm): 12.9
BIOLOGY - Food: plants/detritus+animals
BIOLOGY - Notes: Always found in schools (Krachangdara 1994).
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Kottelat, M., 1985
ECOLOGY - All MFD information: Migration: 0. Spawning: 0 . Distribution: Occurs in the Xe Bangfai and Nam Theun basins (4832). Feeding: Feeds on plants (Krachangdara 1994).
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: Medium

Osteochilus hasseltii (Warren, T.)

IDENTIFICATION - Family: **Cyprinidae** (Minnows or carps)
IDENTIFICATION - Species name: ***Osteochilus hasseltii***
IDENTIFICATION - Author: Valenciennes, 1842
IDENTIFICATION - Name in Khmer: ត្រីក្រុស
IDENTIFICATION - Name in Khmer (roman): Kros
IDENTIFICATION - Name in English: Silver sharkminnow
BIOLOGY - Max. total length (cm): 40
BIOLOGY - Max. standard length (cm): 32
BIOLOGY - Length at maturity (cm): 21.7
BIOLOGY - Food: zoobenthos plants/detritus+animals
BIOLOGY - Notes: Benthopelagic and sometimes bottom dwelling riverine species with a medium to long lifespan (Warren 2000); It is normally diurnally active (NIFI 1993).
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Fecundity: 94868
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Lim et al. 1999
ECOLOGY - All MFD information: Migration: It appear to be a species, which mainly lives in smaller tributaries and migrates to flooded areas at the onset of the flood season (Poulsen and Valbo-Jørgensen 2000) in July-August (Baird et al. 1999); It spends the flood season in the floodplain and at the end of the rains, it migrates back to the river habitats in tributaries and, to a lesser extend, the Mekong mainstream (Poulsen and Valbo-Jørgensen 2000); Juveniles are usually first seen in August, they move back to permanent water as flooded lands dry up (Rainboth 1996). Spawning: The peak for occurrence of developed eggs is May-June indicates that the spawning occurs during the period of rising waters at the onset of the floods (Poulsen and Valbo-Jørgensen 2000) but extending into the late rainy season to August and September (Chukajon 1970); Spawning occurs in floodplains (Warren 2000) in areas covered with submerged vegetation and gravel bottom (Pholprasith and Janesirisak 1972); Fish measuring 10.5-17.7 cm have 4,370-13,342 eggs with a diameter of 1.05-1.15 mm (Krachangdara 1994); The eggs are buoyant or semi-buoyant (Warren 2000, Pennapaporn et al. 1991) with a diameter of 1 mm. Hatching occurs around 16 hr at 25.5-27.5ºC (Pennapaporn et al. 1991); The larvae measure about 3 mm at hatching (Leelapatra et al. 2000). The fish becomes mature after eight to ten months when it measures around 15 cm (Jaiyen 1976). . Distribution: A common species (Rainboth 1996); which is found basin wide in tributaries of the Mekong (Pantulu 1986); Recorded from the Xe Bangfai Basin (Kottelat 1998); It is the most abundant fish in Nam Ngum reservoir (Ukkatawewat 9999). Feeding: It is mainly a herbivorous fish (Krachangdara 1994); It feeds on periphyton, filamentous algae (Warren 2000, Rainboth 1996, Baird et al. 1999), phytoplankton, (Rainboth 1996, Chukajon 1970); roots of plants, unicellular algae and some crustaceans (Ukkatawewat 9999), detritus (Chukajon 1970, Baird et al. 1999) and annelids (Chukajon 1970) and aquatic insects (NIFI 1993); Adults feed on aquatic and terrestrial plants (Yap 1988, NIFI 1993, Baird et al. 1999).
ECOLOGY - Migration type: Displays longitudinal as well as lateral migrations.
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: High

Osteochilus lini (Warren, T.)

IDENTIFICATION - Family: **Cyprinidae** (Minnows or carps)
IDENTIFICATION - Species name: ***Osteochilus lini***
IDENTIFICATION - Author: Fowler, 1935
IDENTIFICATION - Name in Khmer: ត្រីក្រុស
IDENTIFICATION - Name in Khmer (roman): Kros
BIOLOGY - Max. total length (cm): 19
BIOLOGY - Max. standard length (cm): 15
BIOLOGY - Length at maturity (cm): 10
BIOLOGY - Food: Mainly plants/detritus
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Motomura et al. 2002
ECOLOGY - All MFD information: Migration: Moves into flooded forests or open fields, and begins to re-enter rivers in October (Rainboth 1996). Spawning: Spawning season is from May to July (Dumrongtripob et al. 1997), and young of the year are first seen in August (Rainboth 1996). The size at maturity is 9 cm total length in females; Fecundity is reported to be 1,929 eggs in 8.9 cm and 13 g fish, and 34,581 eggs in 17.3 cm and 77.2 g fish; The diameter of the egg is reported to be 0.72 mm (Dumrongtripob et al. 1997). . Distribution: Occurs in the Xe Bangfai Basin (Kottelat 1998), in Mun River (Duangsawasdi and Duangsawasdi 1992, Duangsawasdi and Chukajorn 1991.) and Chulabhorn Reservoir (Chantsavang et al. 1991); Larvae/juveniles have been recorded from the drift in both the Mekong and Bassac Rivers in An Giang (Nguyen et al. 2002). Feeding: Feeds on periphyton, phytoplankton algae, and some detritus (Rainboth 1996, Akatawewat et al. 1996).
ECOLOGY - Migration type: Displays longitudinal as well as lateral migrations.
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: Medium


Osteochilus melanopleurus (Warren, T.)

IDENTIFICATION - Family: **Cyprinidae** (Minnows or carps)
IDENTIFICATION - Species name: ***Osteochilus melanopleurus***
IDENTIFICATION - Author: Bleeker, 1852
IDENTIFICATION - Name in Khmer: ត្រីក្រុំ
IDENTIFICATION - Name in Khmer (roman): Krum
BIOLOGY - Max. total length (cm): 74
BIOLOGY - Max. standard length (cm): 60
BIOLOGY - Length at maturity (cm): 34.1
BIOLOGY - Food: plants mainly plants/detritus
BIOLOGY - Notes: A medium to long-lived riverine species, which also can be found in standing water bodies (Warren 2000).
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Spawns in streams / inlets (% respondents): 92.5
REPRODUCTION - Spawns in TS permanent lake (% respondents): 7.5
REPRODUCTION - Date of spawning (% respondents): Apr 2.8%, May 2.8% Feb-Mar 2.8% Jun-Jul 55.6%, Mar-Apr 8.3%, May-Jul 2.8%, May-Jun 25%
REPRODUCTION - Nurses in floodplain (% respondents): 100
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Thuok, N and L. Sina, 1997

ECOLOGY - All MFD information: Migration: A white fish species (Bardach 1959), which moves into seasonally flooded habitats (Rainboth 1996, Baird et al. 1999); Returns to the river from October, with numbers steadily increasing until January, when they begin to decline again (Rainboth 1996). Spawning: Spawning occurs in the rainy season from May to October (Jaiyen 1976, Watanadirokul et al. 1983, Somprasong 1977); It spawns in floodplains (Warren 2000, Baird et al. 1999) and mainstreams of large rivers (Warren 2000); It is a pelagic spawner which produces semi-buoyant eggs (Warren 2000, Watanadirokul et al. 1983, Watanadirokul et al. 1983), with a diameter of 1.45-1.95 mm (Jaiyen 1976), which will be hatch within 14-16 hours at 28ºC (Watanadirokul et al. 1983, Watanadirokul et al. 1983); The newly hatched larva is about 6 mm in total length (Watanadirokul et al. 1983, Watanadirokul et al. 1983). Bardach (1959) reported that the fish becomes adult at 50 cm (Bardach 1959), however more recent research indicate that the size at maturity is 26 cm TL in females and 25.7 cm in males (Jaiyen 1976); Females with total length of 26-59 cm carry 67,000 – 750,000 eggs (Jaiyen 1976, Watanadirokul et al. 1983, Watanadirokul et al. 1983). . Distribution: A common species (Rainboth 1996); which is found basin wide in tributaries of the Mekong (Pantulu 1986); It also occurs in the Xe Bangfai Basin (Kottelat 1998); Larvae/juveniles have been recorded from the drift in both the Mekong and Bassac Rivers in An Giang (Nguyen et al. 2002). Feeding: Its preferred diet consists mostly of periphyton (Rainboth 1996, Warren 2000) as well as leafy plants such as aquatic macrophytes (Rainboth 1996, Pothipituk 1970, Somprasong 1977, Jaiyen 1976) and inundated terrestrial plants (Rainboth 1996, Warren 2000, Baird and Phylavanh 1999, Baird et al. 1999); Feeds also on phytoplankton (Rainboth 1996, Warren 2000, Baird and Phylavanh 1999), filamentous algae, and bottom algae (Rainboth 1996, Pothipituk 1970, Somprasong 1977, Jaiyen 1976, Warren 2000, Baird and Phylavanh 1999, Baird et al. 1999) and detritus (Baird and Phylavanh 1999, Warren 2000, Baird et al. 1999).
ECOLOGY - Migration type: Only seems to display Longitudinal migrations.
ECOLOGY - Feeds in floodplains (% respondents): 100
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: Low
GUILD - Grey fish guild (% respondents): 100

Osteochilus microcephalus (Chavalit Vidthayanon)

IDENTIFICATION - Family: **Cyprinidae** (Minnows or carps)
IDENTIFICATION - Species name: ***Osteochilus microcephalus***
IDENTIFICATION - Author: Valenciennes, 1842
IDENTIFICATION - Name in Khmer: ត្រីក្រុស
IDENTIFICATION - Name in Khmer (roman): Kros
BIOLOGY - Max. total length (cm): 30
BIOLOGY - Max. standard length (cm): 24
BIOLOGY - Length at maturity (cm): 15.2
BIOLOGY - Food: Mainly plants/detritus
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Kottelat, 1985
ECOLOGY - All MFD information: Migration: A white fish species (Bardach 1959); which migrates upstream for reproduction (Singanouvong et al. 1996); it moves into flooded forests and grasslands during the flood season. It returns to the rivers later, with highest numbers appearing from December to February (Rainboth 1996); The fish species migrate up from Cambodia to southern Lao in January-February (Baird et al. 1999). Spawning: 0 . Distribution: A common species (Rainboth 1996). Feeding: Its preferred diet consists mostly of periphyton as well as leafy plants such as aquatic macrophytes and inundated terrestrial plants; It also feeds on phytoplankton,

filamentous algae, and bottom algae (Rainboth 1996, Baird et al. 1999), and detritus (Baird et al. 1999).
ECOLOGY - Migration type: Displays longitudinal as well as lateral migrations.
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: Medium


Osteochilus schlegelii (Baird, I.G.)

IDENTIFICATION - Family: **Cyprinidae** (Minnows or carps)
IDENTIFICATION - Species name: ***Osteochilus schlegelii***
IDENTIFICATION - Author: Bleeker, 1851
IDENTIFICATION - Name in Khmer: ត្រីលលកស
IDENTIFICATION - Name in Khmer (roman): Lolouk sor
BIOLOGY - Max. total length (cm): 49
BIOLOGY - Max. standard length (cm): 40
BIOLOGY - Length at maturity (cm): 23.8
BIOLOGY - Food: plants mainly plants/detritus
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Lim et al. 1999; Thuok, N and L. Sina, 1997
ECOLOGY - All MFD information: Migration: A white fish species (Bardach 1959), which moves into flooded forests and grasslands during the flood season, it returns to the rivers later, with highest numbers appearing from December to February (Rainboth 1996). Spawning: 0 . Distribution: Known from midwater to bottom depths in large and medium-sized rivers. Found in the Great Lake, but apparently not persisting in impoundments (Rainboth 1996). Feeding: Its preferred diet consists mostly of periphyton as well as leafy plants such as aquatic macrophytes and inundated terrestrial plants; It also feeds on phytoplankton, filamentous algae, and bottom algae (Rainboth 1996).
ECOLOGY - Migration type: Displays longitudinal as well as lateral migrations.
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: Low


Osteochilus waandersii (Rainboth W.)

IDENTIFICATION - Family: **Cyprinidae** (Minnows or carps)
IDENTIFICATION - Species name: ***Osteochilus waandersi***
IDENTIFICATION - Author: Bleeker, 1852
IDENTIFICATION - Name in Khmer: ត្រីក្រុស
IDENTIFICATION - Name in Khmer (roman): Kros chhnout
BIOLOGY - Max. standard length (cm): 20.5
BIOLOGY - Length at maturity (cm): 13.2
BIOLOGY - Food: Mainly plants/detritus
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information

REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: MFD occurence map
ECOLOGY - All MFD information: Migration: The fish species migrate up from Cambodia to southern Lao in January-February (Baird et al. 1999); and moves into flooded forests adjacent to upland streams during periods of elevated water levels (Rainboth 1996). Spawning: 0 . Distribution: Occurs in the Xe Bangfai Basin. (Kottelat 1998). Feeding: It is a herbivorous fish (Krachangdara 1994); Its preferred diet consists mostly of periphyton as well as leafy plants such as aquatic macrophytes and inundated terrestrial plants; It also feeds on phytoplankton, filamentous algae, bottom algae (Rainboth 1996), ad detritus (Baird et al. 1999).
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: Medium

Parachela maculicauda (Chavalit Vidthayanon)

IDENTIFICATION - Family: **Cyprinidae** (Minnows or carps)
IDENTIFICATION - Species name: ***Parachela maculicauda***
IDENTIFICATION - Author: Smith, 1934
IDENTIFICATION - Name in Khmer: ត្រីជន្ទាសភ្លុក
IDENTIFICATION - Name in Khmer (roman): Chunteas phluk
BIOLOGY - Max. total length (cm): 6
BIOLOGY - Length at maturity (cm): 4.5
BIOLOGY - Food: zoobenthos mainly animals
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Spawns in streams / inlets (% respondents): 97.5
REPRODUCTION - Spawns in TS permanent lake (% respondents): 2.5
REPRODUCTION - Date of spawning (% respondents): Feb-Mar 2.6% Jun-Jul 65.8%, May-Jul 2.6%, May-Jun 28.9%
REPRODUCTION - Nurses in floodplain (% respondents): 100
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: MFD occurence map
ECOLOGY - All MFD information: Migration: 0. Spawning: 0 . Distribution: Has been recorded in the Mekong Basin from near Vientiane to tributaries of the Great Lake (Rainboth 1996); Found in deep rivers in Borikhamxay province (Baird et al. 1999). Feeding: 0
ECOLOGY - Feeds in floodplains (% respondents): 100
ECOLOGY - Status: Native
ECOLOGY - Habitat: pelagic
ECOLOGY - Resilience: High
GUILD - Grey fish guild (% respondents): 100

Parachela oxygastroides (Chavalit Vidthayanon)

IDENTIFICATION - Family: **Cyprinidae** (Minnows or carps)
IDENTIFICATION - Species name: ***Parachela oxygastroides***
IDENTIFICATION - Author: Bleeker, 1852
IDENTIFICATION - Name in Khmer: ត្រីជន្ទាសភ្លុក
IDENTIFICATION - Name in Khmer (roman): Chunteas phluk

IDENTIFICATION - Name in English: Glass fish
BIOLOGY - Max. total length (cm): 25
BIOLOGY - Max. standard length (cm): 20
BIOLOGY - Length at maturity (cm): 12.9
BIOLOGY - Food: zooplankton mainly animals
BIOLOGY - Notes: This species and P. siamensis seem to be more tolerant of high amounts of suspended solids than P. maculicauda or P. williaminae and are more common in habitats disturbed by farming activities (Rainboth 1996).
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: Water level variation is a migration trigger
REPRODUCTION - Spawns in streams / inlets (% respondents): 97.5
REPRODUCTION - Spawns in TS permanent lake (% respondents): 2.5
REPRODUCTION - Date of spawning (% respondents): Feb-Mar 2.6% Jun-Jul 65.8%, May-Jul 2.6%, May-Jun 28.9%
REPRODUCTION - Nurses in floodplain (% respondents): 100
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: MFD occurence map
ECOLOGY - All MFD information: Migration: Leaves the flooded forest in November as the water levels begin to decline substantially (Rainboth 1996). Spawning: 0 . Distribution: 0. Feeding: Diet includes zooplankton (Rainboth 1996) and insects (Rainboth 1996, Baird et al. 1999).
ECOLOGY - Feeds in floodplains (% respondents): 100
ECOLOGY - Status: Native
ECOLOGY - Habitat: pelagic
ECOLOGY - Resilience: Medium
GUILD - Grey fish guild (% respondents): 100

Parachela siamensis (Chavalit Vidthayanon)

IDENTIFICATION - Family: **Cyprinidae** (Minnows or carps)
IDENTIFICATION - Species name: ***Parachela siamensis***
IDENTIFICATION - Author: Günther, 1868
IDENTIFICATION - Name in Khmer: ត្រីជង្គ្នាសភ្លុក
IDENTIFICATION - Name in Khmer (roman): Chunteas phluk
BIOLOGY - Max. total length (cm): 15
BIOLOGY - Max. standard length (cm): 15
BIOLOGY - Length at maturity (cm): 10
BIOLOGY - Food: Mainly animals
BIOLOGY - Notes: Commonly occurs together with P. oxygastroides and P. williaminae (Rainboth 1996).
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Spawns in streams / inlets (% respondents): 97.5
REPRODUCTION - Spawns in TS permanent lake (% respondents): 2.5
REPRODUCTION - Date of spawning (% respondents): Feb-Mar 2.6% Jun-Jul 65.8%, May-Jul 2.6%, May-Jun 28.9%
REPRODUCTION - Nurses in floodplain (% respondents): 100
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Rainboth, 1996; Kottelat, 1985
ECOLOGY - All MFD information: Migration: At high water it moves into the flooded forest, and probably leaves at the same time as P. oxygastroides (Rainboth 1996). Spawning: 0 . Distribution: This is the most common species of the genus in the Great Lake (Rainboth 1996). Feeding: Feeds on insects (Baird et al. 1999).
ECOLOGY - Feeds in floodplains (% respondents): 100
ECOLOGY - Status: Native
ECOLOGY - Habitat: pelagic

ECOLOGY - Resilience: High
GUILD - Grey fish guild (% respondents): 100

Parachela williaminae (Rainboth W.)

IDENTIFICATION - Family: **Cyprinidae** (Minnows or carps)
IDENTIFICATION - Species name: ***Parachela williamminae***
IDENTIFICATION - Author: Fowler, 1934
IDENTIFICATION - Name in Khmer: ត្រីជង្គ្នាសភ្លុក
IDENTIFICATION - Name in Khmer (roman): Chunteas phluk
BIOLOGY - Max. standard length (cm): 12
BIOLOGY - Length at maturity (cm): 8.2
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Spawns in streams / inlets (% respondents): 97.5
REPRODUCTION - Spawns in TS permanent lake (% respondents): 2.5
REPRODUCTION - Date of spawning (% respondents): Feb-Mar 2.6% Jun-Jul 65.8%, May-Jul 2.6%, May-Jun 28.9%
REPRODUCTION - Nurses in floodplain (% respondents): 100
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: MFD occurence map
ECOLOGY - All MFD information: Migration: 0. Spawning: 0 . Distribution: An apparently uncommon species, known from the main channel of the Mekong from northern Thailand downstream to the Great Lake (Rainboth 1996). Feeding: 0
ECOLOGY - Feeds in floodplains (% respondents): 100
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: Medium
GUILD - Grey fish guild (% respondents): 100

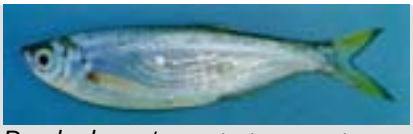
Paralaubuca harmandi (Chavalit Vidthayanon)

IDENTIFICATION - Family: **Cyprinidae** (Minnows or carps)
IDENTIFICATION - Species name: ***Paralaubuca harmandi***
IDENTIFICATION - Author: Sauvage, 1883
IDENTIFICATION - Name in Khmer: ត្រីស្លឹកបូស្សី
IDENTIFICATION - Name in Khmer (roman): Sleuk russey
BIOLOGY - Max. total length (cm): 27
BIOLOGY - Max. standard length (cm): 21.9
BIOLOGY - Length at maturity (cm): 14
BIOLOGY - Food: zooplankton mainly animals
BIOLOGY - Notes: Usually found as scattered individuals rather than in large schools like P. barroni and P. typus (Rainboth 1996).
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Kottelat, 1985

ECOLOGY - All MFD information: Migration: A white fish species (Bardach 1959). Spawning: 0 . Distribution: 0. Feeding: Feeds on zooplankton and insects of larger size than seen in other members of the genus (Rainboth 1996).
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: Medium


Paralaubuca riveroi (Chavalit Vidthayanon)

IDENTIFICATION - Family: **Cyprinidae** (Minnows or carps)
IDENTIFICATION - Species name: ***Paralaubuca riveroi***
IDENTIFICATION - Author: Fowler, 1935
IDENTIFICATION - Name in Khmer: ត្រីស្លឹកឫស្សី
IDENTIFICATION - Name in Khmer (roman): Sleuk russey
BIOLOGY - Max. total length (cm): 22
BIOLOGY - Max. standard length (cm): 18
BIOLOGY - Length at maturity (cm): 11.8
BIOLOGY - Food: zooplankton mainly animals
BIOLOGY - Notes: Usually occurs as scattered representatives in schools of the other species in this genus (Rainboth 1996).
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Thuok, N and L. Sina, 1997.
ECOLOGY - All MFD information: Migration: 0. Spawning: 0 . Distribution: Larvae/juveniles have been recorded from the drift in both the Mekong and Bassac Rivers in An Giang (Nguyen et al. 2002). Feeding: Feeds mostly on zooplankton and occasionally insects (Rainboth 1996).
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: Medium


Paralaubuca typus (Roberts, T.R.)

IDENTIFICATION - Family: **Cyprinidae** (Minnows or carps)
IDENTIFICATION - Species name: ***Paralaubuca typus***
IDENTIFICATION - Author: Bleeker, 1865
IDENTIFICATION - Name in Khmer: ត្រីស្លឹកឫស្សី
IDENTIFICATION - Name in Khmer (roman): Sleuk russey
BIOLOGY - Max. total length (cm): 22
BIOLOGY - Max. standard length (cm): 18
BIOLOGY - Length at maturity (cm): 11.8
BIOLOGY - Food: zooplankton mainly animals
BIOLOGY - Notes: A schooling species (Rainboth 1996), which mainly feeds near the surface (Baird and Phylavanh 1999).
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: Water level variation is a migration trigger
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Thuok, N and L. Sina, 1997

ECOLOGY - All MFD information: Migration: A highly migratory (Roberts and Baird 1995) white fish species (Bardach 1959), which migrates upstream to Kratie and Stung Treng in January-February as part of a group of small non-reproductive fish migrating from downriver (Roberts and Warren 1994); From November to February, a non-reproductive upstream migration is undertaken from Kandal, to the Khone Falls. From May to July, the fish is migrating downstream. At this time, the fish are reported to be in reproductive condition. Above the Khone Falls, an upstream migration occurs from March to July. This migration is apparently triggered by a combination of the first strong rain, rising water, change in water colour/turbidity and the appearance of insects, also reported to migrate around full moon (Poulsen and Valbo-Jørgensen 2000); During the wet season medium sized individuals migrate downstream, adults migrate upstream. The purpose of the migration for both sizes is reproduction (Singanouvong et al. 1996); Migrates up the Mekong and Sekong Rivers in January-February and migrates down to the Cambodian floodplains in July-August (Baird et al. 1999);
Moves out into flooded forests during high water levels and returns to the mainstream after the water levels have already considerably declined (Rainboth 1996); The fish enter the Mekong mainstream from both the Tonle Sap River and from small canals into the mainstream; The species is reported to migrate together with several other species, in particular Henicorhynchus spp., but also Botia modesta, small Pangasius spp. and Micronema spp (Poulsen and Valbo-Jørgensen 2000). Spawning: It becomes adult at a size of 20 cm (Bardach 1959); Eggs have been observed in the abdomen during the period from April to July with a strong peak in May-June, indicating that spawning occur during this period. Fish have been observed spawning both in the mainstream and in floodplain habitats (Poulsen and Valbo-Jørgensen 2000); Reported to spawn in floodplains (Baird et al. 1999). . Distribution: Occurs from the Mekong Delta to Chiang Saen near the border between Lao PDR, Thailand and Myanmar (Poulsen and Valbo-Jørgensen 2000); Occurs in the Xe Bangfai Basin (Kottelat 1998). Feeding: Feeds on zooplankton (Rainboth 1996) e.g. planktonic crustaceans (Bardach 1959); flying insects (Rainboth 1996, Bardach 1959, Baird et al. 1999) which it catches at the surface in shallow water (Poulsen and Valbo-Jørgensen 2000) in June (Baird and Phylavanh 1999); Rice bran (Baird et al. 1999); May consume seasonally inundated riverine vegetation during the rainy season (Baird and Phylavanh 1999) and plant seeds (Bardach 1959); Is also known to scavenge (Baird et al. 1999).
ECOLOGY - Migration type: Displays longitudinal as well as lateral migrations.
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: Medium

Poropuntius deauratusm (IFReDI collection)

IDENTIFICATION - Family: **Cyprinidae** (Minnows or carps)
IDENTIFICATION - Species name: ***Poropuntius deauratus***
IDENTIFICATION - Author: Valenciennes, 1842
IDENTIFICATION - Name in Khmer: ត្រីក្រុសភ្នំ
IDENTIFICATION - Name in Khmer (roman): Kros phnom
BIOLOGY - Length at maturity (cm): 0.9
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: From FishBase
ECOLOGY - Migration type: No information on migration type
ECOLOGY - Status: Questionable
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: Medium

Probarbus jullieni (IFReDI collection)

