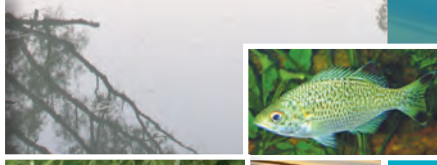


Freshwater Fishes

OF THE BURDEKIN DRY TROPICS



CARING
FOR
OUR
COUNTRY



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Freshwater Fishes

OF THE BURDEKIN DRY TROPICS



CARING
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OUR
COUNTRY



Jason Carter and Jim Tait

Foreword

Australians love their fish and for Queenslanders, spending time fishing in local creeks and rivers is part of our lifestyle.

Iconic fish like Barramundi and Mangrove Jack are part of our landscape and our culture. These and many other freshwater fish species are found in the Burdekin Dry Tropics natural resource management region and play an important role in our commercial and recreational fishing industries and in the ecology of our rivers and wetlands.

Since European settlement, however, changing land use has altered the way our rivers and wetlands function, threatening our fish populations.

NQ Dry Tropics is currently working with state and local government agencies, authorities, private industry and individuals to tackle some of these issues. Past and current projects have been successful in restoring wetlands and creeks and enabling fish to move more freely, but there is still a lot more to be done.

By better understanding our native fish and the threats they face, we can all do our part to help protect and restore local fish populations.

Whether you enjoy fishing, have an interest in our native wildlife, or are concerned about the environment, this book provides an introduction to local freshwater fishes, the threats they face, and the ways we can all help ensure their long-term survival.

Jason Carter



Freshwater fishing tip

How do I measure a fish?

Correct measurement of a fish is from the tip of the snout to the end of the tail. If you catch undersized or unwanted native fish, return it to the water immediately, taking care to avoid causing injury.



Burdekin Dry Tropics Natural Resource Management Region



Freshwater fishing tip

What is a bag limit?

A bag limit refers to the total number of fish an individual has in their possession at any one time including previously caught fish that are at home in the freezer.

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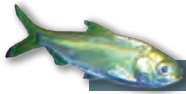
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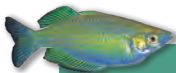
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What to look for when identifying a fish

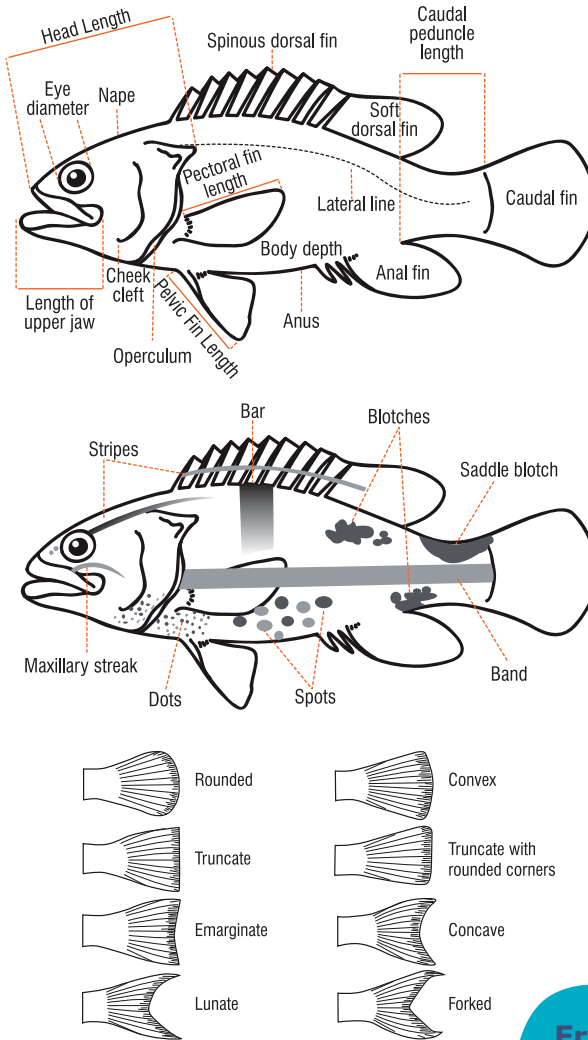


Illustration by Paul Lennon, courtesy of Department of Employment, Economic Development & Innovation (DEEDI)

Freshwater fishing tip

How do I set fishing lines in fresh water?