IDENTIFICATION - Family: **Cyprinidae** (Minnows or carps)
IDENTIFICATION - Species name: ***Probarbus jullieni***
IDENTIFICATION - Author: Sauvage, 1880
IDENTIFICATION - Name in Khmer: ត្រីត្រសក់
IDENTIFICATION - Name in Khmer (roman): Tra sork krohom
IDENTIFICATION - Name in English: Iso barb
BIOLOGY - Max. standard length (cm): 150
BIOLOGY - Length at maturity (cm): 76.7
BIOLOGY - Food: plants/detritus+animals
BIOLOGY - Notes: Generally intolerant of habitat alterations, it has disappeared from areas affected by impoundments (Rainboth 1996); Large dams in Stung Treng and Kratie Provinces would eliminate most of the rapids habitat that are important for the spawning of this species (Roberts 1992); The eggs are eaten by P. conchophilus, Hemibagrus nemurus, H. wyckii and Morulius spp. (Roberts and Warren 1994, Baird 1994).
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: MFD occurence map
ECOLOGY - All MFD information: Migration: A white fish species (Bardach 1959); It migrates upstream for spawning from October to February from Kompong Cham to Chiang Khong (Poulsen and Valbo-Jørgensen 2000) often in association with P. labeamajor (Roberts and Warren 1994, Poulsen and Valbo-Jørgensen 2000); At Khone Falls the migrations take place between October and December, with a peak in November or early December, when water levels begin to go down (Roberts 1993); Or in December to the beginning of January (Baird et al. 1999); It was reported that it migrates up the tributary Nam Ta in Lao PDR to spawn during March-April (Poulsen and Valbo-Jørgensen 2000); The species is further believed to enter flooded streams in the high-water season (Baird and Phylavanh 1999); It is hypothesised to exist as discrete stocks that undertake migrations over relatively short distances (Singanouvong et al. 1996, Baird and Flaherty 2000); Juvenile individuals often migrate downstream in association with small cyprinids for dispersal and feeding (Singanouvong et al. 1996); these trophic migrations by juveniles and sub-adults occur mainly at the onset of the flood season are reported throughout the occurrence range (Poulsen and Valbo-Jørgensen 2000). Spawning: It is a dry season spawner (Singanouvong et al. 1996), which breeds between December and March (Ukkatawewat 9999, Tan et al. 1983, Poulsen and Valbo-Jørgensen 2000, Amatyakul et al. 1995, Phuriphong and Ukkatawewat 1992); Spawning grounds shallow rapids with strong current in the mainstream of large rivers (Roberts and Warren 1994, Tan et al. 1983, Ukkatawewat 9999, Ukkatawewat 1979 , Amatyakul et al. 1995) with sand and gravel substrate (Ukkatawewat 9999, Ukkatawewat 1979 , Amatyakul et al. 1995, Tan et al. 1983), There are usually deep pools nearby, where the fish stay during the day (Tan et al. 1983); It is apparently incapable of reproducing in reservoirs (Roberts 1992).
During the spawning period the fish congregate in large schools of between 30 and 40 individuals (Phuriphong and Ukkatawewat 1992), before spawning, males and females chase one another at the surface of the water (Phuriphong and Ukkatawewat 1992); Spawning takes place at night (Tan et al. 1983, Tan et al. 1983), before the fish moves to the spawning ground in the evening, it starts surfacing in the deep pool where it stays during the day (Tan et al. 1983); Falling water and atmospheric temperatures, together with decreased turbidity, may be important factors in controlling the arrival time of Probarbus to its spawning grounds (Baird and Flaherty 2000); The arrival of P. jullieni at its spawning grounds seem to be associated with low moonlight conditions (Singanouvong et al. 1996); In the Mekong River, spawning grounds have been identified in Nong Kai, Loei, Ubon Ratchathani, Nakhon Phanom, Mukdaharn (Amatyakul et al. 1995); and Champasack Provinces (Roberts and Warren 1994).
In the wild only females between four and five kg or heavier have been found in spawning condition (Baird and Phylavanh 1999, Plangchawee et al. 1987), it is however not known at what age wild fish mature, but in captivity both males and females mature when five years old (Rodrarung and

Janesirisak 1990); Mature males usually weigh 5-20 kg, while females weigh 10-50 kg (Amatyakul et al. 1995); Captive brood stock with a weight of 3.0-5.5 kg, have around 45,000 eggs (Leelapatra et al. 2000); A of 14 kg was recorded as producing about 500,000 eggs (Ukkatawewat 1979). The eggs are buoyant (Ukkatawewat 9999) or semi-buoyant, but slightly heavy and adhesive (Amatyakul et al. 1995); The diameter of egg is about 2 mm (Amatyakul et al. 1995, Ukkatawewat 9999, Ukkatawewat 1979); Hatching occurs in 32 hrs (Ukkatawewat 9999, Ukkatawewat 1979); to 72 hr at 23ºC (Amatyakul et al. 1995); At hatching, the larvae measure 0.8 – 0.9 cm (Amatyakul et al. 1995). . Distribution: Found basin wide in the mainstream of the Lower Mekong (Pantulu 1986, Poulsen and Valbo-Jørgensen 2000); In Cambodia, it occurs in the Mekong from the Lao border to the Great Lake (Rainboth 1996); inhabits parts of the Mekong, Sekong, Sre Pok and Se San Rivers (Baird and Flaherty 2000); Occurs mainly as juveniles up to 40 cm long in the Delta (Poulsen and Valbo-Jørgensen 2000); Larvae/juveniles have been recorded from the drift in the Mekong River in An Giang (Nguyen et al. 2002). Feeding: Feeds on aquatic plants (Smith 1945, Ukkatawewat 9999, Amatyakul et al. 1995, Singanouvong et al. 1996, Baird et al. 1999) and invertebrates (Singanouvong et al. 1996, Phuriphong and Ukkatawewat 1992) including molluscs (Ukkatawewat 9999, Amatyakul et al. 1995, Phuriphong and Ukkatawewat 1992, Baird et al. 1999) crabs (Amatyakul et al. 1995, Baird et al. 1999), insects (Ukkatawewat 9999, Baird et al. 1999), aquatic insect larvae, and zooplankton (Amatyakul et al. 1995); Juveniles feed on small gastropod sand snails, fruits, insects, and detritus (Baird and Phylavanh 1999); The species is a night-time feeder (Amatyakul et al. 1995).
ECOLOGY - Migration type: Displays longitudinal as well as lateral migrations.
ECOLOGY - Status: Native
ECOLOGY - Habitat: Demersal
ECOLOGY - Resilience: Very low

Probarbus labeamajor (Warren, T.)

IDENTIFICATION - Family: **Cyprinidae** (Minnows or carps)
IDENTIFICATION - Species name: ***Probarbus labeamajor***
IDENTIFICATION - Author: Roberts, 1992
IDENTIFICATION - Name in Khmer: ត្រីត្រសក់ស
IDENTIFICATION - Name in Khmer (roman): Tra sork sor
IDENTIFICATION - Name in English: Thicklip barb
BIOLOGY - Max. total length (cm): 183
BIOLOGY - Max. standard length (cm): 150
BIOLOGY - Length at maturity (cm): 76.7
BIOLOGY - Notes: probably will not survive in impoundments (Rainboth 1996); Large dams on the mainstream in Stung Treng and Kratie Provinces, would eliminate most of the rapids habitats that are important for its spawning (Roberts 1992).
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: Cannot breed in reservoirs
ECOLOGY - Tonle Sap distribution: Hill, and Hill, 1994
ECOLOGY - All MFD information: Migration: It has very similar migrations habits to P. jullieni, and the two species often migrate together (Roberts and Warren 1994, Poulsen and Valbo-Jørgensen 2000); In Southern Lao PDR migrates in December and the beginning of January (Baird et al. 1999); Upstream spawning migrations occur from October to February from Kompong Cham to Chiang Khong. At Chiang Khong, fishermen reported that is migrates up the tributary Nam Ta in Lao PDR to spawn during March-April (Poulsen and Valbo-Jørgensen 2000); It is possible that Probarbus does not migrate long distances (Baird and Flaherty 2000). Spawning: Above the Khone Falls, the main spawning period is reported to be January to February, sometimes extending into March-April (Poulsen and Valbo-Jørgensen 2000); To date, the only confirmed spawning site in Laos for this species is just below the Khone Falls (Baird and Flaherty 2000); It used to spawn near Don Hee (Roberts and Warren 1994); Probarbus are apparently incapable of reproducing in

reservoirs (Roberts 1992). . Distribution: Occurs throughout the survey area, from the Mekong Delta to the border between Lao PDR, Thailand and Myanmar (Poulsen and Valbo-Jørgensen 2000); Known to inhabit parts of the Mekong, Sekong, Sre Pok and Se San Rivers (Baird 1994); Found in large upland rivers of the middle and Lower Mekong Basin. Probably more common than P. jullieni in Stung Treng, but apparently not found in the Great Lake (Rainboth 1996). Feeding: Feeds on crabs, snails, insects, and aquatic plants (Baird et al. 1999).
ECOLOGY - Migration type: Displays longitudinal as well as lateral migrations.
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: Very low

Puntioplites bulu (Chavalit Vidthayanon)

IDENTIFICATION - Family: **Cyprinidae** (Minnows or carps)
IDENTIFICATION - Species name: ***Puntioplites bulu***
IDENTIFICATION - Author: Bleeker, 1851
IDENTIFICATION - Name in Khmer: ត្រីគុចជ្រៀ/កញ្ជ្រៀ
IDENTIFICATION - Name in Khmer (roman): Kuch chreov
BIOLOGY - Max. total length (cm): 35
BIOLOGY - Length at maturity (cm): 21.2
BIOLOGY - Food: plants plants/detritus+animals
BIOLOGY - Notes: Formerly common, but very rare in recent years. It is a candidate for listing by the IUCN (Rainboth 1996).
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Rainboth, 1996; Thuok, N and L. Sina, 1997
ECOLOGY - All MFD information: Migration: A white fish species (Bardach 1959); Moves into flooded forests when water-levels are high (Rainboth 1996); Returns from the floodplain to the Tonle Sap in October where it formerly was taken in the dai fisheries (Blache and Goossens 1954). Spawning: 0 . Distribution: previously common in the Great Lake where it was an important part of the catch by the large traps (Fily and D'Aubenton 1966). Feeding: Feeds mostly on submerged plants along with some filamentous algae and insects that occur on the plants (Rainboth 1996).
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: Medium

Puntioplites falcifer (Rainboth W.)

IDENTIFICATION - Family: **Cyprinidae** (Minnows or carps)
IDENTIFICATION - Species name: ***Puntioplites falcifer***
IDENTIFICATION - Author: Smith, 1929
IDENTIFICATION - Name in Khmer: ត្រីច្រកែង
IDENTIFICATION - Name in Khmer (roman): Chra kaeng
BIOLOGY - Length at maturity (cm): 23.8

BIOLOGY - Food: Mainly plants/detritus
BIOLOGY - Notes: It is a riverine species, which seems to avoid standing water (Rainboth 1996).
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: MFD occurence map
ECOLOGY - All MFD information: Migration: The Mekong Basin can be divided into four sections with distinct migration patterns: 1:
Northern Lao PDR and Thailand (from Loei-Chiang Rai Province): Upstream migrations here occur from Feb-May and in July-Aug, but the main period of upstream migration is from March-April. Downstream migration occurs from September-November; 2:
From Champassack to Nakhon Phanom Province: Upstream migrations in this region are concentrated in May-June. Downstream migrations are reported in November-December; 3:
Northern Cambodia (Stung Treng – Kratie): The species migrates upstream in this river stretch from November – December, and downstream in April-June; 4:
The Mekong in Viet Nam: Only one report on upstream migration in Tien Giang Province in July. The fish migrates downstream in October-December. It migrates in large schools often together with a number of other species, in particular Cosmochilus harmandi, Cirrhinus spp., Black sharkminnow (Labeo chrysophekadion), and Bangana sp. (Poulsen and Valbo-Jørgensen 2000); This species probably enters seasonally inundated areas to feed during the high-water season (Baird and Phylavanh 1999); At the Nam Ngum Reservoir this species is apparently the first to migrate into rivers in April for spawning (Warren et al. Scott and Crossman 1973).
This fish species migrate up from Cambodia to Southern Lao in January-February, and returns to Cambodia to spawn in the flood season in July-August. After spawning the fish migrate to the floodplain and streams, at the end of the rainy season in November-December it returns to large rivers and streams (Baird et al. 1999). Spawning: It is a pelagic spawner, which lays buoyant or semi-buoyant eggs; It spawns in floodplains and mainstreams of large rivers (Warren et al. Scott and Crossman 1973); In July to August (Baird et al. 1999); Although also reported to spawn in small streams and in rice fields; The spawning season is protracted with eggs reported in the period from March-December (with most reports from May-June), and 2 cm long juveniles reported all the year (although in highest occurrence from May to November); Reported to attain sexual maturity, when it weighs about 0.3-0.4 kg (Poulsen and Valbo-Jørgensen 2000). . Distribution: A common species in the mainstream Mekong all the way from Chiang Rai Province to the southernmost part of the Mekong Delta (Poulsen and Valbo-Jørgensen 2000); Occurs in the Xe Bangfai and Nam Theun Basins (Kottelat 1998); Common around Stung Treng; It does not seem to occur in the Great Lake (Rainboth 1996); Recorded from the Sekong (Baird et al. 1999). Feeding: Feeds on algae (Baird and Phylavanh 1999, Warren 2000), periphyton, other plant material (Warren 2000, Baird et al. 1999), detritus, bark, leaves (Baird and Phylavanh 1999), earthworms (Baird and Phylavanh 1999, Baird et al. 1999), insects (Baird and Phylavanh 1999, Rainboth 1996, Baird et al. 1999), insect larvae (Rainboth 1996, Baird et al. 1999), ant eggs (Baird et al. 1999); In reservoirs it apparently grazes extensively on the epiphytic growths of filamentous algae found growing on the remains of the drowned forest (Warren 2000).
ECOLOGY - Migration type: Displays longitudinal as well as lateral migrations.
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: Low

Puntioplites proctozystron (Jean-Francois Helias / Fishing Adventures Thailand)

IDENTIFICATION - Family: **Cyprinidae** (Minnows or carps)
IDENTIFICATION - Species name: ***Puntioplites proctozystron***
IDENTIFICATION - Author: Bleeker, 1865

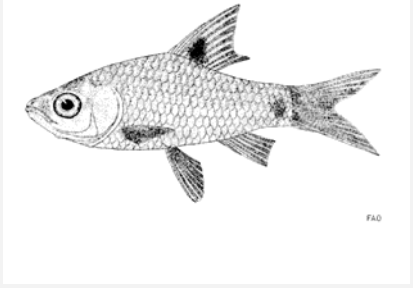
IDENTIFICATION - Name in Khmer: ត្រីច្រកែង
IDENTIFICATION - Name in Khmer (roman): Chra kaeng
BIOLOGY - Max. total length (cm): 30
BIOLOGY - Length at maturity (cm): 18.5
BIOLOGY - Food: zoobenthos plants/detritus+animals
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: Can breed in reservoirs
ECOLOGY - Tonle Sap distribution: Thuok, N and L. Sina, 1997
ECOLOGY - All MFD information: Migration: A white fish species (Bardach 1959); Moves into flooded forests as well as into marshes during high-water periods. It begins to return to the Tonle Sap in October and becomes progressively more abundant until January, when its numbers begin to taper off (Rainboth 1996). Spawning: Spawning occurs in the rainy season (Janesirisak 1971), May to October (Banyen 1988), but the exact timing varies according to environmental factors such as rainfall and water current. In some reservoirs the fish spawns twice a year (Janesirisak 1971) in April-May and September (Duangsawasdi et al. 1988) or in May-August and again in October-November (Janesirisak 1971); Spawning occurs in slow moving water areas with muddy bottom (Watanadiroku and Murada 1985); Females become sexually mature at 12 cm (Duangsawasdi et al. 1988), 23 cm (Janesirisak 1971) or 25 cm (Bardach 1959); The fecundity of 23 cm female is 96,300-100,000 eggs (Janesirisak 1971); Fish of about 17-27 cm body length and of 79.0-278.0 g body weight have approx. 21,500-144,000 eggs. The average number is 62,700 (Duangsawasdi et al. 1988); The eggs are of the semi-buoyant type (Banyen et al. 1989, Banyen et al. 1989, Duangsawasdi et al. 1988, Banyen 1988), with an initial diameter of 0.73 mm (Banyen et al. 1989, Banyen et al. 1989, Duangsawasdi et al. 1988); Hatching occurs 12 hr after fertilization at 28ºC (Banyen et al. 1989, Banyen et al. 1989). . Distribution: Basin wide distribution in main river channel and large rivers. Feeding: Feeds on planktonic crustacea (Bardach 1959, Thoopbucha and Benjakarn 1973) including ostracodes and copepods (Janesirisak 1971), Protozoa (Thoopbucha and Benjakarn 1973), nematodes (Janesirisak 1971), algae, higher plants (Thoopbucha and Benjakarn 1973) and plant detritus (Janesirisak 1971).
ECOLOGY - Migration type: Displays longitudinal as well as lateral migrations.
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: Medium

Puntius aurotaeniatus (Chavalit Vidthayanon)

IDENTIFICATION - Family: **Cyprinidae** (Minnows or carps)
IDENTIFICATION - Species name: ***Puntius aurotaeniatus***
IDENTIFICATION - Author: Tirant, 1885
IDENTIFICATION - Remark: puntius aurotaeniatus
BIOLOGY - Max. standard length (cm): 6
BIOLOGY - Length at maturity (cm): 4.5
BIOLOGY - Food: Mainly animals
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: MFD occurence map
ECOLOGY - All MFD information: Migration: 0. Spawning: Spawns during the rainy season (Rainboth 1996, Baird et al. 1999) and half-grown young are caught in March (Rainboth 1996). . Distribution: Occurs in the Middle and Lower Mekong (Rainboth 1996); mainly in running waters (Pantulu 1986); Recorded from the Xe Bangfai and Nam Theun basins in Laos (Kottelat 1998). Feeding: Feeds primarily on zooplankton and insect larvae (Rainboth 1996, Baird et al. 1999).
ECOLOGY - Status: No information
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: High

Puntius brevis (Baird, I.G.)

IDENTIFICATION - Family: **Cyprinidae** (Minnows or carps)
IDENTIFICATION - Species name: ***Puntius brevis***
IDENTIFICATION - Author: Bleeker, 1850
IDENTIFICATION - Name in Khmer: ត្រីអង្គុតំប្រាក់
IDENTIFICATION - Name in Khmer (roman): Angkot prak
BIOLOGY - Max. total length (cm): 15
BIOLOGY - Max. standard length (cm): 12
BIOLOGY - Length at maturity (cm): 8.2
BIOLOGY - Food: zoobenthos mainly animals
BIOLOGY - Notes: proliferates in impoundments (Rainboth 1996).
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Spawns in floodplain lakes / rice field (% respondents): 95
REPRODUCTION - Spawns in streams / inlets (% respondents): 5
REPRODUCTION - Date of spawning (% respondents): May 2.7% Jul 5.4% Jun-Jul 59.5% May-Jun 29.7%, May-Sep 2.7%
REPRODUCTION - Nurses in floodplain (% respondents): 100
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Kottelat, 1985; Lim et al. 1999
ECOLOGY - All MFD information: Migration: A white fish species (Bardach 1959); Moves onto newly inundated land during flood season (Rainboth 1996). Spawning: Females with ripe ovaries are found in July (Thiencharoen 1970) and spawning season may be in late rainy season, from July to October (Smith 1945); The fish has adhesive eggs (Thiencharoen 1970) and spawns in newly inundated land (Rainboth 1996); Females reach maturity at 7.6 cm, and males at 4.6 cm (Thiencharoen 1970). . Distribution: Recorded from the Nam Theun and Xe Bangfai Basins (Kottelat 1998); Houay Ta Euang and Phapho swamp and Xe Lamphao (Baird et al. 1999); Larvae/juveniles have been recorded from the drift in the Mekong River in An Giang (Nguyen et al. 2002). Feeding: Eats crustaceans, tubificid worms, zooplankton (Rainboth 1996), algae (Rainboth 1996, Baird et al. 1999), mud (Bardach 1959), terrestrial (Bardach 1959, Pothipituk 1970) and aquatic plants, green algae and diatoms (Pothipituk 1970); Insect larvae, and shrimps (Baird et al. 1999).
ECOLOGY - Feeds in floodplains (% respondents): 100
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: High
GUILD - Black fish guild (% respondents): 100



Puntius masyai (FAO)

IDENTIFICATION - Family: **Cyprinidae** (Minnows or carps)
IDENTIFICATION - Species name: ***Puntius masyai***

IDENTIFICATION - Author: Smith, 1945
BIOLOGY - Max. total length (cm): 2.5
BIOLOGY - Length at maturity (cm): 2
BIOLOGY - Food: zoobenthos mainly animals
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Lim et al. 1999
ECOLOGY - Migration type: No information on migration type
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: High

Puntius orphoides (Warren, T.)

IDENTIFICATION - Family: **Cyprinidae** (Minnows or carps)
IDENTIFICATION - Species name: ***Puntius orphoides***
IDENTIFICATION - Author: Valenciennes, 1842
IDENTIFICATION - Name in Khmer: ត្រីអំពិលទុំ
IDENTIFICATION - Name in Khmer (roman): Ampil tum
IDENTIFICATION - Name in English: Javaen barb
BIOLOGY - Max. total length (cm): 31
BIOLOGY - Max. standard length (cm): 25
BIOLOGY - Length at maturity (cm): 15.7
BIOLOGY - Food: plants mainly animals
BIOLOGY - Notes: Occasionally found in impoundments, but usually stays in the flowing streams leading to the impoundment (Rainboth 1996).
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Spawns in floodplain lakes / rice field (% respondents): 97.5
REPRODUCTION - Spawns in streams / inlets (% respondents): 2.5
REPRODUCTION - Date of spawning (% respondents): Jul 2.7% Jun-Jul 67.6% May-Jun 29.7%
REPRODUCTION - Nurses in floodplain (% respondents): 100
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Thuok, N and L. Sina, 1997
ECOLOGY - All MFD information: Migration: A white fish species (Bardach 1959), which moves into seasonally inundated areas at the onset of the rainy season. Adults leave the floodplains as the water disappears in December or January (Rainboth 1996). Spawning: It breeds in the rainy season (Rainboth 1996, Duangsawasdi et al. 1989.), but the exact timing varies according to local environmental factors such as rainfall and current (Duangsawasdi et al. 1989.); in some rivers it spawns from February to June (Duangsawasdi et al. 1989), in others from March to September (Duangsawasdi et al. 1989.), in southern Lao PDR in June-July (Baird et al. 1999); The young of the year start to appear in streams in July and August; It breeds in floodplains (Rainboth 1996, Baird et al. 1999) in areas covered with vegetation (Leelapatra et al. 2000); The eggs are adhesive with an initial diameter of 0.7 mm (Jitpironsri et al. 1992) and will hatch 18-19 hours after fertilization at 27-28ºC (Vongkamolchoon and Chatchavanthatri 1995.); The larva measures about 3 mm at hatching (Vongkamolchoon and Chatchavanthatri 1995.). The fish matures at 10-11 cm (Duangsawasdi et al. 1989., Duangsawasdi et al. 1989); There is considerable variation in fecundity in different environments, in Maeklong River fish of 10-18 cm and 15-80 g contain around 20,000 eggs (Duangsawasdi et al. 1989.); In Tha Chin River fish of 12 cm length contains about 80,000 eggs, and fish of 17 cm about 117,000 eggs (Duangsawasdi et al. 1989); In culture, fish with a total length of 10.9-12.3 cm and a body weight of 18.07-23.36 g contains about 7,300-15,000 eggs (Jitpironsri et al. 1992). . Distribution: Found basin wide in tributaries of the Mekong (Pantulu 1986). Feeding: Feeds on algae, insects and organic detritus (Jitpironsri et al. 1992).

ECOLOGY - Feeds in floodplains (% respondents): 100
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: Medium
GUILD - Black fish guild (% respondents): 95
GUILD - Grey fish guild (% respondents): 5

Puntius artipentazona (Baird, I.G.)

IDENTIFICATION - Family: **Cyprinidae** (Minnows or carps)
IDENTIFICATION - Species name: ***Puntius partipentazona***
IDENTIFICATION - Author: Fowler, 1934
BIOLOGY - Max. total length (cm): 5
BIOLOGY - Max. standard length (cm): 4
BIOLOGY - Length at maturity (cm): 3.1
BIOLOGY - Food: plants/detritus+animals
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: MFD occurence map
ECOLOGY - All MFD information: Migration: 0. Spawning: 0 . Distribution: Known from the Middle and Lower Mekong (Rainboth 1996). Feeding: Feeds primarily on zooplankton, along with some aquatic insect larvae and plant matter (Rainboth 1996, Baird et al. 1999).
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: High

Raiamas guttatus (Chavalit Vidthayanon)

IDENTIFICATION - Family: **Cyprinidae** (Minnows or carps)
IDENTIFICATION - Species name: ***Raiamas guttatus***
IDENTIFICATION - Author: Day, 1870
IDENTIFICATION - Name in English: Burmese trout
BIOLOGY - Max. total length (cm): 37
BIOLOGY - Max. standard length (cm): 30
BIOLOGY - Length at maturity (cm): 18.5
BIOLOGY - Food: zoobenthos mainly animals
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Kottelat, M., 1985; CNMC 1998, Scott and Crossman 1973
ECOLOGY - All MFD information: Migration: A white fish species (Bardach 1959). Spawning: 0 . Distribution: Found basin wide in the mainstream of the Mekong (Pantulu 1986); It has been recorded from the Great Lake in Cambodia (Rainboth 1996), and it also occurs in the Xe Bangfai and Nam Theun basins (Kottelat 1998). Feeding: Feeds on fish (Baird and Phylavanh 1999, Rainboth 1996, Baird et al. 1999), insects (Rainboth 1996, Baird et al. 1999), detritus (Baird and Phylavanh 1999) and shrimps (Baird et al. 1999).
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic

ECOLOGY - Resilience: Medium

Rasbora urotaenia (Baird, I.G.)

IDENTIFICATION - Family: **Cyprinidae** (Minnows or carps)
IDENTIFICATION - Species name: ***Rasbora aurotaenia***
IDENTIFICATION - Author: Tirant, 1885
IDENTIFICATION - Name in English: Pale rasbora
BIOLOGY - Max. total length (cm): 19
BIOLOGY - Max. standard length (cm): 15
BIOLOGY - Length at maturity (cm): 10
BIOLOGY - Food: zoobenthos plants/detritus+animals
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Thuok, N and L. Sina, 1997
ECOLOGY - All MFD information: Migration: Migrates up from Tonle Sap, to Laos in January-February (Baird et al. 1999). Spawning: Spawns in June-July (Baird et al. 1999). . Distribution: Recorded from Mekong at Pak Mun (37786); Found in southern Laos (Baird et al. 1999); and around the Tonle Sap river and Great Lake (Thuok, N and L. Sina, 1997). Feeding: probably feeds mostly on terrestrial insects and also on some algae (Rainboth 1996, Baird et al. 1999).
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: Medium

Rasbora caudimaculata (Chavalit Vidthayanon)

IDENTIFICATION - Family: **Cyprinidae** (Minnows or carps)
IDENTIFICATION - Species name: ***Rasbora caudimaculata***
IDENTIFICATION - Author: Volz, 1903
IDENTIFICATION - Name in English: Greater scissortail
BIOLOGY - Max. total length (cm): 21
BIOLOGY - Max. standard length (cm): 17
BIOLOGY - Length at maturity (cm): 11.2
BIOLOGY - Food: zoobenthos mainly animals
BIOLOGY - Notes: Not a common species, apparently occurs with only localized populations (Rainboth 1996).
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Lamberts and Sarath, 1997
ECOLOGY - All MFD information: Migration: 0. Spawning: 0 . Distribution: 0. Feeding: Feeds primarily on terrestrial insects (Rainboth 1996).
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: Medium

Rasbora daniconius (Jayasinghe, A.)

IDENTIFICATION - Family: **Cyprinidae** (Minnows or carps)
IDENTIFICATION - Species name: ***Rasbora daniconius***
IDENTIFICATION - Author: Hamilton, 1822
IDENTIFICATION - Name in Khmer: ត្រីចង្វាឆ្នូត
IDENTIFICATION - Name in Khmer (roman): ***Changva chnot***
IDENTIFICATION - Name in English: Slender rasbora
BIOLOGY - Max. total length (cm): 15
BIOLOGY - Length at maturity (cm): 7.2
BIOLOGY - Food: zoobenthos mainly animals
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Reproductive guild: Nonguarders: Open water/substratum egg scatterers
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Lim et al. 1999
ECOLOGY - Migration type: No information on migration type
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: High

Rasbora dusonensis (JJPhoto)

IDENTIFICATION - Family: **Cyprinidae** (Minnows or carps)
IDENTIFICATION - Species name: ***Rasbora dusonensis***
IDENTIFICATION - Author: Bleeker, 1851
IDENTIFICATION - Name in Khmer: ត្រីចង្វា
IDENTIFICATION - Name in Khmer (roman): Changva
IDENTIFICATION - Name in English: Rosefin rasbora
BIOLOGY - Max. total length (cm): 15
BIOLOGY - Max. standard length (cm): 12
BIOLOGY - Length at maturity (cm): 9.2
BIOLOGY - Food: zoobenthos mainly animals
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Kottelat, 1985
ECOLOGY - Migration type: No information on migration type
ECOLOGY - Feeds in floodplains (% respondents):
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: High

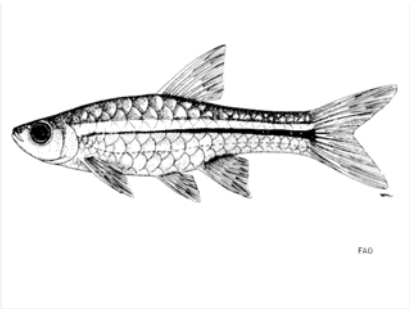
Rasbora hobelmani (Rainboth W.)

IDENTIFICATION - Family: **Cyprinidae** (Minnows or carps)
IDENTIFICATION - Species name: ***Rasbora hobelmani***
IDENTIFICATION - Author: Kottelat, 1984
IDENTIFICATION - Name in Khmer: ត្រីចង្វា
IDENTIFICATION - Name in Khmer (roman): Changva
IDENTIFICATION - Name in English: Kottelat rasbora
BIOLOGY - Max. total length (cm): 8
BIOLOGY - Max. standard length (cm): 6
BIOLOGY - Length at maturity (cm): 4.5
BIOLOGY - Food: zoobenthos mainly animals
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Lim et al. 1999
ECOLOGY - All MFD information: Migration: 0. Spawning: 0 . Distribution: Mekong Basin in Laos in Oudomsai Province, northern Thailand and eastern Myanmar (Kottelat 2001). Feeding: probably feeds mostly on terrestrial insects (Rainboth 1996, Lim et al. 1999, Baird et al. 1999).
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: High

Rasbora myersi (Rainboth W.)

IDENTIFICATION - Family: **Cyprinidae** (Minnows or carps)
IDENTIFICATION - Species name: ***Rasbora myersi***
IDENTIFICATION - Author: Brittan, 1954
IDENTIFICATION - Name in Khmer: ត្រីចង្វា
IDENTIFICATION - Name in Khmer (roman): Changva
IDENTIFICATION - Name in English: Siler rasbora
BIOLOGY - Max. standard length (cm): 10
BIOLOGY - Length at maturity (cm): 7
BIOLOGY - Food: plants/detritus+animals
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: From FishBase
ECOLOGY - All MFD information: Migration: Migrate into small streams and floodplains. Spawning: 0 . Distribution: Found in running waters of the Mekong (Pantulu 1986); Recorded from the Mekong Basin in Yunnan (Chu and Chen 1990);Known from the Mekong basin at Luang Prabang, Nam Ngum dam site, Tha Ngon, Hatdokkeo, Tha Bo, Sai Fong, Sithan Tay, Pakse and Pathoum Phon in Laos (DoF 1987); Phnom Penh and Stung Treng in Cambodia (ICLARM 2001); Larvae/juveniles have been recorded from the drift in both the Mekong and Bassac Rivers in An Giang (Nguyen et al. 2002). Feeding: Feeds mostly on terrestrial insects, as well as some crustaceans and algae (Rainboth 1996, Baird et al. 1999).
ECOLOGY - Status: No information

ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: Medium



Rasbora paucisqualis (FAO)

IDENTIFICATION - Family: **Cyprinidae** (Minnows or carps)
IDENTIFICATION - Species name: ***Rasbora paucisqualis***
IDENTIFICATION - Author: Ahl, 1935
IDENTIFICATION - Name in English: Largescaled rasbora
BIOLOGY - Max. total length (cm): 5
BIOLOGY - Max. standard length (cm): 4
BIOLOGY - Length at maturity (cm): 3.1
BIOLOGY - Food: zoobenthos mainly animals
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Lim et al. 1999
ECOLOGY - Migration type: No information on migration type
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: High

Rasbora paviana (Baird, I.G.)

IDENTIFICATION - Family: **Cyprinidae** (Minnows or carps)
IDENTIFICATION - Species name: ***Rasbora paviei***
IDENTIFICATION - Author: Tirant, 1885
IDENTIFICATION - Name in Khmer: ត្រីចង្វាធ្នូត
IDENTIFICATION - Name in Khmer (roman): Changva chnot
IDENTIFICATION - Name in English: Sidestripe rasbora
BIOLOGY - Max. total length (cm): 15
BIOLOGY - Max. standard length (cm): 12
BIOLOGY - Length at maturity (cm): 8.2
BIOLOGY - Food: zoobenthos mainly animals
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Lim et al. 1999.
ECOLOGY - All MFD information: Migration: 0. Spawning: Spawns in rivers and ponds (Lim et al. 1999) in June-July (Günther 1868); A 12.6 cm individual has about 2,264 eggs with a diameter of 0.74 mm (Krachangdara 1994). . Distribution: Occurs in the Xe Bangfai and Nam Theun Basins (Kottelat 1998); Houay Ka Luang, Houay Kuang, Xe Lamphao, Xe Pian and Xe Kamanh (Baird et al. 1999); Found in Tonle Sap and Great Lake (Lim et al. 1999); Larvae/juveniles have been recorded from the drift in the Mekong River in An Giang (Nguyen et al. 2002). Feeding: Diet

probably consists of terrestrial insects (Rainboth 1996, Krachangdara 1994, Baird et al. 1999), and aquatic plants (Krachangdara 1994).
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: High

Rasbora rubrodorsalis (JJPhoto)

IDENTIFICATION - Family: **Cyprinidae** (Minnows or carps)
IDENTIFICATION - Species name: ***Rasbora rubrodorsalis***
IDENTIFICATION - Author: Donoso-Büchner and Schmidt, 1997
BIOLOGY - Max. total length (cm): 5
BIOLOGY - Max. standard length (cm): 3.3
BIOLOGY - Length at maturity (cm): 2.6
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Motomura et al. 2002
ECOLOGY - All MFD information: Migration: 0. Spawning: 0 . Distribution: 0. Feeding: Zooplanktivorous (Rainboth 1996).
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: High

Rasbora tornieri (Rainboth W.)

IDENTIFICATION - Family: **Cyprinidae** (Minnows or carps)
IDENTIFICATION - Species name: ***Rasbora tornieri***
IDENTIFICATION - Author: Ahl, 1922
IDENTIFICATION - Name in Khmer: ត្រីចង្វាមូល
IDENTIFICATION - Name in Khmer (roman): Changva moul
IDENTIFICATION - Name in English: Yellowtail rasbora
BIOLOGY - Max. total length (cm): 21
BIOLOGY - Max. standard length (cm): 17
BIOLOGY - Length at maturity (cm): 11.2
BIOLOGY - Food: zoobenthos mainly animals
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Rainboth, 1996; Lim et al. 1999
ECOLOGY - All MFD information: Migration: Non-migratory (Blache and Goossens 1954). Spawning: Spawns in rivers and ponds (Lim et al. 1999) in June-July (Baird et al. 1999). . Distribution: Occurs in southern Laos (Baird et al. 1999); Recorded from Tonle Sap and the Great Lake (Rainboth 1996, Lim et al. 1999). Feeding: Diet consists of terrestrial insects (Lim et al. 1999, Rainboth 1996, Baird et al. 1999).
ECOLOGY - Status: Native

ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: Medium

Rasbora pauciperforata (Noren, M.)

IDENTIFICATION - Family: **Cyprinidae** (Minnows or carps)
IDENTIFICATION - Species name: ***Rasbora pauciperforata***
IDENTIFICATION - Author: Weber and de Beaufort, 1916
IDENTIFICATION - Name in Khmer: ត្រីចង្វា
IDENTIFICATION - Name in Khmer (roman): Changva
IDENTIFICATION - Name in English: Redstripe rasbora
BIOLOGY - Max. total length (cm): 7
BIOLOGY - Length at maturity (cm): 5.1
BIOLOGY - Food: zooplankton mainly animals
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - All MFD information: Migration: 0. Spawning: 0 . Distribution: 0. Feeding: Diet consists of zooplankton and some insects (Rainboth 1996).
ECOLOGY - Status: No information
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: High

Sikukia stejnegeri (Rainboth W.)

IDENTIFICATION - Family: **Cyprinidae** (Minnows or carps)
IDENTIFICATION - Species name: ***Sikukia stejnegeri***
IDENTIFICATION - Author: Smith, 1931
BIOLOGY - Max. total length (cm): 12
BIOLOGY - Length at maturity (cm): 8.2
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Kottelat, 1985
ECOLOGY - All MFD information: Migration: A white fish species (Bardach 1959). Spawning: 0 . Distribution: 0. Feeding: Herbivorous (Taki 1978).
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: High

Thryssocypris tonlesapensis (Rainboth W.)

IDENTIFICATION - Family: **Cyprinidae** (Minnows or carps)
IDENTIFICATION - Species name: ***Thryssocypris tonlesapensis***
IDENTIFICATION - Author: Roberts and Kottelat, 1984
BIOLOGY - Max. total length (cm): 8
BIOLOGY - Max. standard length (cm): 6.4
BIOLOGY - Length at maturity (cm): 4.7
BIOLOGY - Food: zoobenthos mainly animals
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Kottelat, 1985
ECOLOGY - All MFD information: Migration: 0. Spawning: 0 . Distribution: A Mekong endemic, found near the water surface from the Tonle Sap to the Mekong Delta. Highest numbers primarily in the tidal zone of large deltaic branches of the Lower Mekong (Rainboth 1996); Larvae/juveniles have been recorded from the drift in both the Mekong and Bassac Rivers in An Giang (Nguyen et al. 2002). Feeding: Its diet consists of insect larvae (Rainboth 1996).
ECOLOGY - Status: Native
ECOLOGY - Habitat: pelagic
ECOLOGY - Resilience: High

Thynnichthys thynnoides (Chavalit Vidthayanon)

IDENTIFICATION - Family: **Cyprinidae** (Minnows or carps)
IDENTIFICATION - Species name: ***Thynnichthys thynnoides***
IDENTIFICATION - Author: Bleeker, 1852
IDENTIFICATION - Name in Khmer: ត្រីលិញ
IDENTIFICATION - Name in Khmer (roman): Linh
BIOLOGY - Max. total length (cm): 25
BIOLOGY - Length at maturity (cm): 15.7
BIOLOGY - Food: plants mainly plants/detritus
BIOLOGY - Notes: It is a truly pelagic species (Warren 2000, Warren 2000) with a medium to long lifespan; It is a riverine species, which occasionally is found in reservoirs close to sizeable rivers (Warren 2000); Found in small schools (Krachangdara 1994).
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Thuok, N and L. Sina, 1997
ECOLOGY - All MFD information: Migration: A white fish species (Bardach 1959), which migrates upstream during the dry-season, but in fewer numbers than several other small cyprinid species (Henichorynchus spp. and Labiobarbus spp) (Warren 2000); Migrates up to southern Lao PDR from Cambodia in January-February and returns to Cambodia in June July (Baird et al. 1999); Migrates into floodplains in August-September to spawn (Baird et al. 1999), under high water levels and returns to the rivers in October (Rainboth 1996). Spawning: It becomes adult at a length of 23 cm (Bardach 1959); It spawns in the wet-season (Warren 2000) in floodplains in August-September (Baird et al. 1999); In April (Krachangdara 1994); or in May-June and possibly September (Bardach 1959); It is a fecund species (Ali and Kadir 1996), which spawns in the flooded littoral zone (Ali and

Kadir 1996, Rainboth 1996, Warren 2000), where the eggs are released near submerged macrophytes (Ali and Kadir 1996); It is probably a pelagic spawner producing buoyant or semi-buoyant eggs (Warren 2000); The egg diameter is 0.73-0.83 mm (Krachangdara 1994). . Distribution: Found basin wide in the mainstream of the Mekong (Pantulu 1986); Larvae/juveniles have been recorded from the drift in the Mekong River in An Giang (Nguyen et al. 2002). Feeding: Facultative filter feeder (Warren 2000), which feeds on algae (Bardach 1959) both phytoplankton and periphyton (Rainboth 1996, Warren 2000) and smaller amounts of bottom algae and some small zooplankton (Rainboth 1996, Baird et al. 1999).
ECOLOGY - Migration type: Displays longitudinal as well as lateral migrations.
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: Medium

Trigonostigma espei (Åhlander, O.)

IDENTIFICATION - Family: **Cyprinidae** (Minnows or carps)
IDENTIFICATION - Species name: ***Trigonostigma espei***
IDENTIFICATION - Author: Meinken, 1967
IDENTIFICATION - Name in English: Lambchop rasbora
BIOLOGY - Max. standard length (cm): 2.5
BIOLOGY - Length at maturity (cm): 2
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Likely (present in the Cardamomes)
ECOLOGY - All MFD information: Migration: 0. Spawning: 0 . Distribution: Known from southern Laos (Baird et al. 1999). Feeding: 0
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: High

Datnioides microlepis (JJPhoto)

IDENTIFICATION - Family: **Datnioididae**
IDENTIFICATION - Species name: ***Datnioides microlepis***
IDENTIFICATION - Author: Bleeker, 1853
IDENTIFICATION - Name in English: Finescale tigerfish
BIOLOGY - Max. total length (cm): 55
BIOLOGY - Max. standard length (cm): 45
BIOLOGY - Length at maturity (cm): 26.5
BIOLOGY - Food: Mainly animals
ECOLOGY - Tonle Sap distribution: Kottelat, 1985
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: High

Datnioides pulcher (Chavalit Vidthayanon)

IDENTIFICATION - Family: **Datnioididae**
IDENTIFICATION - Species name: ***Datnioides pulcher***
IDENTIFICATION - Author: Kottelat, Scott and Crossman 1973
IDENTIFICATION - Name in Khmer: ត្រីខ្លា
IDENTIFICATION - Name in Khmer (roman): Khla
BIOLOGY - Max. standard length (cm): 40
BIOLOGY - Length at maturity (cm): 23.8
BIOLOGY - Notes: Common as single individuals in freshwaters throughout Cambodia (Rainboth 1996).
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: MFD occurence map
ECOLOGY - All MFD information: Migration: A black fish species (Bardach 1959). Spawning: Spawns in March, the eggs are buoyant and approximately 0.8 mm in diameter (Rithcharung and Mahawong 1993). . Distribution: 0. Feeding: A voracious predator, feeds on prawns, crabs, worms, insect larvae, and fishes (Rainboth 1996).
ECOLOGY - Status: No information
ECOLOGY - Habitat: Benthopelagic

Datnioides undecimradiatus (Chavalit Vidthayanon)

IDENTIFICATION - Family: **Datnioididae**
IDENTIFICATION - Species name: ***Datnioides undecimradiatus***
IDENTIFICATION - Author: Robertsand Kottelat, 1994
IDENTIFICATION - Name in Khmer: ត្រីខ្លា
IDENTIFICATION - Name in Khmer (roman): Khla
BIOLOGY - Max. standard length (cm): 40
BIOLOGY - Length at maturity (cm): 23.8
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: From FishBase
ECOLOGY - All MFD information: Migration: 0. Spawning: Two females examined in February were full of eggs and two males examined in early March were in spawning condition, including one specimen that weighed only 30 g (Baird and Phylavanh 1999). . Distribution: It apparently is restricted to freshwater in the Middle and Lower Mekong Basin (Thailand, Laos, Cambodia and probably Viet Nam) (Roberts and Kottelat 1994, Kottelat 2001). Feeding: Carnivorous: Feeds on fish and shrimps (Baird and Phylavanh 1999).
ECOLOGY - Migration type: Displays longitudinal as well as lateral migrations.
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: No information

Oxyeleotris marmorata (Chavalit Vidthayanon)

IDENTIFICATION - Family: **Eleotridae** (Sleepers)
IDENTIFICATION - Species name: ***Oxyeleotris marmorata***
IDENTIFICATION - Author: Bleeker, 1852
IDENTIFICATION - Name in Khmer: ត្រីដំរី
IDENTIFICATION - Name in Khmer (roman): Domrei
IDENTIFICATION - Name in English: Marble goby
BIOLOGY - Max. standard length (cm): 65
BIOLOGY - Length at maturity (cm): 36.6
BIOLOGY - Food: Nekton mainly animals
BIOLOGY - Notes: A slow moving predator (Rainboth 1996). Moves around slowly in middle of water but is very quickly at bottom of the water. The species prefer staying in mud or sand. This fish can stop moving immediately and sometimes look as if it is sleeping (Vivatchaiset 1993).
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: Can breed in reservoirs
ECOLOGY - Tonle Sap distribution: MFD occurence map
ECOLOGY - All MFD information: Migration: A black fish species (Bardach 1959). Spawning: The fish has two spawning seasons in March-April, and in October-November (Bardach 1959) or April and September (Vivatchaiset 1993); Becomes sexually mature at about 8 cm in length (Duangsawasdi et al. 1992); Fish measuring 15.2-21.5 cm have 6,800-36,300 eggs (Krachangdara 1994); Fish measuring 15-30 cm have 10,000-90,000 eggs. (Vivatchaiset 1993); The eggs are shaped like water drops and measure 0.6 x 2.2 mm (Krachangdara 1994) and are yellow (Vivatchaiset 1993). . Distribution: A very common species in the Middle Mekong and often proliferates in reservoirs (Rainboth 1996); Larvae/juveniles have been recorded from the drift in both the Mekong and Bassac Rivers in An Giang (Nguyen et al. 2002). Feeding: Feeds on fish (Rainboth 1996, 1349, Yap 1988, Ukkatawewat 9999, Krachangdara 1994, Duangsawasdi et al. 1992, Vivatchaiset 1993), shrimps, molluscs (Ukkatawewat 9999, Krachangdara 1994, Duangsawasdi et al. 1992, Vivatchaiset 1993), aquatic insects, and crabs (Ukkatawewat 9999); insect larvae, and detritus (Duangsawasdi et al. 1992); According to Bardach (1959) it feeds on planktonic crustaceans (Bardach 1959), however Yap (1988) found that even juveniles feed on fish (Yap 1988).
ECOLOGY - Status: Native
ECOLOGY - Habitat: Demersal

Coilia lindmani (Rainboth W.)

IDENTIFICATION - Family: **Engraulidae (**Anchovies)
IDENTIFICATION - Species name: ***Coilia lindmani***
IDENTIFICATION - Author: Bleeker, 1858
IDENTIFICATION - Name in Khmer: ត្រីជន្លួញមាន់
IDENTIFICATION - Name in Khmer (roman): Chunlungh moan
IDENTIFICATION - Name in English: Lindman's grenadier anchovy
BIOLOGY - Max. total length (cm): 25
BIOLOGY - Max. standard length (cm): 20

BIOLOGY - Length at maturity (cm): 12.9
BIOLOGY - Food: Nekton mainly animals
COLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Spawns in floodplain lakes / rice field (% respondents):
REPRODUCTION - Spawns in rivers (% respondents):
REPRODUCTION - Spawns in streams / inlets (% respondents): 97.5
REPRODUCTION - Spawns in TS permanent lake (% respondents): 2.5
REPRODUCTION - Date of spawning (% respondents): Jun-Jul 73.7%, May-Jul 2.6%, May-Jun 23.7%
REPRODUCTION - Nurses in floodplain (% respondents): 100
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Rainboth, 1996; Kottelat, M., 1985
ECOLOGY - All MFD information: Migration: This species seems to have no discernable migratory pattern in the lower Mekong (Blache and Goossens 1954). Spawning: 0 . Distribution: The most common grenadier anchovy in the Cambodian Mekong ranging from the delta to the Great Lake and as far upstream as Stung Treng (Rainboth 1996). Feeding: 0
ECOLOGY - Feeds in floodplains (% respondents): 100
ECOLOGY - Status: Native
ECOLOGY - Habitat: pelagic
ECOLOGY - Resilience: High
GUILD - Grey fish guild (% respondents): 100

Coilia macrognathos (Chavalit Vidthayanon)

IDENTIFICATION - Family: **Engraulidae** (Anchovies)
IDENTIFICATION - Species name: ***Coilia macrognathos***
IDENTIFICATION - Author: Bleeker, 1852
IDENTIFICATION - Name in Khmer: ត្រីជន្លួញមាន់
IDENTIFICATION - Name in Khmer (roman): Chunlungh moan
IDENTIFICATION - Name in English: Longjaw grenadier anchovy
BIOLOGY - Max. total length (cm): 32
BIOLOGY - Max. standard length (cm): 26
BIOLOGY - Length at maturity (cm): 16.3
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Spawns in streams / inlets (% respondents): 97.5
REPRODUCTION - Spawns in TS permanent lake (% respondents): 2.5
REPRODUCTION - Date of spawning (% respondents): Jun-Jul 73.7%, May-Jul 2.6%, May-Jun 23.7%
REPRODUCTION - Nurses in floodplain (% respondents): 100
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Lim et al. 1999; CNM, Scott and Crossman 1973
ECOLOGY - All MFD information: Migration: A white fish species (Bardach 1959); it does not seem to have any discernable migratory pattern however (Rainboth 1996). Spawning: 0 . Distribution: A common species in the Mekong Delta. Less common though still present in the Tonle Sap and the Great Lake (Rainboth 1996). Feeding: 0
ECOLOGY - Feeds in floodplains (% respondents): 100
ECOLOGY - Status: Native
ECOLOGY - Habitat: pelagic
ECOLOGY - Resilience: High
GUILD - Grey fish guild (% respondents): 100

Lycothrissa crocodilus (Rainboth W.)