A person must not set more than six fishing lines or be more than 200 metres from those lines. Only one hook, artificial fly or lure can be attached to a fishing line.

Sharing our world with freshwater fishes



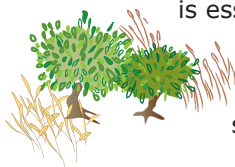
Freshwater fishing tip

Can I use a net?

Cast or bait nets cannot be used in fresh water. Landing, scoop or dip nets can be used for fish retrieval.

Human activities on land can be harmful to fish, hindering their journey to and from important breeding sites and decreasing fish populations. Looking after waterways and adopting fish friendly practices helps ensure healthy populations.

Australia is a dry continent, yet it is home to more than 230 species of freshwater fishes. Nearly one-third of these species are found in the Burdekin Dry Tropics natural resource management region with some living only in a single river system.



Despite this treasure trove of diversity, our fragile fish populations are under threat. Freshwater fish numbers have decreased dramatically over the last century and are continuing to decline. We can all take action to help protect our native fish and ensure they remain for future generations to enjoy.

Threats to freshwater fishes

Loss of habitat

In the coastal areas of the north Queensland's dry tropics, waterways are often modified to provide irrigation or relocated to accommodate development. This destroys natural habitats and changes flow patterns of the creek or stream, harming native fish.

What we can do: Leave creek and river beds as you find them – don't remove trees and logs. Contact your local council and state representative and ask for important fish habitat like wetlands and creeks to be protected.



Removal of creek-side vegetation

Creek-side (riparian) vegetation is essential for healthy streams.

Native trees and plants protect creek banks from erosion and provide essential shade and shelter.

What we can do: Don't remove creek-side vegetation, manage cattle access to creeks, control feral animals, remove weeds along creek and river banks and re-vegetate banks by planting native trees, shrubs and groundcovers.

Weeds

Infestations of aquatic weeds such as water hyacinth, salvinia and hymenachne can remove oxygen from waterways causing fish to suffocate. The weeds can also act as barriers to fish movement.



What we can do: Fill your garden with native plants (many of Australia's worst weeds started in gardens) and reduce your use of fertilizers that promotes weed growth in our creeks and rivers. You can also volunteer with your local wetlands group to help remove weeds along creeks and rivers.

Manmade fish barriers (weirs and road crossings)

Many of our native freshwater fishes need to move in order to breed and survive. Structures like dams, weirs, causeways and road culverts can act

like roadblocks, preventing fishes from moving upstream. Our native fishes can't jump well so even a small (20cm) drop over a causeway can stop fishes moving upstream.

What we can do: Build fish passages to help fish move through and around existing barriers. Ensure all new road crossing are fish friendly. Report sightings of fish trapped below culverts or causeways.

Poor water quality

The pollutants in agricultural and urban runoff can harm native freshwater fish. Polluted water often has less oxygen than our native freshwater fish need. Soils can be washed off land that has been heavily cleared, overgrazed, developed, or places where animals access creeks. Some domestic, industrial, and agricultural chemicals in run-off can be lethal to fish.

What we can do: Use fewer chemicals, maintain ground cover on all land, and manage animal access to creeks. Silt traps can also be used during road construction and development.

Rubbish

Rubbish left on the ground can make its way into creeks and rivers harming our native fishes. Old fishing line, nets, plastics and chemical hazards like cigarette butts are particularly problematic.

What we can do: Dispose properly of all rubbish, recycle, compost where possible and never leave rubbish behind when fishing.