IDENTIFICATION - Family: **Engraulidae** (Anchovies)
IDENTIFICATION - Species name: ***Lycothrissa crocodilus***
IDENTIFICATION - Author: Bleeker, 1851
IDENTIFICATION - Name in Khmer: ត្រីឆ្នាក្រពើ
IDENTIFICATION - Name in Khmer (roman): Chhmar krapeu
IDENTIFICATION - Name in English: Sabretoothed thryssa
BIOLOGY - Max. total length (cm): 37
BIOLOGY - Max. standard length (cm): 30
BIOLOGY - Length at maturity (cm): 18.5
BIOLOGY - Food: Nekton mainly animals
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: Water level variation is a migration trigger
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Rainboth, 1996
ECOLOGY - All MFD information: Migration: Rainboth (1996)(Rainboth 1996) stated that the species is non-migratory because its numbers remain uniform in the Tonle Sap throughout the fishing season (Rainboth 1996); However Bardach (1959) (Bardach 1959) postulated that it is a white fish species; and it has been found to migrate upstream from the Delta during the dry season from October to March and downstream at the onset of the rainy season, from May to July (Poulsen and Valbo-Jørgensen 2000). Spawning: Developing eggs are mostly found around March to April. This suggests that eggs develop during the dry season and spawning occurs either during late dry season or at the onset of the flood season (Poulsen and Valbo-Jørgensen 2000). . Distribution: Occurs from just downstream the Khone Falls to the Mekong Delta (Poulsen and Valbo-Jørgensen 2000, Kottelat 2001); Common in the Mekong Delta up to the Tonle Sap and in the Great Lake (Rainboth 1996). Feeding: Diet consists of crustaceans, small fishes (Vaas 1953, Bardach 1959, Baird et al. 1999) and insects (Vaas 1953, Baird et al. 1999). From FishBase: From the Khone Falls to the Mekong delta, it migrates upstream during the dry season from October to March and downstream at the onset of the monsoon season from May to July (Ferraris 2001). These migrations are reported to be triggered by the receding or rising of the water levels (Ferraris 2001). Feeds on crustaceans, insects and small fishes (Rainboth 1996).
ECOLOGY - Migration type: Displays longitudinal as well as lateral migrations.
ECOLOGY - Status: Native
ECOLOGY - Habitat: pelagic
ECOLOGY - Resilience: High

Setipinna melanochir (Chavalit Vidthayanon)

IDENTIFICATION - Family: **Engraulidae** (Anchovies)
IDENTIFICATION - Species name: ***Setipinna melanochir***
IDENTIFICATION - Author: Bleeker, 1849
IDENTIFICATION - Name in Khmer: ត្រីឆ្នា
IDENTIFICATION - Name in Khmer (roman): Chhma
IDENTIFICATION - Name in English: Dusky-hairfin anchovy
BIOLOGY - Max. total length (cm): 41
BIOLOGY - Max. standard length (cm): 33

BIOLOGY - Length at maturity (cm): 20.1
BIOLOGY - Food: Nekton mainly animals
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Thuok, N and L. Sina, 1997
ECOLOGY - All MFD information: Migration: A white fish species (Bardach 1959). Spawning: 0 . Distribution: Common in the Mekong, as far upstream as Thailand (Rainboth 1996); Mekong Basin in Laos downstream of Khone falls, Cambodia and Viet Nam (Kottelat 2001); Becomes abundant in the Middle Mekong when the water levels rise and turbidity increases (Rainboth 1996). Feeding: primarily feeds on insect larvae and small fishes (Vaas 1953, Baird et al. 1999).
ECOLOGY - Status: Native
ECOLOGY - Habitat: pelagic
ECOLOGY - Resilience: High

Glossogobius aureus (Murdy, E.O./Ferraris, C.J., Jr.)

IDENTIFICATION - Family: **Gobiidae** (Gobies)
IDENTIFICATION - Species name: ***Glossogobius aureus***
IDENTIFICATION - Author: Akihito and Meguro, 1975
IDENTIFICATION - Name in Khmer: ត្រីក្រាន
IDENTIFICATION - Name in Khmer (roman): Khman
IDENTIFICATION - Name in English: Golden tank goby
BIOLOGY - Max. total length (cm): 31
BIOLOGY - Max. standard length (cm): 25
BIOLOGY - Length at maturity (cm): 15.7
BIOLOGY - Food: Nekton mainly animals
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Kottelat, 1985; Lim et al. 1999
ECOLOGY - All MFD information: Migration: 0. Spawning: 0 . Distribution: Ascends upstream well above the tidal zone in the Mekong (Rainboth 1996). Feeding: Feeds on small fishes, crustaceans (Rainboth 1996) including prawns, and also aquatic insect larvae (Allen 1989).
ECOLOGY - Status: Native
ECOLOGY - Habitat: Demersal
ECOLOGY - Resilience: Medium

Gyrinocheilus aymonieri (Rainboth W.)

IDENTIFICATION - Family: **Gyrinocheilidae** (Algae eaters)
IDENTIFICATION - Species name: ***Gyrinocheilus aymonieri***
IDENTIFICATION - Author: Tirant, 1883
IDENTIFICATION - Name in English: Chinese algae-eater
BIOLOGY - Max. total length (cm): 35
BIOLOGY - Max. standard length (cm): 28
BIOLOGY - Length at maturity (cm): 17.4
BIOLOGY - Food: plants plants/detritus+animals
BIOLOGY - Notes: It holds on to fixed objects with its sucker-like mouth, it breathes by pumping water into the gill cavity through a small spiracle (Rainboth 1996).

ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Likely (recorded in Cambodia, in Phnom Penh and in floodplains)
ECOLOGY - All MFD information: Migration: A white fish species (Bardach 1959). Spawning: 0 . Distribution: Found basin wide in tributaries of the Mekong (Pantulu 1986); Reported from the Xe Bangfai Basin (Kottelat 1998); Larvae/juveniles have been recorded from the drift in the Mekong River in An Giang (Nguyen et al. 2002). Feeding: Its diet consists largely of mud (Bardach 1959) detritus (Krachangdara 1994), and algae (Bardach 1959, Rainboth 1996, Krachangdara 1994), periphyton, and phytoplankton; but it also feeds on insect larvae and zooplankton (Rainboth 1996).
ECOLOGY - Status: Native
ECOLOGY - Habitat: Demersal
ECOLOGY - Resilience: No information

Hyporhamphus limbatus (E. D' Antoni in Rainboth)\

IDENTIFICATION - Family: **Hemiramphidae** (Halfbeaks)
IDENTIFICATION - Species name: ***Hyporamphus limbatus***
IDENTIFICATION - Author: Valenciennes, 1847
IDENTIFICATION - Name in Khmer: ត្រីផ្ទោង
IDENTIFICATION - Name in Khmer (roman): Phtoung
IDENTIFICATION - Name in English: Congaturi halfbeak
BIOLOGY - Max. standard length (cm): 25
BIOLOGY - Length at maturity (cm): 15.7
BIOLOGY - Food: zoobenthos mainly animals
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Spawns in streams / inlets (% respondents): 100
REPRODUCTION - Spawns in TS permanent lake (% respondents):
REPRODUCTION - Date of spawning (% respondents): Jul-Aug 5.3% July-Sep 2.6%, Jun-Jul 63.2% May-Jun 28.9%
REPRODUCTION - Nurses in floodplain (% respondents): 100
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: MFD occurence map
ECOLOGY - All MFD information: Migration: 0. Spawning: 0 . Distribution: Seen in the Mekong as far upstream as Stung Treng, and also found in the Great Lake (Rainboth 1996). Feeding: Insectivorous (Rainboth 1996, Lim et al. 1999, Collette and Su 1986).
ECOLOGY - Migration type: Only seems to display Longitudinal migrations.
ECOLOGY - Feeds in floodplains (% respondents): 100
ECOLOGY - Status: No information
ECOLOGY - Habitat: pelagic
ECOLOGY - Resilience: High
GUILD - Grey fish guild (% respondents): 100

Zenarchopterus ectuntio (Chavalit Vidthayanon)

IDENTIFICATION - Family: **Hemiramphidae** (Halfbeaks)
IDENTIFICATION - Species name: ***Zenarchopterus ectuntio***
IDENTIFICATION - Author: Hamilton, 1822
BIOLOGY - Max. total length (cm): 18
BIOLOGY - Length at maturity (cm): 11.8

BIOLOGY - Food: plants/detritus+animals
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Kottelat, 1985
ECOLOGY - All MFD information: Migration: 0. Spawning: 0 . Distribution: Found well upstream from the tidal zone in the Lower Mekong (Rainboth 1996). Feeding: Feeds on terrestrial insects (Rainboth 1996).
ECOLOGY - Status: Native
ECOLOGY - Habitat: pelagic
ECOLOGY - Resilience: High

Macrognathus circumcinctus (Chavalit Vidthayanon)

IDENTIFICATION - Family: **Mastacembelidae** (Spiny eels)
IDENTIFICATION - Species name: ***Macrognathus circumcinctus***
IDENTIFICATION - Author: Hora, 1924
BIOLOGY - Max. total length (cm): 20.0 SL
BIOLOGY - Length at maturity (cm): 12.9
BIOLOGY - Food: Mainly animals
BIOLOGY - Notes: Nocturnally active (Riehl and Baensch 1996).
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Kottelat, 1985
ECOLOGY - All MFD information: Migration: A black fish species (Bardach 1959). Spawning: 0 . Distribution: Recorded from the Songkhram River Basin (Kottelat 2001). Feeding: Feeds on invertebrates and small fishes (Riehl and Baensch 1996).
ECOLOGY - Status: Native
ECOLOGY - Habitat: Demersal
ECOLOGY - Resilience: High

Macrognathus maculatus (Chavalit Vidthayanon)

IDENTIFICATION - Family: **Mastacembelidae** (Spiny eels)
IDENTIFICATION - Species name: ***Macrognathus maculatus***
IDENTIFICATION - Author: Cuvier, 1832
IDENTIFICATION - Name in Khmer: ត្រីខ្ជឹង
IDENTIFICATION - Name in Khmer (roman): Khchoeung
IDENTIFICATION - Name in English: Frecklefin eel
BIOLOGY - Max. total length (cm): 28
BIOLOGY - Length at maturity (cm): 15.9
BIOLOGY - Food: zoobenthos mainly animals
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Lim et al. 1999
ECOLOGY - All MFD information: Migration: A black fish species (Bardach 1959). Spawning: 0 . Distribution: Likely to be found in the Lower Mekong of Cambodia (Rainboth 1996). Feeding: Feeds on bottom dwelling insect larvae, worms, and possibly some crustaceans (Rainboth 1996).
ECOLOGY - Status: Native

ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: Medium

Macrognathus semiocellatus (Chavalit Vidthayanon)

IDENTIFICATION - Family: **Mastacembelidae** (Spiny eels)
IDENTIFICATION - Species name: ***Macrognathus semiocellatus***
IDENTIFICATION - Author: Roberts, 1986
BIOLOGY - Max. total length (cm): 24
BIOLOGY - Max. standard length (cm): 19.2
BIOLOGY - Length at maturity (cm): 12.5
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Motomura et al. 2002
ECOLOGY - All MFD information: Migration: 0. Spawning: 0 . Distribution: Mekong Basin in Laos, Thailand, Cambodia and Viet Nam (Kottelat 2001); Recorded from the Xe Bangfai Basin (Kottelat 1998). Feeding: 0
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: High

Macrognathus siamensis (Baird, I.G.)

IDENTIFICATION - Family: **Mastacembelidae** (Spiny eels)
IDENTIFICATION - Species name: ***Macrognathus siamensis***
IDENTIFICATION - Author: Günther, 1861
IDENTIFICATION - Name in Khmer: ត្រីឆ្លួញ
IDENTIFICATION - Name in Khmer (roman): Chlounh
IDENTIFICATION - Name in English: Peacock eel
BIOLOGY - Max. total length (cm): 37
BIOLOGY - Max. standard length (cm): 30
BIOLOGY - Length at maturity (cm): 18.5
BIOLOGY - Food: zoobenthos mainly animals
BIOLOGY - Notes: Spends much of its time buried in the silt, sand, or fine gravel with only a part of its head protruding from the bottom, but it emerges at dusk to forage for food (Rainboth 1996).
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Lim et al. 1999
ECOLOGY - All MFD information: Migration: A black fish species (Bardach 1959). Spawning: 0 . Distribution: Recorded in the Xe Bangfai Basin (Kottelat 1998); Larvae/juveniles have been recorded from the drift in both the Mekong and Bassac Rivers in An Giang (Nguyen et al. 2002). Feeding: Feeds on benthic insect larvae, crustaceans, and worms (Rainboth 1996).
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: High

Macrognathus taeniagaster (Baird, I.G.)

IDENTIFICATION - Family: **Mastacembelidae** (Spiny eels)
IDENTIFICATION - Species name: ***Macrognathus taeniagaster***
IDENTIFICATION - Author: Fowler, 1935
BIOLOGY - Max. total length (cm): 20
BIOLOGY - Max. standard length (cm): 16
BIOLOGY - Length at maturity (cm): 10.6
BIOLOGY - Food: zoobenthos mainly animals
BIOLOGY - Notes: During the daytime, it spends much of its time buried in silt, sand, or fine gravel with only the snout and eyes protruding from the bottom, but it emerges at night to forage (Rainboth 1996).
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Lim et al. 1999
ECOLOGY - All MFD information: Migration: 0. Spawning: 0 . Distribution: Very common in the Mekong and often seen in impoundments (Rainboth 1996). Feeding: Feeds on benthic insect larvae, crustaceans, and worms (Rainboth 1996).
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: High

Mastacembelus armatus (CAFS)

IDENTIFICATION - Family: **Mastacembelidae** (Spiny eels)
IDENTIFICATION - Species name: ***Mastacembelus armatus***
IDENTIFICATION - Author: Lacepède, 1800
IDENTIFICATION - Name in Khmer: ក្រីខ្ចឹង
IDENTIFICATION - Name in Khmer (roman): Khchoeung
IDENTIFICATION - Name in English: Zig-zag eel
BIOLOGY - Max. total length (cm): 31
BIOLOGY - Length at maturity (cm): 48.8
BIOLOGY - Food: zoobenthos plants/detritus+animals
BIOLOGY - Notes: Sometimes rests partially buried in fine substrates, and forages at night (Rainboth 1996).
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Lim et al. 1999
ECOLOGY - All MFD information: Migration: It is a non-migratory (Bardach 1959) or at least relatively stationary species, which performs only short local migrations (Poulsen and Valbo-Jørgensen 2000); however during the flood season part of the population moves to floodplain habitats in the vicinity of the dry season refuges mainly to feed (Poulsen and Valbo-Jørgensen 2000). Spawning: Has developed eggs all the year with a peak in April-June; Was reported to spawn in a whirlpool in April – May, where the eggs stuck to filamentous algae in the whirlpool; It was however also reported to spawn in rice fields (Poulsen and Valbo-Jørgensen 2000). The eggs have a diameter of 1.8-1.9 mm (Krachangdara 1994). . Distribution: The species occurred at all mainstream stations from Chiang Saen to the Lower Mekong Delta, and at many stations it occurs all the year. The level of abundance, however, is very variable, even between closely situated stations. In Cambodia south of Kratie fishers indicate that it is a rare species (Poulsen and Valbo-Jørgensen 2000); Larvae/juveniles have been recorded from the drift in both the Mekong and Bassac Rivers in An Giang (Nguyen et al. 2002);. Feeding: Feeds on fishes and insects (Krachangdara 1994), benthic insect larvae, worms, and some submerged plant material (Rainboth 1996).
ECOLOGY - Migration type: Displays longitudinal as well as lateral migrations.
ECOLOGY - Status: Native

ECOLOGY - Habitat: Demersal
ECOLOGY - Resilience: High

Mastacembelus erythrotaenia (NREB, Sarawak/ DANIDA)

IDENTIFICATION - Family: **Mastacembelidae** (Spiny eels)
IDENTIFICATION - Species name: ***Mastacembelus erythrotaenia***
IDENTIFICATION - Author: Bleeker, 1850
IDENTIFICATION - Name in Khmer: ត្រីខ្ជឹងផ្កា
IDENTIFICATION - Name in Khmer (roman): Khchoeung pkhar
IDENTIFICATION - Name in English: Fire eel
BIOLOGY - Max. total length (cm): 100
BIOLOGY - Length at maturity (cm): 53.5
BIOLOGY - Food: zoobenthos plants/detritus+animals
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Lim et al. 1999
ECOLOGY - All MFD information: Migration: 0. Spawning: 0 . Distribution: Known from the Lower Mekong floodplain, but not yet recorded from upland areas of the Middle Mekong. This species has apparently become rare in recent years (Rainboth 1996). Feeding: Feeds on benthic insect larvae, worms, and some plant material (Rainboth 1996).
ECOLOGY - Status: Native
ECOLOGY - Habitat: Demersal
ECOLOGY - Resilience: Medium

Mastacembelus favus (Warren, T.)

IDENTIFICATION - Family: **Mastacembelidae** (Spiny eels)
IDENTIFICATION - Species name: ***Mastacembelus favus***
IDENTIFICATION - Author: Hora, 1924
IDENTIFICATION - Name in Khmer: ត្រីខ្ជឹង
IDENTIFICATION - Name in Khmer (roman): Khchoeung
IDENTIFICATION - Name in English: Tire track eel
BIOLOGY - Max. total length (cm): 86
BIOLOGY - Max. standard length (cm): 70
BIOLOGY - Length at maturity (cm): 39.1
BIOLOGY - Food: zoobenthos plants/detritus+animals
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Lim et al. 1999
ECOLOGY - Migration type: No information on migration type
ECOLOGY - Status: Native
ECOLOGY - Habitat: Demersal
ECOLOGY - Resilience: Medium

No picture available
IDENTIFICATION - Family: **Nandidae** (Asian leaffishes)
IDENTIFICATION - Species name: ***Nandus nebulosus***
IDENTIFICATION - Author: Gray, 1835

IDENTIFICATION - Name in English: Bornean leaffish
BIOLOGY - Max. total length (cm): 12
BIOLOGY - Length at maturity (cm): 8.2
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Kottelat, 1985
ECOLOGY - All MFD information: Migration: 0. Spawning: 0 . Distribution: 0. Feeding: 0
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: No information

Pristolepis fasciata (Jean-Francois Helias / Fishing Adventures Thailand)

IDENTIFICATION - Family: **Nandidae** (Asian leaffishes)
IDENTIFICATION - Species name: ***Pristolepis fasciata***
IDENTIFICATION - Author: Bleeker, 1851
IDENTIFICATION - Name in Khmer: ត្រីកន្ត្រុំប់
IDENTIFICATION - Name in Khmer (roman): Kantrob
IDENTIFICATION - Name in English: Catopra
BIOLOGY - Max. total length (cm): 20
BIOLOGY - Length at maturity (cm): 12.9
BIOLOGY - Food: zoobenthos mainly animals
BIOLOGY - Notes: It has upper and lower palatal tooth plates which it uses to grind coarse or shelled food organisms (Warren 2000); Feeding activity peaks at 6 AM and reaches a minimum at 10 PM (Duangsawasdi et al. 1990). It is a demersal or semi-pelagic species and probably short-lived (Warren 2000).
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: Water level variation is a migration trigger
REPRODUCTION - Breeds in reservoirs: Can breed in reservoirs
ECOLOGY - Tonle Sap distribution: Thuok, N and L. Sina, 1997
ECOLOGY - All MFD information: Migration: A black fish species (Bardach 1959); Enters smaller streams and floodplains at the onset of the floods. These movements are triggered mainly be changes in water levels (Poulsen and Valbo-Jørgensen 2000). Spawning: Eggs were reported from March to October with a peak from April to June (Poulsen and Valbo-Jørgensen 2000), and it spawns from June to August or September in the Mekong (Bardach 1959, Baird and Phylavanh 1999); and March to September in the Maeklong (Duangsawasdi et al. 1989.); In reservoirs it spawns at almost any time of the year with a peak spawning probably takes place in the wet-season months (Warren 2000); May to June (Singhapitukiet and Jermjitpong 1980) or from May to August (Dumrongtripob et al. 1997); In reservoirs it spawns at the inlet (Dumrongtripob et al. 1997), and it has a preference for submerged leafy vegetation (Warren 2000).
According to some reports eggs are sticky, large and yolky (Warren 2000), others state that they are floating or pelagic with a diameter of 0.6-0.8 mm (Singhapitukiet and Jermjitpong 1980), Hatching occurs after around 22 hr at 28-29ºC (Singhapitukiet and Jermjitpong 1980, Chumnongsittathum et al. 1992); The size of larvae at hatching is around 2.5 mm in total length (Chumnongsittathum et al. 1992). Females attain sexual maturity around 7-10 cm total length (Dumrongtripob et al. 1997, Duangsawasdi et al. 1989., Warren 2000); Females 10-18 cm long and weighing 15-80 g contain around 20,000 eggs (Duangsawasdi et al. 1989.); Fish measuring 14.0-20.0 cm have 5,476-34,441 eggs with a diameter of 0.85-0.95 mm (Krachangdara 1994). . Distribution: Occurs throughout the mainstream from Chiang Saen to the Mekong Delta (Poulsen and Valbo-Jørgensen 2000); and in tributaries (Pantulu 1986); Recorded from the Xe Bangfai Basin

(Kottelat 1998); Larvae/juveniles have been recorded from the drift in both the Mekong and Bassac Rivers in An Giang (Nguyen et al. 2002). Feeding: Feeds on filamentous algae, submerged land plants, fruits, and seeds (Duangsawasdi et al. 1990, Rainboth 1996, Duangsawasdi et al. 1990), periphyton on submerged vegetation (Warren 2000); Insects (Yap 1988, NIFI 1993), aquatic insects (Rainboth 1996, Duangsawasdi et al. 1990, Krachangdara 1994), crustaceans (Rainboth 1996, Duangsawasdi et al. 1990), including shrimps (NIFI 1993); Zooplankton (Krachangdara 1994); Earthworms, juvenile gastropods (Baird and Phylavanh 1999), and small gastropods, other benthic organisms (Warren 2000, Roberts 1993, Yap 1988), and fish (NIFI 1993).
ECOLOGY - Migration type: Displays longitudinal as well as lateral migrations.
ECOLOGY - Status: Native
ECOLOGY - Habitat: Demersal
ECOLOGY - Resilience: No information


Chitala chitala (Patzner, R.)

IDENTIFICATION - Family: **Notopteridae**
IDENTIFICATION - Species name: ***Chitala chitala***
IDENTIFICATION - Author: Hamilton, 1822
IDENTIFICATION - Name in English: Clown knifefish
BIOLOGY - Max. total length (cm): 149
BIOLOGY - Length at maturity (cm): 63.9
BIOLOGY - Food: Mainly animals
ECOLOGY - Tonle Sap distribution: Kottelat, 1985
ECOLOGY - Status: Misidentification
ECOLOGY - Habitat: Demersal
ECOLOGY - Resilience: No information


Chitala blanci (Warren, T.)

IDENTIFICATION - Family: **Notopteridae** (Featherbacks or knifefishes)
IDENTIFICATION - Species name: ***Chitala blanci***
IDENTIFICATION - Author: d'Aubenton, 1965
IDENTIFICATION - Name in Khmer: ត្រីក្រាយ
IDENTIFICATION - Name in Khmer (roman): Kray
IDENTIFICATION - Name in English: Indochina featherback
BIOLOGY - Max. total length (cm): 147
BIOLOGY - Max. standard length (cm): 120
BIOLOGY - Length at maturity (cm): 62.9
BIOLOGY - Food: Nekton mainly animals
BIOLOGY - Notes: It was reported that it has habits similar to those of the clown featherback (C. ornata). It was mentioned that it is possible to distinguish between the two species by observing them when they surface, e.g. during spawning (Poulsen and Valbo-Jørgensen 2000); Active during the twilight and at night (Rainboth 1996).
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: Water level variation is a migration trigger
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Lim et al. 1999

ECOLOGY - All MFD information: Migration: Does not migrate extensively (Roberts 1993), it is only undertaking short, local migrations. However it is reported to migrate into smaller tributaries when the water starts to rise, and then return to the main river when it recedes (Poulsen and Valbo-Jørgensen 2000). Spawning: The species carries eggs most of the year, but the main period is from April to May, this indicates that spawning mainly occurs in the late dry season. Spawning takes place within the main river channel in areas with submerged wood and rocks, and the female guards the fry (Poulsen and Valbo-Jørgensen 2000). Distribution: Occurs in the mainstream of the Mekong in Thailand, Laos and Cambodia (Kottelat 1998 , Roberts 1992) where it occurs from Xayaboury to Kompong Cham. However, it is rare in Kompong Cham Province (Poulsen and Valbo-Jørgensen 2000); and the main distribution area may be from Khemerat, to Kratie (Rainboth 1996); It also occurs in the lower course of some tributaries including the Xe Bangfai (Kottelat 1998); but it avoids smaller tributaries and swamps (Roberts 1992). Feeding: Feeds on fish (Baird and Phylavanh 1999, Rainboth 1996, Baird et al. 1999), insects (Rainboth 1996, Baird et al. 1999), crustaceans (Rainboth 1996) including shrimps (Baird and Phylavanh 1999, Baird et al. 1999) and crabs, also shell fish, (Baird et al. 1999), earthworms, leaves, snails, and detritus (Baird and Phylavanh 1999).
ECOLOGY - Status: Native
ECOLOGY - Habitat: Demersal
ECOLOGY - Resilience: Low

Chitala lopis (Rainboth W.)

IDENTIFICATION - Family: **Notopteridae** (Featherbacks or knifefishes)
IDENTIFICATION - Species name: ***Chitala lopis***
IDENTIFICATION - Author: Bleeker, 1851
IDENTIFICATION - Name in Khmer: ត្រីក្រាយ
IDENTIFICATION - Name in Khmer (roman): Kray
IDENTIFICATION - Name in English: Giant featherback
BIOLOGY - Max. standard length (cm): 150
BIOLOGY - Length at maturity (cm): 76.7
BIOLOGY - Food: Mainly animals (troph. 2.8 and up)
BIOLOGY - Notes: probably has a crepuscular or nocturnal activity pattern (Rainboth 1996).
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: MFD occurence map
ECOLOGY - All MFD information: Migration: 0. Spawning: 0 . Distribution: Found most often in the upland area from Khone Falls to Kratie, and is not known from the Great Lake (Rainboth 1996); but is also known from Thailand (Kottelat 2001). Feeding: piscivorous (Rainboth 1996).
ECOLOGY - Status: Native
ECOLOGY - Habitat: Demersal
ECOLOGY - Resilience: Very low

Chitala ornata (Baird, I.G.)