Invasive pest species

There are many pest (non-native) species in the dry tropics region. Many of these eat native fishes or compete with them for food. Once introduced to our waterways, invasive fishes are almost impossible to eradicate. There are more invasive fishes in Townsville's Ross River than nearly anywhere else in Australia. Most of these are the result of deliberate releases of unwanted aquarium fishes.



What we can do: Don't get rid of unwanted aquarium fishes by releasing them into rivers or drains. Take them to your local pet shop or destroy them humanely. If you do catch a non-native fish, destroy it on site. Never transport pests to other locations as some fish (like Tilapia) can carry live young in their mouths even after the adult is dead. Report exotic species or unlawful activities to Queensland Fisheries 24-hour Fishwatch hotline on 1800 017 116.

Know your fish, love your fish

This booklet will help you identify native and pest freshwater fishes of the dry tropics region.



When using this booklet, remember that:

- Colouration of fish can vary dramatically depending on factors such as age, sex, location and season;
- Some species, such as the River Whaler Shark, are primarily marine species but are included here as they are often found in fresh water.





Catfishes

Eel-tailed Catfishes
Family Plotosidae

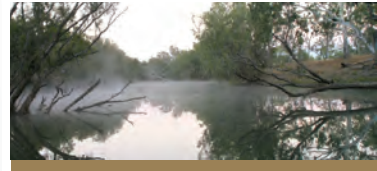
Fork-tailed Catfishes
Family Ariidae

Eel-tailed Catfishes have broad, flattish heads and four pairs of 'whiskers' (also known as barbels) around their mouth. Their dorsal fin, tail (caudal) fin and anal fin are joined, giving their body an eel-like appearance. The Eel-tailed Catfishes have spines capable of inflicting an extremely painful injury.

The Lesser Salmon Catfish, *Arius graffei*, is the only species of Fork-tailed Catfishes to inhabit the Burdekin Dry Tropics NRM region. They have three pairs of 'whiskers', a forked tail, and fins that are separate rather than joined. Fork-tailed Catfishes have stouter bodies than the Eel-tailed Catfish but, like them, have sharp spines that can cause a painful wound.







Black Catfish *Neosilurus ater*

Also called:

Butter Jew, Narrow-fronted Tandan

Appearance:

Grey to blackish overall, often mottled. Both males and females sometimes have golden orange colouration on sides during breeding season (January–March). Snouts slightly more elongated than those of other species of catfish. Spines near gills and on backs can inflict painful wounds.



Characteristics:

Have been observed to make upstream breeding migrations to tributary streams and riffle bed spawning sites during wet season flows. Lay eggs near bottom of waterway; eggs settle in crevices on the river- or stream-bed. Mostly solitary. Primarily carnivorous.

Distribution:

Recorded in the Burdekin and Haughton River systems and within the Ross River, Barratta and Plantation Creeks. Likely to be present within the Black and Elliot Rivers, and Saltwater (Home Hill) and Molong Creek.



Maximum length: 47 cm

Common length: 25 cm

Status: Regulated

Size limit: Minimum 35 cm

Bag Limit: Combined limit of 5 for the Black Catfish, Hyrtl's Tandan, Soft-spined Catfish and Eel-tailed Catfish

Conservation status: None

Habitat requirement: Movement through fresh water systems required to complete lifecycle

Threats: Manmade barriers

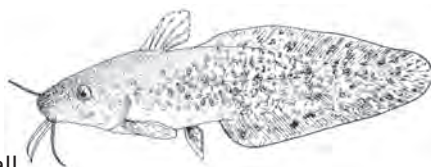


Eel-tailed Catfish *Tandanus tandanus*

Also called:
Freshwater Catfish

Appearance:

Colour varies and ranges from grey, brown, reddish-brown, purplish to olive-green overall, whitish underneath. Often mottled in appearance; specimens less than 30 cm in size mottled all over, including fins. Dorsal fin located near middle of body.



Characteristics:

This species is not native to this region and is usually solitary. Prefers lakes and ponds rather than streams. Build nests in the spring breeding season when water temperatures reach 20°C. Live, breed and feed at or near bottom of waterbody. They can reach up to 22 years of age.