IDENTIFICATION - Family: **Notopteridae** (Featherbacks or knifefishes)

IDENTIFICATION - Species name: ***Chitala ornata***
IDENTIFICATION - Author: Gray, 1831
IDENTIFICATION - Name in Khmer: ត្រីក្រាយ
IDENTIFICATION - Name in Khmer (roman): Kray
IDENTIFICATION - Name in English: Clown featherback
BIOLOGY - Max. total length (cm): 122
BIOLOGY - Max. standard length (cm): 100
BIOLOGY - Length at maturity (cm): 53.5
BIOLOGY - Food: Nekton mainly animals
BIOLOGY - Notes: Crepuscular and night active (Rainboth 1996); It was reported that its habits are similar to those of the royal featherback (C. blanchi). It was mentioned that it is possible to distinguish between the two species by observing them when they surface, e.g. during spawning (Poulsen and Valbo-Jørgensen 2000).
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Lim et al. 1999
ECOLOGY - All MFD information: Migration: A white fish species (Bardach 1959); Throughout the range, it is reported to migrate locally and move into smaller tributaries and flooded areas (Poulsen and Valbo-Jørgensen 2000) including inundated forest (Rainboth 1996) during the flood season, and return to the main river channel when the water starts to recede (Poulsen and Valbo-Jørgensen 2000). Spawning: Eggs are laid on submerged wood over an extended period from March to July (Poulsen and Valbo-Jørgensen 2000, Smith 1945); In June in Cambodia (Bardach 1959) and in Thailand; It is reported to show parental care by the male (Smith 1945) and the female (Poulsen and Valbo-Jørgensen 2000). Two large specimens (about 700 mm SL) have been observed splashing at the surface of a deep pool upstream of Mahaxai on 6 March 1996 in what could have been spawning or courting behaviour (Kottelat 1998) . Distribution: Only known from the mainstream of the Mekong and the lower course of some tributaries (Kottelat 1998); Found basin wide in the mainstream Mekong (Pantulu 1986); Occurs from Chiang Khong to the Mekong Delta, except for the lowermost part (Poulsen and Valbo-Jørgensen 2000); Larvae/juveniles recorded from the drift in both the Mekong and Bassac Rivers in An Giang (Nguyen et al. 2002); Also recorded from the Xe Bangfai Basin (Kottelat 1998). . Feeding: Feeds on surface-feeding fishes, insects, and crustaceans (Rainboth 1996, Baird et al. 1999) including shrimps, and crabs, and also shellfish (Baird et al. 1999).
ECOLOGY - Migration type: Displays longitudinal as well as lateral migrations.
ECOLOGY - Status: Native
ECOLOGY - Habitat: pelagic
ECOLOGY - Resilience: Low

Notopterus notopterus (JJPhoto)

IDENTIFICATION - Family: **Notopterida**e (Featherbacks or knifefishes)
IDENTIFICATION - Species name: ***Notopterus notopterus***
IDENTIFICATION - Author: pallas, 1769
IDENTIFICATION - Name in Khmer: ត្រីស្លាត
IDENTIFICATION - Name in Khmer (roman): Slat
IDENTIFICATION - Name in English: Bronze featherback
BIOLOGY - Max. total length (cm): 74
BIOLOGY - Max. standard length (cm): 60
BIOLOGY - Length at maturity (cm): 34.1
BIOLOGY - Food: Nekton mainly animals
BIOLOGY - Notes: Most active during the twilight and at night (Rainboth 1996).

ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Hill, and Hill, 1994
ECOLOGY - All MFD information: Migration: postulated by Bardach to be a white fish species (Bardach 1959); It is however closer to his definition of a black fish since the species only undertakes localised lateral migrations from the main river to floodplains during the flood season, and back to the main river or other permanent water bodies during the dry season (Poulsen and Valbo-Jørgensen 2000, Rainboth 1996), however at several places, it is reported to move into tributaries during the flood season (Poulsen and Valbo-Jørgensen 2000). Spawning: It carries eggs in May and June (Poulsen and Valbo-Jørgensen 2000, Baird and Phylavanh 1999), and is reported to spawn from May to August (Bardach 1959); The eggs are laid in small clumps on submerged vegetation (Roberts 1992) in seasonally inundated areas (Rainboth 1996), although it may breed in both riverine and standing water habitats (Poulsen and Valbo-Jørgensen 2000, Roberts 1992). It is sexually mature at a weight of 50 g (Baird and Phylavanh 1999); A female measuring 21-25 cm usually lays 1,200-3,000 eggs (Roberts 1992); 18-23 cm fish have 688-1,211 eggs of 2.1-2.8 mm diameter (Krachangdara 1994). . Distribution: It is distributed throughout the mainstream, from the Mekong Delta to Chiang Saen (Poulsen and Valbo-Jørgensen 2000); and found in tributaries of the Lower Mekong (Pantulu 1986); Also reported from the Lower and Middle Xe Bangfai in Laos (Kottelat 1998 , Roberts 1993); Larvae/juveniles have been recorded from the drift in both the Mekong and Bassac Rivers in An Giang (Nguyen et al. 2002). Feeding: Feeds on insects (Baird and Phylavanh 1999, Bardach 1959, Rainboth 1996, Ukkatawewat 9999, Baird et al. 1999, NIFI 1993), shrimps (Baird and Phylavanh 1999, Baird et al. 1999), vegetation (Baird and Phylavanh 1999, Ukkatawewat 9999, Bardach 1959), fish (Rainboth 1996, Yap 1988, Baird and Phylavanh 1999, Baird et al. 1999, Krachangdara 1994, NIFI 1993), and earthworms, in that order of importance (Baird and Phylavanh 1999); and also seeds (Bardach 1959), crustaceans (Ukkatawewat 9999), young roots of aquatic plants (Ukkatawewat 9999, NIFI 1993), crabs (Baird et al. 1999), molluscs (Baird et al. 1999, NIFI 1993) and detritus (NIFI 1993)
ECOLOGY - Migration type: Displays longitudinal as well as lateral migrations.
ECOLOGY - Status: Native
ECOLOGY - Habitat: Demersal
ECOLOGY - Resilience: Medium

Osphronemus exodon (Warren, T.*)*

IDENTIFICATION - Family: **Osphronemidae** (Gouramies)
IDENTIFICATION - Species name: ***Osphronemus exodon***
IDENTIFICATION - Author: Roberts, 1994
IDENTIFICATION - Name in Khmer: ត្រីត្រចៀកដំរី
IDENTIFICATION - Name in Khmer (roman): Trocheak domrei
IDENTIFICATION - Name in English: Elephant ear gourami
BIOLOGY - Max. standard length (cm): 60
BIOLOGY - Length at maturity (cm): 34.1
BIOLOGY - Food: plants/detritus+animals
BIOLOGY - Notes: A long living pelagic or semi-pelagic species (Warren 2000); Large individuals, over 40 cm (SL), have enlarged jaw teeth, which lie on the external surface of the jaws entirely outside the mouth when it is shut (Roberts 1994), the extraordinary dentition may facilitate feeding and foraging on roots and other plant matter, and may also be used when it makes its nest out of fine roots (Baird and Phylavanh 1999).
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: Water level variation is a migration trigger

REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: MFD occurence map
ECOLOGY - All MFD information: Migration: Does not migrate longitudinally (Warren 2000); but undertakes lateral migrations from the main river channel to floodplain areas during the flood season, and returns to the main river or other permanent water bodies during the dry season. This migration is triggered by changes in water levels (Poulsen and Valbo-Jørgensen 2000); Some fishers report that the fish stays on the edge of the flooded forest, and others reported that it enters it during the high water period (Roberts 1994). Spawning: Eggs were reported to occur over a long period during the dry season and into the flood season, with a peak around March-April (Poulsen and Valbo-Jørgensen 2000); It means that it spawns in the dry-season at the lowest water levels (Rainboth 1996, Warren 2000, Roberts 1994); Spawning occurs in open water, with no current, near the shoreline (Roberts 1994, Rainboth 1996), where it builds a nest from leaves, stalks and other organic materials (Warren 2000, Roberts 1994), which it collects vegetation using its complex set of teeth (Baird and Phylavanh 1999) and binds together with a sticky substance secreted from body glands (Warren 2000, Roberts 1994); after spawning at least one parent guards the eggs and young that cluster around the nest (Roberts 1994); The female reportedly stays inside the burrow of the nest for over a month during the spawning season while the male guards just outside the nest (Baird and Phylavanh 1999). . Distribution: It occurs from Xayaboury to Kompong Cham Province (Poulsen and Valbo-Jørgensen 2000); Probably most common from just upstream of Khone Falls southward to Stung Treng and Kratie. Not known from the Great Lake (Rainboth 1996); It also occurs in the Xe Bangfai Basin (Kottelat 1998). Feeding: Feeds mostly on plant material including fruits, leaves (Rainboth 1996, Roberts 1994, Warren 2000), and flowers, with some insects, crustaceans (Rainboth 1996, Roberts 1994), periphyton, and shrimps (Warren 2000).
The young may feed more on insects, while adults are likely to consume more plant matter (Roberts 1994).
ECOLOGY - Migration type: Displays longitudinal as well as lateral migrations.
ECOLOGY - Status: Native
ECOLOGY - Habitat: pelagic
ECOLOGY - Resilience: No information

Trichogaster microlepis (Rainboth W.)

IDENTIFICATION - Family: **Osphronemidae** (Gouramies)
IDENTIFICATION - Species name: ***Trichogaster microlepis***
IDENTIFICATION - Author: Günther, 1861
IDENTIFICATION - Name in Khmer: ត្រីកំភ្លាញភ្លុក
IDENTIFICATION - Name in Khmer (roman): Kamphleanh phluk
IDENTIFICATION - Name in English: Moonlight gourami
BIOLOGY - Max. total length (cm): 16
BIOLOGY - Max. standard length (cm): 13
BIOLOGY - Length at maturity (cm): 8.8
BIOLOGY - Food: zoobenthos mainly animals
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Thuok, N and L. Sina, 1997
ECOLOGY - All MFD information: Migration: A black fish species (Bardach 1959). Spawning: 0 . Distribution: Common in the floodplain of the Lower Mekong (Rainboth 1996). Feeding: Feeds on zooplankton, crustaceans, and aquatic insects (Rainboth 1996).
ECOLOGY - Status: Native
ECOLOGY - Habitat: Demersal
ECOLOGY - Resilience: Medium

Trichogaster pectoralis (Rainboth W.)

IDENTIFICATION - Family: **Osphronemidae** (Gouramies)
IDENTIFICATION - Species name: ***Trichogaster pectoralis***
IDENTIFICATION - Author: Regan, 1910
IDENTIFICATION - Name in Khmer: ត្រីកន្ធរ
IDENTIFICATION - Name in Khmer (roman): Kantho
IDENTIFICATION - Name in English: Snakeskin gourami
BIOLOGY - Max. total length (cm): 25
BIOLOGY - Length at maturity (cm): 15.7
BIOLOGY - Food: zooplankton mainly animals
BIOLOGY - Notes: A hardy, medium to long-lived species (Warren 2000); It has a special air-breathing organ, which allows it to breathe atmospheric air and therefore live in oxygen poor water (1036777, Duangsawasdi et al. 1992), but it can also absorb oxygen from water over the gills (Frimodt 1995); At least one country reports adverse ecological impact after introduction (Welcomme 1988).
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Thuok, N and L. Sina, 1997
ECOLOGY - All MFD information: Migration: Non migratory (Bardach 1959, Warren 2000); Found in flooded forests and gradually moves back to rivers and the Great Lake as floodwaters recede (Rainboth 1996). Spawning: Spawns throughout the rainy season (Anon 1997, Tongsanga 1958, Phothongkhum 1968) in standing-waters covered with a lot of aquatic vegetation (Tongsanga 1958, Phothongkhum 1968); where the male blows a surface bubble nest (Leelapatra et al. 2000, Xuan 1993) among the plants (Warren 2000); The eggs are buoyant, with an initial size of 0.91-2 mm (Leelapatra et al. 2000); or 0.67 mm (Duangsawasdi et al. 1992); The eggs hatch after 27 hours 28ºC (Leelapatra et al. 2000), or after 18-20 hours at 28-30ºC (Xuan 1993); the larvae measure 2.7 mm at hatching (Leelapatra et al. 2000).
It reaches maturity at an age of 7-12 months (Leelapatra et al. 2000, Anon 1997) and a body length of 8-10 cm (Leelapatra et al. 2000); Fecundity of the snakeskin gourami is around 18,000-36,000 eggs depending on the size of fish (Thonguthai 1968), a 18 cm female can lay around 30,000 eggs (Leelapatra et al. 2000); Fish measuring 10-21 cm have 6,240-26,900 eggs with an average of 16,042 (Duangsawasdi et al. 1992). . Distribution: 0. Feeding: Generally feeds on aquatic plants (Frimodt 1995, Duangsawasdi et al. 1992), zoo- and phytoplankton, insect larvae (Amatyakul et al. 1995, Duangsawasdi et al. 1992), periphyton, algae (Amatyakul et al. 1995) and detritus (Duangsawasdi et al. 1992); The adult fish is a polyphagus species, feeding on vegetable matter (Anon 1997), zooplankton, and crustaceans (Yap 1988); After the yolk sac has been absorbed, the fry feed on zooplankton and phytoplankton (Anon 1997).
ECOLOGY - Migration type: Displays longitudinal as well as lateral migrations.
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: Medium

Trichogaster trichopterus (Chavalit Vidthayanon)

IDENTIFICATION - Family: **Osphronemidae** (Gouramies)
IDENTIFICATION - Species name: ***Trichogaster trichopterus***

IDENTIFICATION - Author: pallas, 1770
IDENTIFICATION - Name in Khmer: ត្រីកំភ្លាញសម្រែ
IDENTIFICATION - Name in Khmer (roman): Kamphleanh srae
IDENTIFICATION - Name in English: Three spot gourami
BIOLOGY - Max. total length (cm): 19
BIOLOGY - Max. standard length (cm): 15
BIOLOGY - Length at maturity (cm): 10
BIOLOGY - Food: Mainly animals
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Motomura et al. 2002
ECOLOGY - All MFD information: Migration: A black fish species (Bardach 1959), which does not undertake longitudinal migrations within the Mekong, but migrates from the main river, or any other permanent water body, to flooded areas during the flood season and returns to the permanent water body at the beginning of the dry season (Poulsen and Valbo-Jørgensen 2000). Spawning: Eggs were reported from March to December with a peak from April to June; It nests in rain-fed paddy fields (Poulsen and Valbo-Jørgensen 2000), during the period June-July (Poulsen and Valbo-Jørgensen 2000, Bardach 1959). . Distribution: Occurs from Chiang Saen to the Mekong Delta (Poulsen and Valbo-Jørgensen 2000, Rainboth 1996); Recorded from the Xe Bangfai Basin (Allen 1991); Larvae/juveniles have been recorded from the drift in both the Mekong and Bassac Rivers in An Giang (Nguyen et al. 2002). Feeding: Feeds on zooplankton, crustaceans, and insect larvae (Rainboth 1996).
ECOLOGY - Migration type: Displays longitudinal as well as lateral migrations.
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: High

Trichopsis schalleri (Chavalit Vidthayanon)

IDENTIFICATION - Family: **Osphronemidae** (Gouramies)
IDENTIFICATION - Species name: ***Trichopsis schalleri***
IDENTIFICATION - Author: Ladiges, 1962
IDENTIFICATION - Name in Khmer: ត្រីក្រឹម
IDENTIFICATION - Name in Khmer (roman): Kreum
IDENTIFICATION - Name in English: Threestripe gourami
BIOLOGY - Max. total length (cm): 7
BIOLOGY - Max. standard length (cm): 5
BIOLOGY - Length at maturity (cm): 3.8
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Motomura et al. 2002
ECOLOGY - All MFD information: Migration: 0. Spawning: Females are sexually mature at 4.3 cm SL (Kottelat 1998). . Distribution: Known from the Mekong Basin in Laos, Yunnan and Thailand, and also recorded from the Lower, Middle and Upper Nam Theun (not collected on the Nakay Plateau) (Kottelat 1998). Feeding: Feeds on zooplankton (Rainboth 1996) and aquatic insects (Rainboth 1996, Kottelat 1998).
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: No information

Trichopsis vittata (Chavalit Vidthayanon)

IDENTIFICATION - Family: **Osphronemidae** (Gouramies)
IDENTIFICATION - Species name: ***Trichopsis vittata***
IDENTIFICATION - Author: Cuvier, 1831
IDENTIFICATION - Name in Khmer: ត្រីក្រឹម
IDENTIFICATION - Name in Khmer (roman): Kreum
IDENTIFICATION - Name in English: Croaking gourami
BIOLOGY - Max. total length (cm):
BIOLOGY - Max. standard length (cm): 7
BIOLOGY - Length at maturity (cm): 5.1
BIOLOGY - Food: Mainly animals
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: From FishBase
ECOLOGY - All MFD information: Migration: 0. Spawning: 0 . Distribution: Common throughout the Middle and Lower Mekong (Rainboth 1996); Larvae/juveniles have been recorded from the drift in both the Mekong and Bassac Rivers in An Giang (Nguyen et al. 2002). Feeding: Feeds on zooplankton, crustaceans (Rainboth 1996), and insect larvae (Rainboth 1996, Krachangdara 1994).
ECOLOGY - Status: Native
ECOLOGY - Habitat: Demersal
ECOLOGY - Resilience: No information

Helicophagus waandersii (Warren, T.)

IDENTIFICATION - Family: **Pangasiidae** (Shark catfishes)
IDENTIFICATION - Species name: ***Helicophagus waandersii***
IDENTIFICATION - Author: Bleeker, 1858
IDENTIFICATION - Name in Khmer: ត្រីប្រាកណ្តុរ
IDENTIFICATION - Name in Khmer (roman): Pra kandorl
BIOLOGY - Max. total length (cm): 70
BIOLOGY - Length at maturity (cm): 39.1
BIOLOGY - Food: Mainly animals
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Kottelat, 1985
ECOLOGY - All MFD information: Migration: Above the Khone Falls migrates upstream during late dry season and/or early flood season (Rainboth 1996, Singanouvong et al. 1996, Poulsen and Valbo-Jørgensen 2000); these migrations are relatively short (Ref.Poulsen and Valbo-Jørgensen 2000), and the purpose seem to be spawning (Poulsen and Valbo-Jørgensen 2000), although they may also involve migrations for dispersal and feeding by sub-adults (Singanouvong et al. 1996, Poulsen and Valbo-Jørgensen 2000). The fish moves downstream as water clears at the end of the flood season (Rainboth 1996).
Below the Falls the pattern is opposite with a downstream migration at the onset of the flood season and an upstream migration from the during the dry season (Poulsen and Valbo-Jørgensen

2000). Some populations migrate into major tributaries (e.g. Nam Ngum River and Songkhram River (Poulsen and Valbo-Jørgensen 2000); In Mun River, the species migrates upstream from the beginning of the rainy season to the end of August and move back downstream from late September to November (Schouten et al. 2000). Spawning: Eggs occur from March to July with a peak in May June, which probably is the main spawning season is during the period May to June (Poulsen and Valbo-Jørgensen 2000), but may extend until September - October (Singanouvong et al. 1996); However the species has also been reported to spawn in January to April (NFFS 1988). 2-4 cm juveniles have been reported both below (down stream to Can Tho and Dong Thap) and above Khone Falls (upstream to Nong Khai Province) (Poulsen and Valbo-Jørgensen 2000). . Distribution: Found basin wide in the mainstream of the Mekong (Pantulu 1986). Feeding: Molluscivorous (Roberts and Vidthayanon 1991, Rainboth 1996, Singanouvong et al. 1996, NFFS 1988, Vidthayanon and Roongthongbaisuree 1993): Feeds almost exclusively on bivalve molluscs (Roberts and Vidthayanon 1991, Rainboth 1996).
ECOLOGY - Migration type: Displays longitudinal as well as lateral migrations.
ECOLOGY - Status: Native
ECOLOGY - Habitat: Demersal

Pangasianodon gigas (IGFA)

IDENTIFICATION - Family: **Pangasiidae** (Shark catfishes)
IDENTIFICATION - Species name: ***Pangasianodon gigas***
IDENTIFICATION - Author: Chevey, 1931
IDENTIFICATION - Name in Khmer: ត្រីរាជ
IDENTIFICATION - Name in Khmer (roman): Reach
IDENTIFICATION - Name in English: Mekong giant catfish
BIOLOGY - Max. total length (cm): 300
BIOLOGY - Length at maturity (cm): 141.4
BIOLOGY - Food: plants mainly plants/detritus
BIOLOGY - Notes: At present, there are reports of the Mekong giant catfish being caught in reservoirs every year, with body weights exceeding 100 kg. This indicates that the Mekong giant catfish can grow to their normal size in reservoirs. However, at present none of the fish caught in the reservoir has mature gonads. It is not known if the fish can mature in this type of environment (Leelapatra et al. 2000).
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Kottelat, 1985; CNMC 1998, Scott and Crossman 1973
ECOLOGY - All MFD information: Migration: A white fish species (Bardach 1959); the actual distances and destinations of individuals moving through different parts of the river are poorly known (Rainboth 1996); Spawning migration has been observed in the northern part of the Mekong Basin (Vidthayanon 2001) where it migrates upstream during April-May. This migration is triggered by the first rain and increasing turbidity (Poulsen and Valbo-Jørgensen 2000). Spawning: Carries eggs from March to July (Singanouvong et al. 1996) and the main spawning season is between April and May (Leelapatra et al. 2000, Vidthayanon and Roongthongbaisuree 1993) at Chiang Rai, however in Mun River it spawns in June-July (Vidthayanon and Roongthongbaisuree 1993); The eggs are adhesive, yellowish in colour with a diameter of 1.7 mm (Leelapatra et al. 2000) and hatches 42 hours after fertilization at 25ºC (Pholprasith and Tavarutmaneegul 1997); The larvae measure 7 mm at hatching (Pholprasith and Tavarutmaneegul 1997); Based on the occurrence of juveniles Durand (1940) suggested that it may spawn in the delta or mouth of the Mekong, and perhaps in the adjacent brackish coastal waters of Cambodia (Durand 1940); Other spawning grounds have been identified in the mainstream of the Mekong River near Chiang Rai (Pholprasith and Tavarutmaneegul 1997, Vidthayanon and Roongthongbaisuree 1993), and in Mun River at

Ubon Ratchathani (Vidthayanon and Roongthongbaisuree 1993); Juveniles measuring 12.5-15.0 cm SL have been found in the Great Lake of Cambodia (Vidthayanon and Roongthongbaisuree 1993); Fish caught with ripe eggs were estimated to be 6-8 years old with a body weight of 150-250 kg (Pholprasith and Tavarutmaneegul 1997), while a 14-year old fish permanently cultured in an earthy pond still had immature gonads (Leelapatra et al. 2000); A 178-kg female was found contain 10.8 million eggs (Pholprasith and Tavarutmaneegul 1997). . Distribution: Found basin wide in the mainstream of the Lower Mekong (Pantulu 1986) Burma, Laos, Thailand, Cambodia and Viet Nam (NFFS 1988); Although it apparently used to be relatively common in different areas along the Lao-Thai border (e.g. around Nong Khai), the giant catfish is now extremely rare along most of this stretch (Poulsen and Valbo-Jørgensen 2000). Feeding: Feeds only on vegetation in the river (Davidson 1975); filamentous algae (Leelapatra et al. 2000, Vidthayanon and Roongthongbaisuree 1993) and detritus (Vidthayanon and Roongthongbaisuree 1993); The food of the fish consists largely, perhaps exclusively, of algae cropped from stones on the bottom and sides of the river. The frequent presence of stones in its stomach, up to the size of a mans fist is easily accounted for by the supposition that thy have been inadvertently swallowed in efforts to detach the algae (Smith 1945, Rainboth 1996); It probably also eats insect larvae and periphyton attached to the stones (Rainboth 1996, Leelapatra et al. 2000); The fry feed mainly on zooplankton (Leelapatra et al. 2000, NFFS 1988) for 1-2 months (NFFS 1988), but is also cannibalistic (Leelapatra et al. 2000).
ECOLOGY - Migration type: Displays longitudinal as well as lateral migrations.
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: Low

Pangasius bocourti (Warren, T.)