Distribution:

Recorded in the Burdekin River (upper only) where they were introduced (Valley of Lagoons). Elsewhere in Australia they are found in coastal streams along the Queensland east coast, from the New South Wales border to north of Cairns, and throughout the Murray-Darling River system.



Maximum length: 90 cm

Common length: 50 cm

Status: Regulated

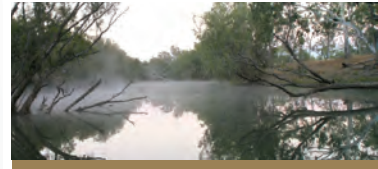
Size limit: Minimum 35 cm

Bag Limit: Combined limit of 5 for the Black Catfish, Hyrtl's Tandan, Soft-spined Catfish and Eel-tailed Catfish

Conservation status: None
Queensland species introduced to the Burdekin Dry Tropics NRM region. Numbers have been greatly reduced in sections of the Murray Darling Basin - probably primarily due to carp infestation.

Habitat requirement: Movement through fresh water systems required to complete lifecycle

Threats: Invasive species



Fork-tailed catfish *Arius graffei*

Also called:

Lesser Salmon Catfish (estuarine populations);
Blue Catfish.

Appearance:

Dusky grey overall, sometimes with a bluish tinge. White underneath. Three pairs of barbels (whiskers), two separate dorsal fins and forked tail.



Based on an original by Roger Swainston

Characteristics:

Can live in estuaries and coastal marine waters, as well as fresh water rivers and lagoons; need access to both environments to complete life cycle. Males incubate eggs in their mouth. Juveniles tend to form large shoals.

Distribution:

Recorded in the Houghton River system and Saltwater Creek (Home Hill). Fresh water populations also recorded within the lower Burdekin, Bowen, Broken and Bogie Rivers.



Maximum length: 60 cm

Common length: 30 cm

Status: Regulated

Size limit: minimum 35 cm

Bag Limit: 20

Conservation status: None (currently secure in the Burdekin Dry Tropics NRM region but populations have declined in NSW)

Habitat requirement: Needs to move between fresh water and sea, but not to breed

Threats:

- Loss of habitat (degradation of floodplain habitat)
- Removal of creek side vegetation
- Poor water quality
- Manmade barriers



Hyrtl's Tandan *Neosilurus hyrtlii*

Appearance:

Dark brown to pale silvery-grey overall with whitish underside and dark brown to yellowish fins. They also have rounder snouts and shorter whiskers than other catfishes. Those living in murky water tend to be paler in colour.



Characteristics:

Have been observed to make upstream breeding migrations to tributary streams and riffle bed spawning sites during wet season flows. Form shoals. Primarily carnivorous.

Distribution:

Recorded in the Burdekin, Haughton, Black and Ross River systems. Recorded in the Don River and believed to occur throughout the Don River system.



Maximum length: 34 cm

Common length: 20 cm

Status: Regulated

Size limit: Minimum 35 cm

Bag Limit: Combined limit of 5 for the Black Catfish, Hyrtl's Tandan, Soft-spined Catfish and Eel-tailed Catfish

Conservation status: None

Habitat requirement: Movement through fresh water systems required to complete lifecycle

Threats: Manmade barriers



Rendahl's Catfish *Porochilus rendahli*

Also called:
Rendahl's Tandan

Appearance:
Uniform or mottled grey to pale yellowish-brown. Slightly concave head and smallish dorsal fin. Eyes closer to mouth than in other species of Catfishes.



Characteristics:
Migrate to flooded lowland lagoons and swamps to spawn, usually at the onset of wet season rains. Feed on small items such as insect larvae and microcrustaceans. Prefer slow-moving water and often found amongst thick vegetation. Can form large shoals. Swim, lay their eggs, and feed at bottom of waterbody. Current knowledge and understanding of this species is limited.

Distribution:
Recorded in the Burdekin River system. Known to occur in the Ross and Haughton Rivers, and in Saltwater Creek (Home Hill).