IDENTIFICATION - Family: **Pangasiidae** (Shark catfishes)
IDENTIFICATION - Species name: ***Pangasius bocourti***
IDENTIFICATION - Author: Sauvage, 1880
IDENTIFICATION - Name in Khmer: ត្រីប្រាខ្ចៅ
IDENTIFICATION - Name in Khmer (roman): Pra khchao
BIOLOGY - Max. total length (cm): 147
BIOLOGY - Max. standard length (cm): 120
BIOLOGY - Length at maturity (cm): 62.9
BIOLOGY - Food: plants/detritus+animals
BIOLOGY - Notes: Similar in appearance and behaviour to P. kunyit (Poulsen and Valbo-Jørgensen 2000).
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Suvatti, 1981
ECOLOGY - All MFD information: Migration: From just below the Khone Falls to Chiang Saen in the north there is an upstream migration from the onset of the flood season (Singanouvong et al. 1996, Rainboth 1996, Poulsen and Valbo-Jørgensen 2000); this migration coincides with an increase in turbidity (Rainboth 1996); the fish passes Khone Falls through some of the largest canals (Baird 1998 , Singanouvong et al. 1996).
Further below the Khone Falls to the Mekong Delta, the fish migrates in the opposite direction: Downstream in the beginning of the rainy season or in the late dry season and upstream migration when the water level in the river is decreases in November, and continuing well into the dry season until at least February (Poulsen and Valbo-Jørgensen 2000). Spawning: Mature eggs occur from March to August (Poulsen and Valbo-Jørgensen 2000), and a 2,500 g individual was full of eggs in September (Baird and Phylavanh 1999); The young are first seen in June, averaging about 5 cm by mid-June (Rainboth 1996); However the spawning period uncertain (Singanouvong et al. 1996) and may extend from the onset of flood season (Rainboth 1996) to August or even October (Singanouvong et al. 1996). . Distribution: Known from large rivers in the Lower and Middle Mekong (Roberts and Vidthayanon 1991, Poulsen and Valbo-Jørgensen 2000); Larvae/juveniles have been recorded from the drift in the Mekong River in An Giang (Nguyen et al. 2002);There are probably

two different populations in the Mekong. One occur from the Mekong Delta in Viet Nam to the Mukdahan-Savannakhet area upstream from the Khone Falls. Another population occurs from around Boulikhamxay-Nong Khai provinces to around Chiang Rai - Bokeo provinces in the north (Poulsen and Valbo-Jørgensen 2000). Feeding: In the rainy season it consumes mainly plant material such as fruits (Baird and Phylavanh 1999, Singanouvong et al. 1996) and leaves; In the dry season it feeds on fish, molluscs, algae and shrimps (Baird and Phylavanh 1999); Juveniles feed on insects. Adults feed on plants, insects and molluscs (Vidthayanon and Roongthongbaisuree 1993).
ECOLOGY - Migration type: Displays longitudinal as well as lateral migrations.
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: No information

Pangasius conchophilus (IFReDI collection)

IDENTIFICATION - Family: **Pangasiidae** (Shark catfishes)
IDENTIFICATION - Species name: ***Pangasius conchophilus***
IDENTIFICATION - Author: Roberts and Vidthayanon, 1991
IDENTIFICATION - Name in Khmer: ត្រីកែ
IDENTIFICATION - Name in Khmer (roman): Pra kae
BIOLOGY - Max. standard length (cm): 120
BIOLOGY - Length at maturity (cm): 62.9
BIOLOGY - Food: Mainly animals
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: Water level variation is a migration trigger
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: MFD occurence map
ECOLOGY - All MFD information: Migration: A white fish species (Bardach 1959); From just upstream Khone Falls to Chiang Saen it migrates upstream when the Mekong River rises quickly with the beginning of the monsoon season around May (Baird and Phylavanh 1999, Singanouvong et al. 1996, Rainboth 1996, Poulsen and Valbo-Jørgensen 2000), it mainly moves in large schools at night (Baird and Phylavanh 1999); and the migration continues until August; However this migration of 40 - 90 cm sexually mature fish seem to be preceded by a migration of 10 to 40 cm sub-adults in the period March to May (Poulsen and Valbo-Jørgensen 2000); Migrates up the Mun river to spawn in the rainy season (Ref.Schouten et al. 2000). Spawning: Based on eggs reports from March to August with a strong peak in May-July (Poulsen and Valbo-Jørgensen 2000) and the presence of females in spawning condition in March, June and August (Baird and Phylavanh 1999); and juveniles of 6 to 7 cm by late June (Rainboth 1996); it seems likely that the species spawn at various times of the year (Baird and Phylavanh 1999) although it probably mainly reproduces early in the flood season (Rainboth 1996, Poulsen and Valbo-Jørgensen 2000) the spawning period may extend to October (Singanouvong et al. 1996). An important spawning ground appears to be in the Mekong mainstream somewhere between Kompong Cham and Khone Falls (Poulsen and Valbo-Jørgensen 2000); and in rapids and riffles of the Mun river (Schouten et al. 2000). . Distribution: The distribution range is from the Mekong Delta all the way along the Mekong to Chiang Saen. In the Mekong Delta in Viet Nam, mainly juveniles less than 30 cm are reported (Poulsen and Valbo-Jørgensen 2000); There seem to be one population below Khone Falls and one (to several) above the Falls (Poulsen and Valbo-Jørgensen 2000); Larvae/juveniles have been recorded from the drift in both the Mekong and Bassac Rivers in An Giang (Nguyen et al. 2002). Feeding: Feeds on molluscs (Singanouvong et al. 1996, Roberts and Vidthayanon 1991) primarily gastropods (Rainboth 1996, Baird and Phylavanh 1999) but also some bivalves (Rainboth 1996), insects (Rainboth 1996, Roberts and Vidthayanon 1991); crabs, and algae (Singanouvong et al. 1996), filamentous green algae, leaves (Baird and Phylavanh 1999) forest fruits (Baird and Phylavanh 1999, Singanouvong et al. 1996, Roberts 1993).

Juveniles feed on prawns and insects; sub adults and adults on prawns, insects and particularly molluscs which are more predominant in stomach contents than in any other Pangasius species (Roberts and Vidthayanon 1991, Vidthayanon and Roongthongbaisuree 1993) and also small fish and crabs (Vidthayanon and Roongthongbaisuree 1993); Adults feed mainly on shellfish, crab, and fruit seeds (Vidthayanon and Roongthongbaisuree 1993).
Snails are an especially important source of food in the low-water season between January and May. Dense green algae appear to be an important source of food between January and March, when algae floats down the Mekong River in abundance. Leaves (Baird and Phylavanh 1999) and forest fruits and are the dominant food sources for this catfish between late April and September (Baird and Phylavanh 1999, Roberts 1993).
ECOLOGY - Migration type: Displays longitudinal as well as lateral migrations.
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: Low

Pangasius hypophthalmus (Jean-Francois Helias / Fishing Adventures Thailand)

IDENTIFICATION - Family: **Pangasiidae** (Shark catfishes)
IDENTIFICATION - Species name: ***Pangasius hypophthalmus***
IDENTIFICATION - Author: Sauvage, 1878
IDENTIFICATION - Name in Khmer: ត្រីប្រាធំ
IDENTIFICATION - Name in Khmer (roman): Pra thom
IDENTIFICATION - Name in English: Sutchi catfish
BIOLOGY - Max. total length (cm): 159
BIOLOGY - Max. standard length (cm): 130
BIOLOGY - Length at maturity (cm): 67.5
BIOLOGY - Food: plants mainly animals
BIOLOGY - Notes: Swims at the surface early in the morning during its upstream migration (Poulsen and Valbo-Jørgensen 2000). It requires a great deal of space and is not suited to small aquaria although it shows a generally non-aggressive behaviour. (Rainboth 1996).
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: Water level variation is a migration trigger
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Motomura et al. 2002
ECOLOGY - All MFD information: Migration: A white fish species (Bardach 1959), which migrates upstream for reproduction (Singanouvong et al. 1996); From Nong Khai to Chiang Khong it appears to be migrating upstream from May to July. South of the Khone Falls, there is a pronounced upstream migration from October to February (with a peak in November-December). It probably spawns in deep pools in the Mekong mainstream somewhere between Kratie to Khone Falls at the beginning of the flood season (Poulsen and Valbo-Jørgensen 2000, Bardach 1959) before it migrates downstream migration towards Kandal and the Mekong Delta in Vietnam from May to August; When the eggs hatch, the larvae drift downstream until they are swept out onto floodplain areas in southern Cambodia and Vietnam. At this time, the current in the Tonle Sap River has reversed resulting in a proportion of the larvae drifting up the Tonle Sap and out into flooded areas along the Tonle Sap River and the Great Lake (Poulsen and Valbo-Jørgensen 2000). Spawning: Eggs are reported during March to August with a strong peak in June-July (Poulsen and Valbo-Jørgensen 2000) or July (NFFS 1988, Vidthayanon and Roongthongbaisuree 1993), which is the main spawning season (Khanh 1996); Spawns in July (Vidthayanon and Roongthongbaisuree 1993); It probably spawns in deep pools in the Mekong mainstream somewhere between Kratie and Khone Falls (Poulsen and Valbo-Jørgensen 2000); The eggs are adhesive eggs (Singanouvong et al. 1996, Khanh 1996), and hatch after 22-24 hours at 30ºC (Khanh 1996); The larvae are approximately 3 mm long when they hatch (Pham Van Khanh et al. 2000). The species reaches maturity when three and four years old in males and females respectively, with a

corresponding body weight of 3-4 kg (Khanh et al. 1999.). . Distribution: The distribution range is from the Mekong Delta to Chiang Khong and Bokeo - it was not reported at Chiang Saen. In general, this species appear to be very rare above the Khone Falls (Poulsen and Valbo-Jørgensen 2000), but common in the Lower Mekong (Rainboth 1996); Recorded from Tien and Hau Rivers (Yen et al. 1992); Larvae/juveniles have been recorded from the drift in both the Mekong and Bassac Rivers in An Giang (Nguyen et al. 2002), fingerlings are found in the Tien River. Mature fish however are nearly only found in culture ponds, being very rare in natural habitats in the Mekong Delta (Pham Van Khanh et al. 2000). Feeding: Omnivorous (Ukkatawewat 9999, NFFS 1988): Feeds on fishes and crustaceans, vegetable debris (Rainboth 1996), small fruits and probably forest vegetation during the rainy season (Baird and Phylavanh 1999).
ECOLOGY - Migration type: Displays longitudinal as well as lateral migrations.
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: Low

Pangasius larnaudii (Warren, T.)

IDENTIFICATION - Family: **Pangasiidae** (Shark catfishes)
IDENTIFICATION - Species name: ***Pangasius larnaudii***
IDENTIFICATION - Author: Bocourt, 1866
IDENTIFICATION - Name in Khmer: ត្រីពោ
IDENTIFICATION - Name in Khmer (roman): Pra po
IDENTIFICATION - Name in English: Spot pangasius
BIOLOGY - Max. total length (cm): 159
BIOLOGY - Max. standard length (cm): 130
BIOLOGY - Length at maturity (cm): 67.5
BIOLOGY - Food: zoobenthos mainly animals
BIOLOGY - Notes: Can sometimes be seen at the surface (Poulsen and Valbo-Jørgensen 2000).
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: Water level variation is a migration trigger
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Hill, and Hill, 1994
ECOLOGY - All MFD information: Migration: A white fish species (Bardach 1959); which from around the Khone Falls and upstream migrates up-river from April to July with most activity from late May until the end of June; This migration is for both feeding and reproduction (Singanouvong et al. 1996); At Ubon Ratchatani, it was reported to be the last species to undertake upstream migrations just after the upstream migration of P. krempfi (Poulsen and Valbo-Jørgensen 2000); However, compared to P. conchophilus migratory activity for this species is spread out over a much longer time period with regular smaller runs of fish taking place over a number of weeks (Singanouvong et al. 1996); The main trigger of these migrations seems to be a combination of changes in water levels and changes in water colour (Poulsen and Valbo-Jørgensen 2000); Further below the Falls and towards the Delta the species migrates downstream at the onset of the rainy season (Poulsen and Valbo-Jørgensen 2000); and upstream at the beginning of the dry season, triggered by receding water levels. This migration is reported on the stretch from Dong Thap Province in Vietnam to the Khone Falls (Poulsen and Valbo-Jørgensen 2000); From Kratie and downstream, it is reported that it moves between the Mekong and smaller streams (Poulsen and Valbo-Jørgensen 2000), it is also known to migrate into floodplains (Rainboth 1996). Spawning: Eggs and/or milt were reported to occur over a long period from March to September with most reports from May to July (Poulsen and Valbo-Jørgensen 2000), which explains why the species has been reported to spawn both at the beginning of the flood season (Rainboth 1996) and in August-October (Singanouvong et al. 1996); Rainboth (1996) suggests that it migrates into floodplains to spawn (Rainboth 1996), while Bardach (1959) suggests a mainstream spawning ground near Stung Treng from where the larvae drift to the Bassac region in six to eight days (Bardach 1959). . Distribution: Found basin wide in the mainstream of the Mekong (Pantulu 1986, Poulsen and

Valbo-Jørgensen 2000); Larvae/juveniles have been recorded from the drift in both the Mekong and Bassac Rivers in An Giang (Nguyen et al. 2002). Feeding: Feeds on plant material (Singanouvong et al. 1996, Ukkatawewat 9999, Bardach 1959, Rainboth 1996, NFFS 1988), fish (Singanouvong et al. 1996, 9459, Ukkatawewat 9999, Baird and Phylavanh 1999, Rainboth 1996, Vidthayanon and Roongthongbaisuree 1993), crustaceans (Rainboth 1996, 9459) including shrimps (Ukkatawewat 9999, NFFS 1988), and molluscs (9459, NFFS 1988, Vidthayanon and Roongthongbaisuree 1993) including gastropods (Ukkatawewat 9999), worms (Baird and Phylavanh 1999, NFFS 1988), insects (NFFS 1988) including crickets (Baird and Phylavanh 1999), mud (Bardach 1959), and detritus (Baird and Phylavanh 1999, Singanouvong et al. 1996, NFFS 1988); This species feeds heavily on fruits (Baird and Phylavanh 1999, 9459, Singanouvong et al. 1996, Rainboth 1996, NFFS 1988, Vidthayanon and Roongthongbaisuree 1993) fruit seeds (Vidthayanon and Roongthongbaisuree 1993) and leaves during the rainy season (Baird and Phylavanh 1999); It also scavenges (Vidthayanon and Roongthongbaisuree 1993); Juveniles feed on insects (Vidthayanon and Roongthongbaisuree 1993).
ECOLOGY - Migration type: Displays longitudinal as well as lateral migrations.
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: No information

Pangasius macronema (Chavalit Vidthayanon)

IDENTIFICATION - Family: **Pangasiidae** (Shark catfishes)
IDENTIFICATION - Species name: ***Pangasius macronema***
IDENTIFICATION - Author: Bleeker, 1851
IDENTIFICATION - Name in Khmer: ត្រីឈ្លៀត
IDENTIFICATION - Name in Khmer (roman): Pra chveat
BIOLOGY - Max. total length (cm): 37
BIOLOGY - Max. standard length (cm): 30
BIOLOGY - Length at maturity (cm): 18.5
BIOLOGY - Food: zoobenthos mainly animals
BIOLOGY - Notes: Often found in large schools (Rainboth 1996); Can live in reservoirs (Vidthayanon and Roongthongbaisuree 1993).
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: Discharge variation is a migration trigger
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Motomura et al. 2002; CNMC 1998, Scott and Crossman 1973
ECOLOGY - All MFD information: Migration: A white fish species (Bardach 1959); It migrates upstream to spawn in the beginning of the rainy season (Schouten et al. 2000); Many fishers correlate the occurrence of this species with the emergence of insects especially dragonflies. From Boulikhamxay Province and northwards the species is mainly migrating upstream in May to June. In Cambodia there is an upstream migration from November until January/February. The fish go downstream in May-June (Poulsen and Valbo-Jørgensen 2000); Migrates upstream in May-June. In 1994, migratory activity was concentrated around early to mid-June when water flow volume was increasing rapidly. In 1996, migratory activity was concentrated over two periods; late May/early June and again towards the end of June. Some specimens with moderate fat deposits during he time of migration. Migration is for dispersal and feeding (Singanouvong et al. 1996); Passes the Khone Falls in April-May (Roberts and Baird 1995); During the period from late April to early May its numbers increase substantially by migrants coming from downstream. As the water transparency decreases it moves into tributary streams and flooded forests along with many species of cyprinids and other species of visually oriented catfishes such as P. pleurotaenia (Rainboth 1996). Spawning: Eggs have been observed in the abdomen of this fish all year round except for February, but most often reported from April to June (Poulsen and Valbo-Jørgensen 2000); A female with ripe eggs has been found in September (Baird and Phylavanh 1999); Spawns from February to April (NFFS 1988); It spawns in rapids in the beginning of the rainy season

(Schouten et al. 2000); It spawns in June in Cambodia where larvae are present in July (Bardach 1959); In Viet Nam it was reported to spawn in August to September in the main river (Poulsen and Valbo-Jørgensen 2000). Females are sexually mature at 13 cm and 25g (Baird and Phylavanh 1999). . Distribution: Found basin wide in the mainstream of the Mekong (Pantulu 1986) except for a short stretch from Nakhon Phanom and Mukdaharn Provinces (Poulsen and Valbo-Jørgensen 2000); Rarely caught at Hoo Som Yai at the Khone Falls (Singanouvong et al. 1996); Found in many reservoirs in Thailand (Vidthayanon and Roongthongbaisuree 1993); Larvae/juveniles have been recorded from the drift in both the Mekong and Bassac Rivers in An Giang (Nguyen et al. 2002). Feeding: Feeds on aquatic insect larvae (Rainboth 1996), insects (Baird and Phylavanh 1999, NFFS 1988, Vidthayanon and Roongthongbaisuree 1993), earthworms (Baird and Phylavanh 1999, NFFS 1988), miscellaneous fruits (Baird and Phylavanh 1999, Vidthayanon and Roongthongbaisuree 1993), leaves, pulverised wood, mushrooms, detritus (Baird and Phylavanh 1999), mud, plant fragments (Bardach 1959), and plant seeds (NFFS 1988); and also scavenges (Vidthayanon and Roongthongbaisuree 1993).
ECOLOGY - Migration type: Displays longitudinal as well as lateral migrations.
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: No information

Pangasius micronemus (IFReDI collection)

IDENTIFICATION - Family: **Pangasiidae** (Shark catfishes)
IDENTIFICATION - Species name: ***Pangasius micronemus***
IDENTIFICATION - Author: Bleeker, 1847
IDENTIFICATION - Name in English: Shortbarbel pangasius
BIOLOGY - Max. total length (cm): 107
BIOLOGY - Max. standard length (cm): 100
BIOLOGY - Length at maturity (cm): 53.5
BIOLOGY - Food: plants/detritus+animals
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: CNMC 1998, Scott and Crossman 1973
ECOLOGY - All MFD information: Migration: 0. Spawning: 0 . Distribution: Relatively uncommon in the Mekong (Rainboth 1996). Feeding: Feeds on animal and plant matter including detritus (Rainboth 1996); Feeds on algae in the Great Lake, but on molluscs in the Tonle Sap River (Bardach 1959); Smaller P. micronema mainly feed on small fish but larger feed on fruit seed, fruit and insects (Vidthayanon and Roongthongbaisuree 1993).
ECOLOGY - Migration type: Only seems to display Longitudinal migrations.
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: No information

Pangasius nasutus (www.xyac.edu.cn)

IDENTIFICATION - Family: **Pangasiidae** (Shark catfishes)
IDENTIFICATION - Species name: ***Pangasius nasutus***
IDENTIFICATION - Author: Bleeker, 1863
BIOLOGY - Max. total length (cm): 90
BIOLOGY - Length at maturity (cm): 48.8

ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: CNMC 1998, Scott and Crossman 1973
ECOLOGY - Migration type: No information on migration type
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: No information

Pangasius pleurotaenia (Warren, T.)

IDENTIFICATION - Family: **Pangasiidae** (Shark catfishes)
IDENTIFICATION - Species name: ***Pangasius pleurotaenia***
IDENTIFICATION - Author: Sauvage, 1878
BIOLOGY - Max. total length (cm): 43
BIOLOGY - Max. standard length (cm): 35
BIOLOGY - Length at maturity (cm): 21.2
BIOLOGY - Food: plants/detritus+animals
BIOLOGY - Notes: High occurrence of this species in the Mekong mainstream coincides with emergence of certain insects, in particular dragonflies. Some fishers had seen the fish come to the surface to catch these insects, confirming that the species relies on vision to catch its prey (Poulsen and Valbo-Jørgensen 2000). Before the flood season it is found in the lower reaches of tributary streams along with most of the cyprinids that would be found in the main stream of the Mekong when the water is clear. This species prefer greater water clarity than most species of river catfishes (Pangasiidae) (Rainboth 1996);
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Chao, and Trewavas, 1981
ECOLOGY - All MFD information: Migration: Along the stretch from Khone Falls and up to Chiang Rai Province, the first heavy rains marking the end of the dry season, triggers this species to migrate upstream. Along the stretch from Khone Falls to Loei, Thailand, this migration occur over a relatively short period, typically during May-June (Poulsen and Valbo-Jørgensen 2000, Singanouvong et al. 1996). Further upstream, from Xayaboury to Chiang Rai, migration tend to occur over a longer period, from March to August. Below the Khone Falls it migrates upstream at the beginning of the dry season, a migration that continues in waves well into the dry season (until March). These migrations are triggered by receding/low water levels. Late in the dry season, probably triggered by the first rain showers, the species migrates downstream from the Khone Falls, at least until Kandal Province - migratory behaviour in the Mekong Delta appear to be less clear (Poulsen and Valbo-Jørgensen 2000). Spawning: Eggs were reported to occur from March to December with most reports from May-June (Poulsen and Valbo-Jørgensen 2000); A 23 cm female weighing 70 g examined in November was full of eggs (Baird and Phylavanh 1999); Spawning period uncertain - possibly February-March (Singanouvong et al. 1996). . Distribution: Found basin wide in the mainstream of the Mekong (Pantulu 1986, Poulsen and Valbo-Jørgensen 2000), Most common in the Middle Mekong (Rainboth 1996) rare both in the far north and far south (Poulsen and Valbo-Jørgensen 2000); Larvae/juveniles have been recorded from the drift in both the Mekong and Bassac Rivers in An Giang (Nguyen et al. 2002). Feeding: Diet consists of terrestrial and aquatic insects along with small amounts of plant matter (Rainboth 1996, Vidthayanon and Roongthongbaisuree 1993), fruits (Singanouvong et al. 1996, Vidthayanon and Roongthongbaisuree 1993), leaves, aquatic chlorophytes (Singanouvong et al. 1996), and seeds (Vidthayanon and Roongthongbaisuree 1993); This species feeds on large quantities of the flowers. It sometimes wait under flowering shrubs for flowers to drop into the water (Baird and Phylavanh 1999).
ECOLOGY - Migration type: Displays longitudinal as well as lateral migrations.
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: No information

Pangasius polyuranodon (Rainboth W.)

IDENTIFICATION - Family: **Pangasiidae** (Shark catfishes)
IDENTIFICATION - Species name: ***Pangasius polyuranodon***
IDENTIFICATION - Author: Bleeker, 1852
IDENTIFICATION - Name in Khmer: ត្រីឈ្អែត
IDENTIFICATION - Name in Khmer (roman): Pra chveat
BIOLOGY - Max. standard length (cm): 80
BIOLOGY - Length at maturity (cm): 44
BIOLOGY - Food: plants/ detritus + animals
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: Water level variation is a migration trigger
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: MFD occurence map
ECOLOGY - All MFD information: Migration: Upstream from Khone Falls, the species migrates upstream at the onset of the flood season. This migration is triggered by a combination of the first rain and changes in water level and turbidity. From Kandal to Khone Falls upstream migrations are mainly triggered by receding water at the end of the flood season. Downstream migrations during the onset of the flood season are triggered by a combination of rain and rising water levels. Many fishers use the appearance of certain insects, in particular dragonflies, as an indication that migrations are underway; It was reported to migrate upstream in schools together with other species. However, the downstream migrations are undertaken more sporadic and not together with other species (Poulsen and Valbo-Jørgensen 2000); It probably moves out onto the floodplain during high water (Rainboth 1996). Spawning: Females with eggs were seen in June to August and in October, the eggs of the specimen examined in June appeared to be less developed than the ones examined in October (Baird and Phylavanh 1999); Spawns from May to August (Poulsen and Valbo-Jørgensen 2000); The smallest individual with eggs was 27 cm long and weighed 160 g (Baird and Phylavanh 1999). . Distribution: Occurs from Xayaboury to the Mekong Delta. However it is rare in the Middle Mekong, from the Khone Falls and upstream (Poulsen and Valbo-Jørgensen 2000); More common from Stung Treng and downstream (Rainboth 1996); Larvae/juveniles have been recorded from the drift in both the Mekong and Bassac Rivers in An Giang (Nguyen et al. 2002). Feeding: It is known to feed on insect larvae, bottom dwelling worms, and submerged land plants, including flowers and fruits (Rainboth 1996); Feeds on forest leaves, fruits and insects in the high-water season between June and October. Apart from consuming large quantities of flooded forest fruits and vegetation, presumably as they float down river, this fish is a heavy consumer of dense green algae in the low-water season. It also feeds on fish, snails, crabs, shrimp, and frogs, but not in large quantities (Baird and Phylavanh 1999); Feeds on crab, shrimp, and shellfish (Vidthayanon and Roongthongbaisuree 1993).
ECOLOGY - Migration type: Displays longitudinal as well as lateral migrations.
ECOLOGY - Status: No information
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: Low

Pangasius sanitwongsei (Rainboth W.)