Maximum length: 24 cm
Common length: 15 cm
Status: Regulated
Size limit: None
Bag Limit: 20

Conservation status: None
Habitat requirement: Movement through fresh water systems required to complete lifecycle
Threats: • Manmade barriers



Soft-spined Catfish *Neosilurus mollespiculum*

Also called:

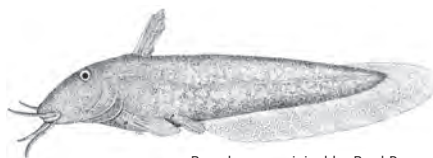
False-spined Catfish

Appearance:

Dark grey to yellowish grey-brown.

Young usually darker than adults.

Spines on back and near gills are less rigid than those of other species of catfishes.



Based on an original by Brad Pusey

Characteristics:

Feeds on both plants and animals. Their diet includes insects, crustaceans and algae. Restricted and patchy location affords a high conservation value as this species is not known to exist anywhere else in the world. Current knowledge and understanding of this species is limited.

Distribution:

Recorded in the Burdekin River system, including the Burdekin, Belyando, Bowen and Fanning Rivers, and Keelbottom and Fletcher Creeks. It is also expected to occur in Running River.



Maximum length: 41 cm

Common length: 15–20 cm

Status: Threatened

Size limit: Minimum 35 cm

Bag Limit: Combined limit of 5 for the Black Catfish, Hyrtl's Tandan, Soft-spined Catfish and Eel-tailed Catfish

Conservation status: High

Habitat requirement: Movement through fresh water systems required to complete lifecycle

Threats: Manmade barriers



Cichlids

Family Cichlidae

Cichlids originated in the warm fresh water environments of Africa and South America. All species found in Australia have been introduced – largely by way of release of captive stock, as Cichlids are popular aquarium fish. While differing greatly in size and colour, they all have a large head, large tail, and long dorsal, post-anal and pectoral fins. Many Cichlids brood their eggs in their mouths until they are quite well developed. Of the twelve species of Cichlids currently found in Queensland, ten are found in the Burdekin Dry Tropics NRM region.

Cichlids pose a significant threat to native species as they are able to out-compete them for food and habitat. Cichlids can tolerate a wide range of water quality conditions and thrive in disturbed environments. They are territorial and aggressive, especially during the breeding season. This can result in native species being unable to access breeding sites where there are exotic fish present, preventing them from reproducing.

One species of Cichlid, the Mozambique Mouthbrooder (Tilapia), is a declared noxious species. It is illegal to buy, sell or possess them, and a serious offence to release them into waterways. If you catch any they must be killed immediately and disposed of away from the water.

Many of the Cichlid species found in the Burdekin Dry Tropics NRM region are found only in the Ross River or Didgeridoo Lagoon and are not yet widespread. It is important that their populations do not expand, please report sightings to staff of the Department of Employment, Economic Development and Innovation on 13 25 23.



If you have an aquarium fish you no longer want, DO NOT release into a waterway; kill it humanely or take it back to the pet shop!





Banded Cichlid *Heros severus*

Appearance:

Generally olive green in colour with seven or eight faint vertical black bands on body.

Characteristics:

Prefer fresh water streams or brackish water. Up to 200 eggs deposited onto stones or roots and defended by both parents. Larvae taken into mouth. Parental care lasts up to six weeks.

Distribution:

Recorded in the Ross River system, though breeding has not been confirmed.



Maximum length: 20 cm

Common length: Not known

Status: Pest

Size limit: None

Bag Limit: None

Conservation status: None

Habitat requirement: Can complete life cycle in one water body

Threats: None



Blue Eye Cichlid *Archocentrus spilurus*

Appearance:

Bright blue eye. Body ranges from bluish purple to orange brown to dark grey. Usually, dark vertical stripes. Males develop a nuchal hump (large fleshy lump of tissue just behind head).