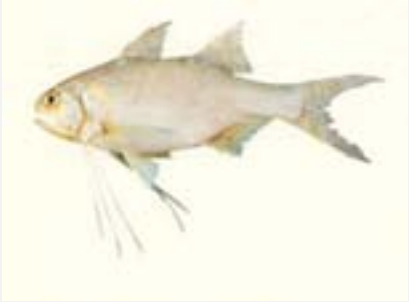
IDENTIFICATION - Family: **Pangasiidae** (Shark catfishes)

IDENTIFICATION - Species name: ***Pangasius sanitwongsei***
IDENTIFICATION - Author: Smith, 1931
IDENTIFICATION - Name in Khmer: ត្រីពោព្រុយ
IDENTIFICATION - Name in Khmer (roman): Pra po pruy
IDENTIFICATION - Name in English: Giant pangasius
BIOLOGY - Max. total length (cm): 366
BIOLOGY - Max. standard length (cm): 300
BIOLOGY - Length at maturity (cm): 141.4
BIOLOGY - Food: Mainly animals
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: Water level variation is a migration trigger
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: CNMC 1998, Scott and Crossman 1973
ECOLOGY - All MFD information: Migration: A white fish species (Bardach 1959); From Kompong Cham to the Khone Falls, the species migrates upstream during receding water from October to February and then downstream during rising water from June to August. The main trigger of these migrations is changes in water level (Poulsen and Valbo-Jørgensen 2000); It does not appear to migrate over the Khone Falls. Spawning: Spawns just before the rainy season, and the young of the year reach a length of about 10 cm by mid-June (Rainboth 1996). . Distribution: Found basin wide in the mainstream (Pantulu 1986, Poulsen and Valbo-Jørgensen 2000); Upper and Middle Mekong (NFFS 1988); Seen in Stung Treng, and used to be common upstream from Khone Falls in the Middle Mekong along the Thai-Lao border (Rainboth 1996), however it is now rare in most of its distribution range (Poulsen and Valbo-Jørgensen 2000); Occasionally caught at Ban Hang Khone just downstream from the Falls (Baird 1998); Recorded from Mun River (NFFS 1988); Juvenile individuals were caught by hook and line in Vientiane in 1999 (Valbo-Jørgensen 2001); and in Songkhram River in 2000 (Suntornratana 2001). Feeding: Adult and young feed mainly on fishes (Vidthayanon 2001, Rainboth 1996, Roberts and Vidthayanon 1991, Vidthayanon and Roongthongbaisuree 1993) and crustaceans (Rainboth 1996), but it sometimes scavenges (Vidthayanon 2001, Vidthayanon and Roongthongbaisuree 1993), larger individuals have for example been known to feed on carcasses of fowl (Roberts and Vidthayanon 1991) or dog (Smith 1945, Roberts and Vidthayanon 1991); It may also consume floating forest fruits and vegetation in the mainstream Mekong River (Baird and Phylavanh 1999) and detritus (NFFS 1988); Juveniles feed on insects and leaves (Baird and Phylavanh 1999).
ECOLOGY - Migration type: Displays longitudinal as well as lateral migrations.
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: No information

No picture available
IDENTIFICATION - Family: **Polynemidae**
IDENTIFICATION - Species name: ***Polynemus melanochir dulcis***
IDENTIFICATION - Author: Motomura and Sabaj, 2002
IDENTIFICATION - Name in English: Lake blackhand paradise fish
BIOLOGY - Max. total length (cm): 17
BIOLOGY - Max. standard length (cm): 13.5
BIOLOGY - Length at maturity (cm): 9.1
ECOLOGY - Tonle Sap distribution: Motomura et al. 2002; Motomura 2004
ECOLOGY - Status: Native
ECOLOGY - Habitat: pelagic
ECOLOGY - Resilience: High

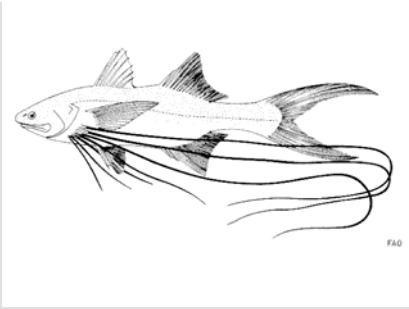
No picture available
IDENTIFICATION - Family: **Polynemidae** (Threadfins)
IDENTIFICATION - Species name: ***Polynemus aquilonaris***
IDENTIFICATION - Author: Motomura, 2003
IDENTIFICATION - Name in English: Northern paradise fish
BIOLOGY - Max. total length (cm): 20
BIOLOGY - Max. standard length (cm): 15.8
BIOLOGY - Length at maturity (cm): 10.5

ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Motomura, 2003; Motomura, 2004
ECOLOGY - Migration type: No information on migration type
ECOLOGY - Status: Native
ECOLOGY - Habitat: Demersal
ECOLOGY - Resilience: High



Polynemus melanochir melanochir (CSIRO)

IDENTIFICATION - Family: **Polynemidae** (Threadfins)
IDENTIFICATION - Species name: ***Polynemus melanochir melanochir***
IDENTIFICATION - Author: Valenciennes, 1831
IDENTIFICATION - Name in English: Blackhand paradise fish
BIOLOGY - Max. total length (cm): 31
BIOLOGY - Max. standard length (cm): 25
BIOLOGY - Length at maturity (cm): 15.7
BIOLOGY - Food: zoobenthos mainly animals
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Lim et al. 1999; CNMC 1998, Scott and Crossman 1973
ECOLOGY - Migration type: No information on migration type
ECOLOGY - Status: Native
ECOLOGY - Habitat: Demersal
ECOLOGY - Resilience: High



Polynemus paradiseus (FAO)

IDENTIFICATION - Family: **Polynemidae** (Threadfins)
IDENTIFICATION - Species name: ***Polynemus paradiseus***
IDENTIFICATION - Author: Linnaeus, 1758
IDENTIFICATION - Name in Khmer: ត្រីព្រាម
IDENTIFICATION - Name in Khmer (roman): Trey priem
IDENTIFICATION - Name in English: Paradise threadfin
BIOLOGY - Max. total length (cm): 23
BIOLOGY - Length at maturity (cm): 14.6
BIOLOGY - Food: Mainly animals
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information

REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Kottelat, 1985
ECOLOGY - All MFD information: Migration: 0. Spawning: 0 . Distribution: Common in muddy waters of the Mekong tidal zone and upstream in freshwater reaches of the Tonle Sap (Rainboth 1996); Found at least as far as upstream as Can Tho and from the Bassac River at least as far as My Tho (5978); Never found above the Khone Falls (Roberts 1993). Feeding: Feeds on crustaceans (Rainboth 1996).
ECOLOGY - Status: Misidentification
ECOLOGY - Habitat: Demersal
ECOLOGY - Resilience: High

Boesemania microlepis (Jean-Francois Helias / Fishing Adventures Thailand)

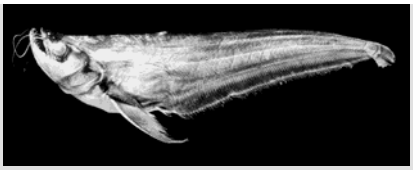
IDENTIFICATION - Family: **Sciaenidae** (Drums or croakers)
IDENTIFICATION - Species name: ***Boesemania microlepis***
IDENTIFICATION - Author: Bleeker, 1858
IDENTIFICATION - Name in Khmer: ត្រីប្រម៉ា
IDENTIFICATION - Name in Khmer (roman): Prama
IDENTIFICATION - Name in English: Boeseman croaker
BIOLOGY - Max. total length (cm): 122
BIOLOGY - Max. standard length (cm): 100
BIOLOGY - Length at maturity (cm): 53.5
BIOLOGY - Food: zoobenthos mainly animals
BIOLOGY - Notes: The adults are strong, fast swimming and probably wide ranging competitors and predators of other fishes and aquatic fauna. It is possibly very sensitive to polluted water, like the other euryhaline fishes mentioned earlier. Its extinction from many freshwater habitats, especially in the lower courses of the rivers, is foreseen (Wongratana 1985).
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Thuok, N and L. Sina, 1997
ECOLOGY - All MFD information: Migration: A white fish species (Bardach 1959); The species is reported to undertake short and sporadic migrations, these are normally solitary rather than in schools possibly in order to follow its prey; Below the Falls, these short distance upstream movements are usually seen at receding water at the end of the flood season (Poulsen and Valbo-Jørgensen 2000); However the species is rather sedentary in the river (CESVI 1998, Baird and Phylavanh 1999), and is an important inhabitant of certain deep-water pools in the Mekong mainstream River in southern Laos (Baird and Phylavanh 1999). Spawning: Eggs were reported only in the period April to July (Poulsen and Valbo-Jørgensen 2000); Spawning occurs during the height of the dry season between March and early May in southern Laos (Baird and Phylavanh 1999); and in May-June in Cambodia (Bardach 1959). The species spawns in deep-water sections of the Mekong River in southern Laos and north-eastern Cambodia (CESVI 1998, Baird and Phylavanh 1999); Seven spawning grounds, associated with deep pools are situated in Khong District, just above the Khone Falls (Baird and Phylavanh 1999); The identified spawning areas are characterized by being over 20 m deep, with hard rock or pebble and silt or sand substrate, and having slow to moderate counter-current eddies in the dry-season, and with steep rock sides descending into the pools (Baird et al. 2001). It makes loud croaking vocalisations during its spawning period (Baird and Phylavanh 1999).
A fish of about 73 cm body length and 3,800 g body weight has approx. 20,500 eggs with a diameter of about 0.5 mm (Duangsawasdi et al. 1988). . Distribution: Found in the Mekong River (Hiranwatana 1970, Hiranwatana 1968, Serene 1951) and its effluents (Serene 1951, Rainboth 1996); above and below Khone Falls (Rainboth 1996); The main distribution area is from the Mekong Delta to Paksan with a single report from Xayabouri (Poulsen and Valbo-Jørgensen 2000);

where it used to occur but have not been seen for many years (Bouakhamvongsa 2001); Recorded from the mainstream at Nong Khai (Anonymous 1968); Vientiane, Pakse (Wongratana 1985, Taki 1968), Hat Salao (Taki 1968); and Loei (Wongratana 1985); and the Mekong Delta of Viet Nam (Kawamoto et al. 1972); and further from the Tonle Sap (1632); and the Great Lake (1037478). Feeding: Feeds mainly on prawns and shrimps (Wongratana 1985, Baird and Phylavanh 1999, Baird et al. 2001, Bothipitak 1970); but also on fishes (Baird and Phylavanh 1999, Baird et al. 2001, Bothipitak 1970, Rainboth 1996), and some insects (Baird et al. 2001, Baird and Phylavanh 1999), bark, leaves, and snails (Baird and Phylavanh 1999).
ECOLOGY - Migration type: Displays longitudinal as well as lateral migrations.
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: Medium


Kryptopterus hexapterus (IFReDI collection)

IDENTIFICATION - Family: **Siluridae**
IDENTIFICATION - Species name: Kryptopterus hexapterus
IDENTIFICATION - Author: Bleeker, 1851
IDENTIFICATION - Remark: Formerly Kryptopterus hexapterus
BIOLOGY - Max. total length (cm): 24
BIOLOGY - Length at maturity (cm): 15.2
BIOLOGY - Food: Mainly animals
ECOLOGY - Tonle Sap distribution: Likely (above Khone Falls and in the delta)
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: High

No picture available
IDENTIFICATION - Family: **Siluridae**
IDENTIFICATION - Species name: Ompok pinnatus
IDENTIFICATION - Author: Ng, 2003
BIOLOGY - Max. total length (cm): 29
BIOLOGY - Length at maturity (cm): 0.9
ECOLOGY - Tonle Sap distribution: Eschmeyer, Editor, 2004
ECOLOGY - Status: Native
ECOLOGY - Habitat: Demersal
ECOLOGY - Resilience: No information


Belodontichthys dinema (Roberts, T.R.)

IDENTIFICATION - Family: **Siluridae** (Sheatfishes)
IDENTIFICATION - Species name: ***Belodontichthys dinema***
IDENTIFICATION - Author: Bleeker, 1851
IDENTIFICATION - Name in Khmer: ត្រីក្លាំងហាយ
IDENTIFICATION - Name in Khmer (roman): Khlang hay
BIOLOGY - Max. total length (cm): 100
BIOLOGY - Length at maturity (cm): 53.5
BIOLOGY - Food: Nekton mainly animals

ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Spawns in streams / inlets (% respondents): 100
REPRODUCTION - Date of spawning (% respondents): Jun 2.6%, Jun-Jul 71.1%, May-Jul 2.6%, May-Jun 23.7%
REPRODUCTION - Nurses in floodplain (% respondents): 100
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Thuok, N and L. Sina, 1997
ECOLOGY - Migration type: No information on migration type
ECOLOGY - Feeds in floodplains (% respondents): 100
ECOLOGY - Status: Native
ECOLOGY - Habitat: Demersal
ECOLOGY - Resilience: No information
GUILD - Grey fish guild (% respondents): 100

No picture available
IDENTIFICATION - Family: **Siluridae** (Sheatfishes)
IDENTIFICATION - Species name: Hemisilurus heterorhynchus
IDENTIFICATION - Author: Bleeker, 1853
BIOLOGY - Max. total length (cm): 80
BIOLOGY - Length at maturity (cm): 44
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Kottelat, 1985
ECOLOGY - Migration type: No information on migration type
ECOLOGY - Status: Native
ECOLOGY - Habitat: Demersal
ECOLOGY - Resilience: Medium


Hemisilurus mekongensis (Rainboth W.)

IDENTIFICATION - Family: **Siluridae** (Sheatfishes)
IDENTIFICATION - Species name: ***Hemisilurus mekongensis***
IDENTIFICATION - Author: Bornbusch and Lundberg, 1989
IDENTIFICATION - Name in Khmer: ត្រីក្រម៉ំ ម
IDENTIFICATION - Name in Khmer (roman): Kromorm
BIOLOGY - Max. total length (cm): 80
BIOLOGY - Length at maturity (cm): 44
BIOLOGY - Food: plants/detritus+animals
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: Discharge variation is a migration trigger
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: Water level variation is a migration trigger
REPRODUCTION - Spawns in streams / inlets (% respondents): 100
REPRODUCTION - Date of spawning (% respondents): Jun-Jul 71.8%, Jun-Oct 2.6%, May-Jun 23.1%, May-Sep 2.6%
REPRODUCTION - Nurses in floodplain (% respondents): 100
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: MFD occurence map
ECOLOGY - All MFD information: Migration: Migrates upstream in April-July. The migratory activity seems to be strongly associated with river discharge. Generally speaking, when water flow increases, migratory activity intensifies, while falling discharge leads to a decrease in migratory activity in most cases. The purpose of the migration is for dispersal and feeding (Singanouvong et al. 1996). Spawning: Spawning period uncertain - probably August - October (Singanouvong et al.

1996). . Distribution: Larvae/juveniles have been recorded from the drift in the Mekong River in An Giang (Nguyen et al. 2002). Feeding: Browses along the bottom, where it feeds on worms, plants, animal debris (Rainboth 1996), insects (Rainboth 1996, Baird and Phylavanh 1999), shrimp/prawn, fish (Singanouvong et al. 1996, Baird and Phylavanh 1999) and crabs (Baird and Phylavanh 1999). It appears that its feeding habits do not differ considerably according to season (Baird and Phylavanh 1999).
ECOLOGY - Migration type: Displays longitudinal as well as lateral migrations.
ECOLOGY - Feeds in floodplains (% respondents): 100
ECOLOGY - Status: No information
ECOLOGY - Habitat: Demersal
ECOLOGY - Resilience: Medium
GUILD - Grey fish guild (% respondents): 100

Kryptopterus apogon (Rainboth W.)

IDENTIFICATION - Family: **Siluridae** (Sheatfishes)
IDENTIFICATION - Species name: ***Kryptopterus apogon***
IDENTIFICATION - Author: Bleeker, 1851
BIOLOGY - Max. total length (cm): 159
BIOLOGY - Max. standard length (cm): 130
BIOLOGY - Length at maturity (cm): 67.5
BIOLOGY - Food: Nekton mainly animals
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Lim et al. 1999
ECOLOGY - All MFD information: Migration: A white fish species (Bardach 1959), which moves into flooded riparian forests and probably into floodplains during high water levels. Young of the year begin to move back to the rivers in October, where they remain common until January (Rainboth 1996);. Spawning: Spawns from just before water levels begin to rise (Rainboth 1996) in May to November (Bardach 1959); The young of the year are first seen in July (Rainboth 1996). . Distribution: Found basin wide in the mainstream of the Mekong (Pantulu 1986); Recorded from the Xe Bangfai Basin (Kottelat 1998). Feeding: Feeds on pelagic fishes in midwater to upper depths (Rainboth 1996, Bardach 1959) and large crustaceans (Bardach 1959).
ECOLOGY - Migration type: Displays longitudinal as well as lateral migrations.
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: No information

Kryptopterus bicirrhis (Baird, I.G.)

IDENTIFICATION - Family: **Siluridae** (Sheatfishes)
IDENTIFICATION - Species name: ***Kryptopterus bicirrhis***
IDENTIFICATION - Author: Valenciennes, 1840
IDENTIFICATION - Name in Khmer: ត្រីកេសប្រាក់
IDENTIFICATION - Name in Khmer (roman): Kes prak
IDENTIFICATION - Name in English: Glass catfish
BIOLOGY - Max. standard length (cm): 15

BIOLOGY - Length at maturity (cm): 10
BIOLOGY - Food: Mainly animals
BIOLOGY - Notes: Always found in the water surface in schools of about 10-20 individuals (1038315). By some authors said to be diurnally active (Mills and Vevers 1989) others state that it is nocturnal (1038315).
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Spawns in streams / inlets (% respondents): 100
REPRODUCTION - Date of spawning (% respondents): Jun 5.4%, Jun-Jul 70.3%, May-Jul 2.7%, May-Jun 21.6%
REPRODUCTION - Nurses in floodplain (% respondents): 100
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Likely (above Khone Falls and in the delta)
ECOLOGY - All MFD information: Migration: 0. Spawning: Spawns around October to November (1038315). . Distribution: Occurs in the Xe Bangfai Basin (Kottelat 1998). Feeding: Feeds on worms, crustaceans (Mills and Vevers 1989), insects (Mills and Vevers 1989, 1038315), and zooplankton (1038315).
ECOLOGY - Feeds in floodplains (% respondents): 100
ECOLOGY - Status: No information
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: High
GUILD - Grey fish guild (% respondents): 100

Kryptopterus cheveyi (Baird, I.G.)

IDENTIFICATION - Family: **Siluridae** (Sheatfishes)
IDENTIFICATION - Species name: ***Kryptopterus cheveyi***
IDENTIFICATION - Author: Durand, 1940
IDENTIFICATION - Name in Khmer: ត្រីកំភ្លៀវស្ទឹង
IDENTIFICATION - Name in Khmer (roman): Kamphleav stung
BIOLOGY - Max. total length (cm): 35
BIOLOGY - Length at maturity (cm): 21.2
BIOLOGY - Food: Mainly animals
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Spawns in streams / inlets (% respondents): 100
REPRODUCTION - Date of spawning (% respondents): Jun 5.1%, Jun-Jul 69.2%, May-Jul 2.6%, May-Jun 23.1%
REPRODUCTION - Nurses in floodplain (% respondents): 100
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Kottelat, 1985; Motomura et al. 2002
ECOLOGY - All MFD information: Migration: 0. Spawning: 0 . Distribution: Reported from the Xe Bangfai Basin (Kottelat 1998); Larvae/juveniles have been recorded from the drift in the Mekong River in An Giang (Nguyen et al. 2002). Feeding: Feeds on larvae of chironomids and ephemeropterans as well as zooplankton and fishes. The mouth and gill cavity often contain sand when the fish is removed from the water (Rainboth 1996).
ECOLOGY - Migration type: Displays longitudinal as well as lateral migrations.
ECOLOGY - Feeds in floodplains (% respondents): 100
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: No information
GUILD - Grey fish guild (% respondents): 100

Kryptopterus cryptopterus (JJPhoto)

IDENTIFICATION - Family: **Siluridae** (Sheatfishes)
IDENTIFICATION - Species name: ***Kryptopterus cryptopterus***
IDENTIFICATION - Author: Bleeker, 1851
IDENTIFICATION - Name in Khmer: ត្រីកំភ្លៀវខ្លាញ់
IDENTIFICATION - Name in Khmer (roman): Kamphleav khlanh
BIOLOGY - Max. total length (cm): 25
BIOLOGY - Max. standard length (cm): 20
BIOLOGY - Length at maturity (cm): 12.9
BIOLOGY - Food: Nekton mainly animals
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Spawns in streams / inlets (% respondents): 100
REPRODUCTION - Date of spawning (% respondents): Jun 5.1%, Jun-Jul 69.2%, May-Jul 2.6%, May-Jun 23.1%
REPRODUCTION - Nurses in floodplain (% respondents): 100
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Kottelat, 1985
ECOLOGY - All MFD information: Migration: The young move into seasonally flooded habitats and are first seen in August (Rainboth 1996). Spawning: According to Rainboth (1996) it spawns in the early part of the rainy season (Rainboth 1996); However females measuring 21-22 cm (40-45 g) were full of eggs in August (Baird and Phylavanh 1999). . Distribution: Found basin wide in the mainstream of the Lower Mekong (Pantulu 1986); Recorded from the Xe Bangfai Basin (Kottelat 1998) and the Great Lake (Rainboth 1996); Larvae/juveniles have been recorded from the drift in both the Mekong and Bassac Rivers in An Giang (Nguyen et al. 2002). Feeding: Feeds mostly on fish, along with prawns, insects, and their larvae (Rainboth 1996); small insects, earthworms and detritus (Baird and Phylavanh 1999).
ECOLOGY - Migration type: Only seems to display Longitudinal migrations.
ECOLOGY - Feeds in floodplains (% respondents): 100
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: No information
GUILD - Grey fish guild (% respondents): 100

No picture available
IDENTIFICATION - Family: **Siluridae** (Sheatfishes)
IDENTIFICATION - Species name: ***Kryptopterus geminus***
IDENTIFICATION - Author: Ng, 2003
BIOLOGY - Max. total length (cm): 21
BIOLOGY - Max. standard length (cm): 17.1
BIOLOGY - Length at maturity (cm): 11.2
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: From FishBase
ECOLOGY - Migration type: No information on migration type
ECOLOGY - Status: Native
ECOLOGY - Habitat: Demersal
ECOLOGY - Resilience: No information

Kryptopterus micronema (Baird, I.G.)

IDENTIFICATION - Family: **Siluridae** (Sheatfishes)
IDENTIFICATION - Species name: ***Kryptopterus micronema***
IDENTIFICATION - Author: Bleeker, 1846
BIOLOGY - Max. total length (cm): 41
BIOLOGY - Max. standard length (cm): 33
BIOLOGY - Length at maturity (cm): 20.1
BIOLOGY - Food: Mainly animals
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Lim et al. 1999.
ECOLOGY - All MFD information: Migration: This species enters streams and seasonally inundated riverine habitat during the high-water season (Baird and Phylavanh 1999). Spawning: 0 . Distribution: 0. Feeding: Feeds on pelagic fishes and shrimps (Rainboth 1996, Baird and Phylavanh 1999).
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: No information

Kryptopterus schilbeides (Rainboth W.)

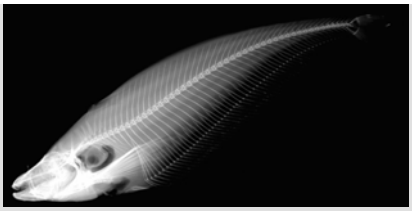
IDENTIFICATION - Family: **Siluridae** (Sheatfishes)
IDENTIFICATION - Species name: ***Kryptopterus schilbeides***
IDENTIFICATION - Author: Bleeker, 1858
IDENTIFICATION - Name in Khmer: ត្រីកំភ្លៀវ
IDENTIFICATION - Name in Khmer (roman): Kamphleav
BIOLOGY - Max. total length (cm): 12
BIOLOGY - Length at maturity (cm): 8.2
BIOLOGY - Food: Mainly animals
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Spawns in streams / inlets (% respondents): 100
REPRODUCTION - Date of spawning (% respondents): Jun 5.1%, Jun-Jul 69.2%, May-Jul 2.6%, May-Jun 23.1%
REPRODUCTION - Nurses in floodplain (% respondents): 100
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: MFD occurence map
ECOLOGY - All MFD information: Migration: A white fish species (Bardach 1959); Moves into flooded forests during high water periods and returns to rivers in November, where they remain common at least until March (Rainboth 1996). Spawning: probably spawns in inundated forest June-October; 10 cm fingerlings collected in January (Bardach 1959). . Distribution: Found in the Lower Mekong (Rainboth 1996). Feeding: Feeds on small fishes, prawns, and insect larvae (Rainboth 1996).
ECOLOGY - Feeds in floodplains (% respondents): 100
ECOLOGY - Status: No information
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: High
GUILD - Grey fish guild (% respondents): 100

Micronema bleekeri *(Chavalit Vidthayanon)*

IDENTIFICATION - Family: **Siluridae** (Sheatfishes)
IDENTIFICATION - Species name: ***Micronema bleekeri***
IDENTIFICATION - Author: Günther, 1864
IDENTIFICATION - Name in Khmer: ត្រីកេសក្រហម
IDENTIFICATION - Name in Khmer (roman): Kes krohorm
BIOLOGY - Max. total length (cm): 74
BIOLOGY - Max. standard length (cm): 60
BIOLOGY - Length at maturity (cm): 34.1
BIOLOGY - Food: Nekton mainly animals
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: Water level variation is a migration trigger
REPRODUCTION - Spawns in streams / inlets (% respondents): 100
REPRODUCTION - Date of spawning (% respondents): Jun 5.4%, Jun-Jul 70.3%, May-Jul 2.7%, May-Jun 21.6%
REPRODUCTION - Nurses in floodplain (% respondents): 100
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Kottelat, M., 1985; Lim et al. 1999
ECOLOGY - All MFD information: Migration: Migrates upstream May - July; migration activity peaks in late May and continues at a comparatively low level until the end of June. The purpose of the migration is mainly for reproduction (Singanouvong et al. 1996); It also undertakes lateral migrations from the main river into smaller tributaries and inundated riverine habitats at the onset of the flood season (Baird and Phylavanh 1999, Poulsen and Valbo-Jørgensen 2000), The first rains at the end of the dry season trigger these migrations, as well as water level changes. (Poulsen and Valbo-Jørgensen 2000); It returns to the main river channel when water starts to recede at the beginning of the dry season. (Poulsen and Valbo-Jørgensen 2000); in Cambodia it was reported to migrate towards the river on, or immediately before, full moon. Below the Khone Falls, these lateral migrations are followed by a longitudinal migration within the mainstream. The purpose of this upstream migration is reportedly to find a deep pool where it can spend the dry season (Poulsen and Valbo-Jørgensen 2000).. Spawning: It mainly carries egg in May and June (Poulsen and Valbo-Jørgensen 2000); corresponding to a spawning period in May- July/August (Singanouvong et al. 1996); A 320 g female has been reported to have eggs (Baird and Phylavanh 1999). . Distribution: Found in the mainstream of the Mekong (Pantulu 1986) from Chiang Saen in to the Mekong Delta (Poulsen and Valbo-Jørgensen 2000). Feeding: Feeds on small fishes (Ukkatawewat 9999, Singanouvong et al. 1996, Baird and Phylavanh 1999), shrimps (Ukkatawewat 9999, Singanouvong et al. 1996), aquatic insect larvae (Ukkatawewat 9999) and leaves (Baird and Phylavanh 1999).
ECOLOGY - Migration type: Displays longitudinal as well as lateral migrations.
ECOLOGY - Feeds in floodplains (% respondents): 100
ECOLOGY - Status: Native
ECOLOGY - Habitat: Demersal
ECOLOGY - Resilience: No information
GUILD - Grey fish guild (% respondents): 100

Ompok bimaculatus (MNHN)

IDENTIFICATION - Family: **Siluridae** (Sheatfishes)
IDENTIFICATION - Species name: ***Ompok bimaculatus***
IDENTIFICATION - Author: Bloch, 1794
IDENTIFICATION - Name in Khmer: ត្រីតាអោន
IDENTIFICATION - Name in Khmer (roman): Ta aon
IDENTIFICATION - Name in English: Butter catfish
BIOLOGY - Max. total length (cm): 55
BIOLOGY - Max. standard length (cm): 45
BIOLOGY - Length at maturity (cm): 26.5
BIOLOGY - Food: Nekton mainly animals
BIOLOGY - Notes: A slow-moving and stealthy predator, (Rainboth 1996).
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Kottelat, 1985; Lim et al. 1999
ECOLOGY - All MFD information: Migration: A white fish species (Bardach 1959), which migrates upstream during the wet season; the purpose of the migration is mainly reproduction (Singanouvong et al. 1996). In the high-water season the fish enters freshly inundated areas small seasonal streams (Rainboth 1996, Baird and Phylavanh 1999); where it is often caught in large numbers (Singanouvong et al. 1996). Spawning: It probably spawns from May to October (Bardach 1959); Females (including a 39 g individual) with developed ovaries were found in May-June (Singanouvong et al. 1996), and in July (Baird and Phylavanh 1999); Eggs are yellow and measure 1.2-1.5 mm diameter (1038319). . Distribution: Larvae/juveniles have been recorded from the drift in both the Mekong and Bassac Rivers in An Giang (Nguyen et al. 2002). Feeding: It is mainly a carnivorous fish (Ref Krachangdara 1994) that feeds on crustaceans, fishes, molluscs (Rainboth 1996); earthworms, detritus (Baird and Phylavanh 1999), insects (Singanouvong et al. 1996), vegetable matter and fish (Pethiyagoda 1991).
ECOLOGY - Migration type: Displays longitudinal as well as lateral migrations.
ECOLOGY - Status: Native
ECOLOGY - Habitat: Demersal
ECOLOGY - Resilience: No information



Ompok eugeneiatus (MNHN)

DENTIFICATION - Family: **Siluridae** (Sheatfishes)
IDENTIFICATION - Species name: ***Ompok eugeneiatus***
IDENTIFICATION - Author: Vaillant, 1893
BIOLOGY - Max. total length (cm): 16.5
BIOLOGY - Length at maturity (cm): 10.9
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information

ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Lim et al. 1999
ECOLOGY - Migration type: No information on migration type
ECOLOGY - Status: Native
ECOLOGY - Habitat: Demersal
ECOLOGY - Resilience: No information

Ompok hypophthalmus (Baird, I.G.)

IDENTIFICATION - Family: **Siluridae** (Sheatfishes)
IDENTIFICATION - Species name: ***Ompok hypophthalmus***
IDENTIFICATION - Author: Bleeker, 1846
IDENTIFICATION - Name in Khmer: ត្រីតាអោន
IDENTIFICATION - Name in Khmer (roman): Ta aon
BIOLOGY - Max. total length (cm): 37
BIOLOGY - Max. standard length (cm): 30
BIOLOGY - Length at maturity (cm): 18.5
BIOLOGY - Food: Nekton mainly animals
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Thuok, N and L. Sina, 1997
ECOLOGY - Migration type: No information on migration type
ECOLOGY - Status: Native
ECOLOGY - Habitat: Demersal
ECOLOGY - Resilience: No information

No picture available
IDENTIFICATION - Family: **Siluridae** (Sheatfishes)
IDENTIFICATION - Species name: ***Ompok urbaini***
IDENTIFICATION - Author: Fang and Chaux, 1949
BIOLOGY - Max. total length (cm): 23
BIOLOGY - Max. standard length (cm): 18.1
BIOLOGY - Length at maturity (cm): 11.8
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Ng, 2003
ECOLOGY - Migration type: No information on migration type
ECOLOGY - Status: Native
ECOLOGY - Habitat: Demersal
ECOLOGY - Resilience: No information

Wallago attu (Rainboth W.)

IDENTIFICATION - Family: **Siluridae** (Sheatfishes)
IDENTIFICATION - Species name: ***Wallago attu***
IDENTIFICATION - Author: Bloch and Schneider, 1801

IDENTIFICATION - Name in Khmer: ត្រីសណ្តាយ
IDENTIFICATION - Name in Khmer (roman): Sanday
IDENTIFICATION - Name in English: Wallago
BIOLOGY - Max. total length (cm): 240
BIOLOGY - Length at maturity (cm): 116.1
BIOLOGY - Food: Nekton mainly animals
BIOLOGY - Notes: A nocturnally active (Rainboth 1996), large, voracious and predatory catfish (Pethiyagoda 1991).
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Reproductive guild: Guarders: Nesters
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Thuok, N and L. Sina, 1997
ECOLOGY - All MFD information: Migration: A white fish species (Bardach 1959), which migrates to smaller streams, canals and to the floodplain at some stage during the flood season. During the dry season it lives in deep pools. The migration seems to have the dual purpose of spawning and, especially at the time where smaller fishes are migrating, pursuing food (Poulsen and Valbo-Jørgensen 2000). Spawning: Eggs are reported to be present in the abdomen of the species from March to October, with most fishers reporting May-July (Poulsen and Valbo-Jørgensen 2000); and it spawns from May to October with peak activity from July to September (Bardach 1959). The spawning takes place in flooded areas where the eggs attach to the substrate and hatch within three days (Poulsen and Valbo-Jørgensen 2000). . Distribution: Found all over Cambodia with the exception of highland streams. Particularly common in large rivers and on the Lower Mekong floodplain (Rainboth 1996); Larvae/juveniles have been recorded from the drift in the Mekong River in An Giang (Nguyen et al. 2002). Feeding: Feeds on fishes (Rainboth 1996, Bardach 1959) and large crustaceans (Bardach 1959) and apparently occasionally on small branches and roots (Baird and Phylavanh 1999).
ECOLOGY - Migration type: Displays longitudinal as well as lateral migrations.
ECOLOGY - Status: Native
ECOLOGY - Habitat: Demersal
ECOLOGY - Resilience: No information

Wallago leerii (JJPhoto)

IDENTIFICATION - Family: **Siluridae** (Sheatfishes)
IDENTIFICATION - Species name: ***Wallago leerii***
IDENTIFICATION - Author: Bleeker, 1851
IDENTIFICATION - Name in Khmer: ត្រីស្នក់
IDENTIFICATION - Name in Khmer (roman): Stuok
BIOLOGY - Max. total length (cm): 220
BIOLOGY - Max. standard length (cm): 180
BIOLOGY - Length at maturity (cm): 90
BIOLOGY - Food: Nekton mainly animals
BIOLOGY - Notes: It is not as common as W. attu (Rainboth 1996).
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: Water level variation is a migration trigger
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Lim et al. 1999
ECOLOGY - All MFD information: Migration: Enters the flooded forest in high water and stays near the edge of the forest in low water (Roberts 1993); In Cambodia downstream migrations start in May and end in July. In Lao PDR and one in Thailand it was reported to migrate downstream in groups in October-November (Poulsen and Valbo-Jørgensen 2000). The schooling behaviour has also been observed outside the Mekong basin in the Kapuas River where it used to form large

migratory schools in the mainstream (Roberts 1989); It apparently migrates into smaller streams to spawn when the water level starts rising, especially after strong rain (Poulsen and Valbo-Jørgensen 2000). Spawning: Eggs in the abdomen of the fish have been observed from April to October, with the majority of observations between May and July; It was reported that it spawns in flooded grassland in July, it was further maintained that the species spawns at night, and that it breeds in deeper water than Wallago attu; During the spawning performance the fish swim in pairs, and the eggs are spawned near the surface (Poulsen and Valbo-Jørgensen 2000). . Distribution: Occurs from about 50 km from the river mouth in Viet Nam to the northernmost Chiang Saen, but is less common than Wallago attu (Poulsen and Valbo-Jørgensen 2000). Feeding: piscivorous (Rainboth 1996, Roberts 1993, Yap 1988).
ECOLOGY - Migration type: Displays longitudinal as well as lateral migrations.
ECOLOGY - Status: Native
ECOLOGY - Habitat: Demersal
ECOLOGY - Resilience: No information

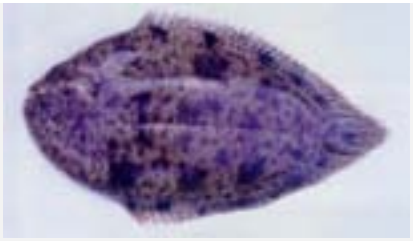

Glyptothorax lampris (CAFS)

IDENTIFICATION - Family: **Sisoridae** (Sisorid catfishes)
IDENTIFICATION - Species name: ***Glyptothorax lampris***
IDENTIFICATION - Author: Fowler, 1934
BIOLOGY - Max. total length (cm): 15
BIOLOGY - Max. standard length (cm): 12.1
BIOLOGY - Length at maturity (cm): 8.3
BIOLOGY - Food: Mainly animals
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Kottelat, 1985
ECOLOGY - All MFD information: Migration: 0. Spawning: 0 . Distribution: Found in running waters of the Mekong Basin (Pantulu 1986). Feeding: Its diet consists of aquatic insect larvae (Rainboth 1996).
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: No information


Achiroides leucorhynchos (Rainboth W.)

IDENTIFICATION - Family: **Soleidae** (Soles)
IDENTIFICATION - Species name: ***Achiroides leucorhynchos***
IDENTIFICATION - Author: Bleeker, 1851
IDENTIFICATION - Name in Khmer: ត្រីអណ្តាតឆ្កែ
IDENTIFICATION - Name in Khmer (roman): Andat chhkae
BIOLOGY - Max. standard length (cm): 8
BIOLOGY - Length at maturity (cm): 5.8
BIOLOGY - Food: Mainly animals
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information

ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Spawns in rivers (% respondents): 97.5
REPRODUCTION - Spawns in streams / inlets (% respondents): 2.5
REPRODUCTION - Date of spawning (% respondents): May 14.3%, Jun 57.1%, Jun-Jul 28.6%
REPRODUCTION - Nurses in floodplain (% respondents): 100
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: IFReDI identification
ECOLOGY - All MFD information: Migration: 0. Spawning: 0 . Distribution: 0. Feeding: Feeds primarily on benthic invertebrates (Rainboth 1996).
ECOLOGY - Feeds in floodplains (% respondents): 100
ECOLOGY - Status: Native
ECOLOGY - Habitat: Demersal
ECOLOGY - Resilience: No information
GUILD - White fish guild (% respondents): 100



Brachirus harmandi (Baird, I.G.)

IDENTIFICATION - Family: **Soleidae** (Soles)
IDENTIFICATION - Species name: ***Brachirus harmandi***
IDENTIFICATION - Author: Sauvage, 1878
IDENTIFICATION - Name in Khmer: ត្រីអណ្តាតឆ្កែ
IDENTIFICATION - Name in Khmer (roman): Andat chhkae
BIOLOGY - Max. total length (cm): 13
BIOLOGY - Max. standard length (cm): 10
BIOLOGY - Length at maturity (cm): 7
BIOLOGY - Food: zoobenthos mainly animals
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Spawns in rivers (% respondents): 97.5
REPRODUCTION - Spawns in streams / inlets (% respondents): 2.5
REPRODUCTION - Date of spawning (% respondents): May 14.3%, Jun 57.1%, Jun-Jul 28.6%
REPRODUCTION - Nurses in floodplain (% respondents): 100
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: MFD occurence map
ECOLOGY - All MFD information: Migration: 0. Spawning: 0 . Distribution: Reported from the Xe Bangfai Basin (Kottelat 1998); Larvae/juveniles recorded from the drift in both the Mekong and Bassac Rivers in An Giang (Nguyen et al. 2002). Feeding: Feeds primarily on benthic invertebrates (Rainboth 1996).
ECOLOGY - Feeds in floodplains (% respondents): 100
ECOLOGY - Status: Native
ECOLOGY - Habitat: Demersal
ECOLOGY - Resilience: High
GUILD - White fish guild (% respondents): 100

Brachirus orientalis (Randall, J.E.)

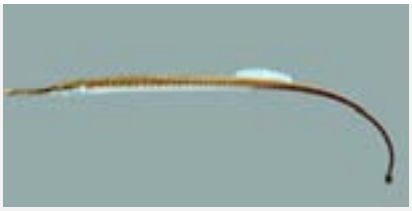
IDENTIFICATION - Family: **Soleidae** (Soles)
IDENTIFICATION - Species name: ***Brachirus orientalis***
IDENTIFICATION - Author: Bloch and Schneider, 1801
IDENTIFICATION - Name in Khmer: ត្រីអណ្តាតវែង
IDENTIFICATION - Name in Khmer (roman): Andat chhkae
IDENTIFICATION - Name in English: Oriental sole
BIOLOGY - Max. standard length (cm): 30
BIOLOGY - Length at maturity (cm): 18.5
BIOLOGY - Food: zoobenthos mainly animals
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Spawns in rivers (% respondents): 97.5
REPRODUCTION - Spawns in streams / inlets (% respondents): 2.5
REPRODUCTION - Date of spawning (% respondents): May 14.3%, Jun 57.1%, Jun-Jul 28.6%
REPRODUCTION - Nurses in floodplain (% respondents): 100
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: MFD occurence map
ECOLOGY - All MFD information: Migration: A white fish species (Bardach 1959). Spawning: 0 . Distribution: 0. Feeding: Feeds mainly on bottom-dwelling invertebrates, (Rainboth 1996, Günther 18683) especially small crustaceans (Günther 18683).
ECOLOGY - Feeds in floodplains (% respondents): 100
ECOLOGY - Status: Native
ECOLOGY - Habitat: Demersal
ECOLOGY - Resilience: Low
GUILD - White fish guild (% respondents): 100

Brachirus panoides (Department of Fisheries, Thailand)

IDENTIFICATION - Family: **Soleidae** (Soles)
IDENTIFICATION - Species name: ***Brachirus panoides***
IDENTIFICATION - Author: Bleeker, 1851
OLOGY - Max. total length (cm): 20
BIOLOGY - Length at maturity (cm): 12.9
BIOLOGY - Food: zoobenthos mainly animals
BIOLOGY - Notes: An euryhaline species (Kottelat 1989).
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: MFD occurence map
ECOLOGY - All MFD information: Migration: 0. Spawning: 0 . Distribution: The species is common just below the falls (Baird et al. 1999); Larvae/juveniles recorded from the drift in both the Mekong and Bassac Rivers in An Giang (Nguyen et al. 2002). Feeding: Feeds on benthic invertebrates (Rainboth 1996) and earthworms (Baird and Phylavanh 1999).
ECOLOGY - Status: Native
ECOLOGY - Habitat: Demersal
ECOLOGY - Resilience: Medium

Monopterus albus (CAFS)

IDENTIFICATION - Family: **Synbranchidae** (Swamp-eels)
IDENTIFICATION - Species name: ***Monopterus albus***
IDENTIFICATION - Author: Zuiew, 1793
IDENTIFICATION - Name in Khmer: ត្រីអន្ទង់
IDENTIFICATION - Name in Khmer (roman): Antong
IDENTIFICATION - Name in English: Swamp eel
BIOLOGY - Max. total length (cm): 122
BIOLOGY - Max. standard length (cm): 100
BIOLOGY - Length at maturity (cm): 52.2
BIOLOGY - Food: zoobenthos mainly animals
BIOLOGY - Notes: Can burrow up to 1.5 m down into the mud where it survives dry periods (Rainboth 1996, Davidson 1975).
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Reproductive guild: Guarders: Nesters
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Motomura et al. 2002
ECOLOGY - All MFD information: Migration: 0. Spawning: A bubble nest builder at the water surface near the shoreline during the rainy season (Rainboth 1996, Talwar and Jhingran 1992). . Distribution: Larvae/juveniles recorded from the drift in the Mekong River in An Giang (Nguyen et al. 2002). Feeding: Feeds on small animals (Krachangdara 1994), crustaceans, and molluscs (Rainboth 1996), and detritus (Talwar and Jhingran 1992, Krachangdara 1994).
ECOLOGY - Status: Native
ECOLOGY - Habitat: Demersal
ECOLOGY - Resilience: Medium



Doryichthys boaja (Chavalit Vidthayanon)

IDENTIFICATION - Family: **Syngnathidae** (Pipefishes and seahorses)
IDENTIFICATION - Species name: ***Doryichthys boaja***
IDENTIFICATION - Author: Bleeker, 1851
IDENTIFICATION - Name in English: Long-snouted pipefish
BIOLOGY - Max. total length (cm): 51
BIOLOGY - Max. standard length (cm): 41
BIOLOGY - Length at maturity (cm): 24.4
BIOLOGY - Food: Mainly animals
BIOLOGY - Notes: Moves about in bottom debris (Rainboth 1996).
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Kottelat, 1985; CNMC 1998, Scott and Crossman 1973
ECOLOGY - All MFD information: Migration: A white fish species (Bardach 1959). Spawning: 0 . Distribution: This species has been seen as far upstream as the Great Lake (Rainboth 1996). Feeding:

ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: Medium

Auriglobus nefastus (Chavalit Vidthayanon)

IDENTIFICATION - Family: T**etraodontidae** (Puffers)
IDENTIFICATION - Species name: ***Auriglobus nefastus***
IDENTIFICATION - Author: Roberts, 1982
IDENTIFICATION - Name in English: Greenbottle pufferfish
BIOLOGY - Max. total length (cm): 16
BIOLOGY - Max. standard length (cm): 13
BIOLOGY - Length at maturity (cm): 8.8
BIOLOGY - Food: Mainly animals
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Kottelat, 1985
ECOLOGY - All MFD information: Migration: 0. Spawning: 0 . Distribution: Found in flowing waters of rivers and streams in the Middle and Lower Mekong Basin (Rainboth 1996). Feeding: Feeds on fish scales and fins (Rainboth 1996).
ECOLOGY - Status: Native
ECOLOGY - Habitat: Demersal
ECOLOGY - Resilience: High

Carinotetraodon lorteti (Chavalit Vidthayanon)

IDENTIFICATION - Family: **Tetraodontidae** (Puffers)
IDENTIFICATION - Species name: ***Carinotetraodon lorteti***
IDENTIFICATION - Author: Tirant, 1885
IDENTIFICATION - Name in English: Redeye puffer
BIOLOGY - Max. total length (cm): 8
BIOLOGY - Max. standard length (cm): 6
BIOLOGY - Length at maturity (cm): 4.5
BIOLOGY - Food: Mainly animals
BIOLOGY - Notes: Said to be able to change colours depending on the surroundings (Rainboth 1996).
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Kottelat, 1985
ECOLOGY - All MFD information: Migration: 0. Spawning: 0 . Distribution: 0. Feeding: Feeds on molluscs, crustaceans, and other invertebrates and zooplankton (Rainboth 1996).
ECOLOGY - Status: Native
ECOLOGY - Habitat: Benthopelagic
ECOLOGY - Resilience: High

Tetraodon cochinchinensis (www.exomarc.com)

IDENTIFICATION - Family: **Tetraodontidae** (Puffers)
IDENTIFICATION - Species name: ***Tetraodon cochinchinensis***
IDENTIFICATION - Author: Steindachner, 1866
BIOLOGY - Max. total length (cm): 9
BIOLOGY - Max. standard length (cm): 7
BIOLOGY - Length at maturity (cm): 5.1
BIOLOGY - Notes: Known to be a quarrelsome and aggressive fish (Rainboth 1996).
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Motomura, Tsukawaki and Kamiya, 2002
ECOLOGY - All MFD information: Migration: A white fish species (Bardach 1959). Spawning: 0 . Distribution: Occurs in the Lower Mekong as far upstream as the Great Lake (Rainboth 1996). Feeding: Feeds on fish (Bardach 1959), large crustaceans (Bardach 1959, Rainboth 1996), molluscs, and other invertebrates as well as some plant matter (Rainboth 1996); Small individuals feed on planktonic crustaceans (Bardach 1959).
ECOLOGY - Status: Native
ECOLOGY - Habitat: Demersal
ECOLOGY - Resilience: High

Tetraodon fluviatilis (Randall, J.E.)

IDENTIFICATION - Family: **Tetraodontidae** (Puffers)
IDENTIFICATION - Species name: ***Tetraodon fluviatilis***
IDENTIFICATION - Author: Hamilton, 1822
IDENTIFICATION - Name in English: Green pufferfish
BIOLOGY - Max. total length (cm): 17
BIOLOGY - Length at maturity (cm): 11.2
BIOLOGY - Food: zoobenthos mainly animals
BIOLOGY - Notes: Adults are pugnacious and aggressive against other fishes (Rainboth 1996).
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Lim et al. 1999
ECOLOGY - All MFD information: Migration: 0. Spawning: 0 . Distribution: Found in the Mekong Delta and may occur in Cambodia (Rainboth 1996). Feeding: Feeds on molluscs, crustaceans, and other invertebrates as well as vascular plants and detritus. May occasionally eat fish scales or fins (Rainboth 1996).
ECOLOGY - Status: Native
ECOLOGY - Habitat: Demersal
ECOLOGY - Resilience: High

Tetraodon leiurus (Baird, I.G.)

IDENTIFICATION - Family: **Tetraodontidae** (Puffers)
IDENTIFICATION - Species name: ***Tetraodon leiurus***
IDENTIFICATION - Author: Bleeker, 1851
BIOLOGY - Max. total length (cm): 19
BIOLOGY - Max. standard length (cm): 16
BIOLOGY - Length at maturity (cm): 10.6
BIOLOGY - Food: plants/detritus+animals
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Rainboth, 1996;
ECOLOGY - All MFD information: Migration: 0. Spawning: 0 . Distribution: Mekong Basin in Laos, Thailand and Cambodia (Kottelat 2001). Feeding: Feeds on molluscs, crustaceans and other invertebrates as well as some plant matter and detritus (Rainboth 1996).
ECOLOGY - Status: Native
ECOLOGY - Habitat: Demersal
ECOLOGY - Resilience: High

Tetraodon nigroviridis (Liu, K.H.)

IDENTIFICATION - Family: **Tetraodontidae** (Puffers)
IDENTIFICATION - Species name: **Tetraodon nigroviridis**
IDENTIFICATION - Author: Marion de Procé, 1822
IDENTIFICATION - Name in English: Spotted green pufferfish
BIOLOGY - Max. total length (cm): 17
BIOLOGY - Length at maturity (cm): 11.2
BIOLOGY - Food: zoobenthos mainly animals
BIOLOGY - Notes: Aggressive with other fishes (Rainboth 1996).
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Lim et al. 1999
ECOLOGY - All MFD information: Migration: 0. Spawning: 0 . Distribution: 0. Feeding: Feeds on molluscs, crustaceans, and other invertebrates, as well as some plant matter. May eat fish scales and fins (Rainboth 1996).
ECOLOGY - Status: Native
ECOLOGY - Habitat: Demersal
ECOLOGY - Resilience: High

Toxotes chatareus (Aland, G.)

IDENTIFICATION - Family: **Toxotidae** (Archerfishes)
IDENTIFICATION - Species name: ***Toxotes chatareus***
IDENTIFICATION - Author: Hamilton, 1822
IDENTIFICATION - Name in Khmer: ត្រីកញ្ចាក់ស្លា
IDENTIFICATION - Name in Khmer (roman): Kanhchak slar/Khla
IDENTIFICATION - Name in English: Largescale archerfish
BIOLOGY - Max. total length (cm): 49
BIOLOGY - Max. standard length (cm): 40
BIOLOGY - Length at maturity (cm): 22.9
BIOLOGY - Food: Nekton mainly animals
BIOLOGY - Notes: Feeds at the surface during the day. Renowned for their habit of spitting to dislodge their insect prey from tree branches above the water; maximum shooting range is about 150 cm (Allen 1991).
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information
ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Kottelat, 1985
ECOLOGY - All MFD information: Migration: A white fish species (Bardach 1959). Spawning: Breeds in both fresh and brackish water (Allen 1991); It lays 20,000 to 150,000 eggs, measuring about 0.4 mm in diameter (Pethiyagoda 1991). . Distribution: Found from the estuary up to Thailand and Laos (Rainboth 1996). Feeding: Diet consists of terrestrial insects (Rainboth 1996, Bardach 1959, Allen 1991), aquatic insect larvae (Bardach 1959, Rainboth 1996); zooplankton, rotifers, cladocerans (Rainboth 1996), vegetable matter (Allen 1991), and fish (Salini et al Scott and Crossman 1973).
ECOLOGY - Status: Native
ECOLOGY - Habitat: pelagic
ECOLOGY - Resilience: Medium

Toxotes microlepis (Baird, I.G.)

IDENTIFICATION - Family: **Toxotidae** (Archerfishes)
IDENTIFICATION - Species name: ***Toxotes microlepis***
IDENTIFICATION - Author: Günther, 1860
IDENTIFICATION - Name in Khmer: ត្រីកញ្ចាក់ស្លា
IDENTIFICATION - Name in Khmer (roman): Kanhchak slar / Khla
IDENTIFICATION - Name in English: Smallscale archerfish
BIOLOGY - Max. total length (cm): 19
BIOLOGY - Max. standard length (cm): 15
BIOLOGY - Length at maturity (cm): 10
BIOLOGY - Food: zoobenthos mainly animals
BIOLOGY - Notes: Because this fish likes to stay under overhanging branches, it is certainly reliant on flooded and riparian forests for habitat (Baird and Phylavanh 1999).
ECOLOGY vs. HYDROLOGY - Discharge as migration trigger: no information

ECOLOGY vs. HYDROLOGY - Water level as migration trigger: no information
REPRODUCTION - Breeds in reservoirs: No info on breeding in reservoirs
ECOLOGY - Tonle Sap distribution: Lim et al. 1999
ECOLOGY - All MFD information: Migration: A white fish species (Bardach 1959). Spawning: 0 . Distribution: Occurs well upstream from the estuary (Rainboth 1996) and has been recorded from the Xe Bangfai Basin (Kottelat 1998). Feeding: Diet consists of terrestrial insects (Rainboth 1996, Baird and Phylavanh 1999), zooplankton, crustaceans, and aquatic insect larvae (Rainboth 1996), and pulverised wood (Baird and Phylavanh 1999).
ECOLOGY - Status: Native
ECOLOGY - Habitat: pelagic
ECOLOGY - Resilience: High

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