Characteristics:

Native to South America. In Australia they inhabit lakes and rivers, preferring shallows and bank areas. Found over sand, mud and rock bottoms, preferring areas of slower-moving water. Eggs laid in depressions in sand and guarded by parents.

Distribution:

Recorded in the Barratta Creek and Didgeridoo Lagoon, though breeding has not been confirmed.



Maximum length: Males 12cm and females 8 cm

Common length: Not known

Status: Pest

Size limit: None

Bag Limit: None

Conservation status: None

Habitat requirement: Can complete life cycle in one water body

Threats: None



Burton's Mouthbreeder *Haplochromis burtoni*

Appearance:

Reproductive males are brightly coloured greyish to near-luminescent blue or yellow. Orange-red patch above pectoral fin. Females sandy grey-green.

Characteristics:

Prefer vegetated, shallow margins and temporary shore pools and lagoons which provide suitable sites for reproduction and protection from predators. Males establish courtship display territories.

Distribution:

Recorded in Ross River.



Maximum length: Not known

Common length: 12–15 cm

Status: Pest

Size limit: None

Bag Limit: None

Conservation status: None

Habitat requirement: Movement through fresh water systems required to complete lifecycle

Threats: None



Convict Cichlid *Archocentrus nigrofasciatus*

Appearance:

Blue-grey body. Eight to nine distinct vertical black bands.

Characteristics:

Inhabit flowing water from small creeks and streams to the shallows of large and fast-flowing rivers. Prefer warm, rocky habitats and find sanctuary in rocks, cracks, crevices or among roots and debris. Eggs laid on cleaned surfaces of rocks. Parents incubate eggs and guard fry.

Distribution:

Recorded in the Ross River, though breeding has not been confirmed.



Maximum length: 10 cm
Common length: Not known
Status: Pest
Size limit: None
Bag Limit: None

Conservation status: None
Habitat requirement: Can complete life cycle in one water body
Threats: None



Firemouth Cichlid *Thorichthys meeki*

Appearance:

Variable colour. Bright red to brick red throat.

Characteristics:

Popular aquarium fish. Prefer lower and middle sections of rivers in slow-moving waters, mud, sand-bottomed canals and rocky ponds. Eggs deposited onto stones and wood. Eggs and juveniles guarded by both parents.

Distribution:

Recorded in the Ross River, though breeding has not been confirmed. This species is non-migratory.



Maximum length: 17 cm
Common length: Not known
Status: Pest
Size limit: None
Bag Limit: None

Conservation Status: None
Habitat requirement: Can complete life cycle in one water body
Threats: None



Green Terror *Aequidens rivulatus*

Appearance:

Distinctive iridescent stripes on cheeks. Noticeable forehead. Golden and reddish edges to fins.

Characteristics:

Territorially aggressive like most Cichlids. Both parents guard the eggs and larvae with males exhibiting most of the aggressive behaviour in defending the territory and females caring for the eggs and larvae. Eggs deposited onto hard surfaces on the bottom. Popular aquarium fish.

Distribution:

Recorded in Ross River.



Maximum length: 27 cm

Common length: Not known

Status: Pest

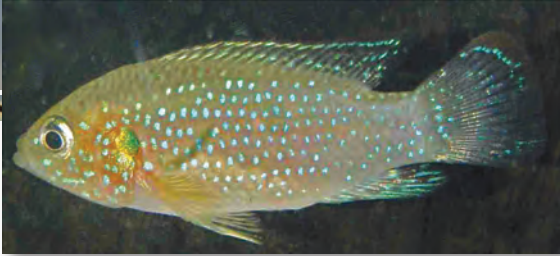
Size limit: None

Bag Limit: None

Conservation status: None

Habitat requirement: Movement through fresh water systems required to complete lifecycle

Threats: None



Jewel Cichlid *Hemichromis lifalili*

Appearance:

Bright red-pink body. Females darker red changing to light pink or yellow-green when sexually active. Pattern of iridescent blue spots on head, body and vertical fins. Large black spot on gill cover and side of body.

Characteristics:

Commonly inhabit slow streams, river mouths and shallow lakes near rivers thus avoiding fast-flowing waterways. Spawn on average 300 eggs that hatch two days later; young kept inside parents mouth for the first few days of life (mouthbrooder). Young free-swimming approximately five days after hatching. Notably aggressive for size. Assume large territorial area and feeds on plants and animals.

Distribution:

Recorded in Ross River, though breeding has not been confirmed. This species is non-migratory.



Maximum length: 15 cm
Common length: Not known
Status: Pest
Size limit: None
Bag Limit: None

Conservation status: None
Habitat requirement: Can complete life cycle in one water body
Threats: None



Oscar *Astronotus ocellatus*

Also called:

Tiger Oscar, Velvet Cichlid or Marble Cichlid

Appearance:

Blunt head and large mouth. Body and fins of adults usually very dark, with olive blue-green and mustard markings highlighting large dark blotches. Change colour during aggressive interactions. Some with orange or red markings and red eye colour.

Characteristics:

Inhabit floodplains and swamps of slow-moving rivers. Usually found among woody debris. Eggs attached to cleaned flat rock or woody debris or in a shallow pit excavated in gravel. Both parents guard eggs and larvae.

Distribution:

Recorded in Ross River.



Maximum length: 45 cm

Common length: 20–28 cm

Status: Pest

Size limit: None

Bag Limit: None

Conservation status: None

Habitat requirement: Movement through fresh water systems required to complete lifecycle

Threats: None



Pearl Cichlid *Geophagus brasiliensis*

Appearance:

Silvery white through to almost purple. Usually one dark spot on their body and often their fins are tipped with black.

Characteristics:

Tolerant of a wide range of water conditions and commonly found in fresh water systems as well as brackish areas. Territorial; both parents will defend their eggs and fry aggressively.

Distribution:

Recorded in Ross River, Didgeridoo Lagoon and Barratta Creek, though breeding has not been confirmed.



Maximum length: 28 cm
 Common length: Not known
 Status: Pest
 Size limit: None
 Bag Limit: None

Conservation Status: None
 Habitat requirement: Can complete life cycle in one water body
 Threats: None



Red Devil *Amphilophus citrinellum*

Appearance:

Mostly bright orange to red. Males have distinctive hump on forehead.

Characteristics:

Inhabit slow-flowing lakes. Aggressive and territorial, especially during spawning and nest guarding. Deposit eggs on rocks or logs, usually on ceiling of natural 'caves'. Both parents guard eggs for several weeks.

Distribution:

Recorded in Ross River.



Maximum length: 24 cm
 Common length: Not known
 Status: Pest
 Size limit: None
 Bag Limit: None

Conservation status: None
 Habitat requirement: Movement through fresh water systems required to complete lifecycle
 Threats: None



Tilapia (two species found in Queensland)

Mozambique Mouthbrooder *Oreochromis mossambicus*

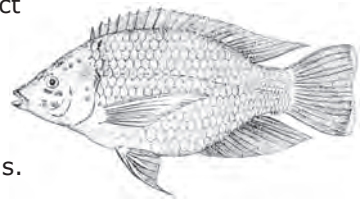
Black Mangrove Cichlid *Tilapia mariae*

Appearance:

Pale olive to silver-grey bodies. Two to five indistinct dark blotches on side. Black spot at the rear of the dorsal fin of juveniles.

Characteristics:

Both Tilapia can tolerate a wide range of temperatures, salinities and dissolved oxygen levels. Black Mangrove Cichlids are less tolerant of cooler temperatures, so have not expanded this far south. Adults move to floodplain habitats during periods of high water level. Young actively disperse to new habitats. Can reach up to 13 years of age. Highly invasive and dominate many aquatic habitats. Able to out-compete most native fish species due to high tolerance of poor water quality, ability to produce large numbers of young in a single year and aggressive temperament.



Distribution:

Recorded in the Ross, Black and upper Burdekin River systems, as well as other coastal creeks (Bluewater, Deep, Alligator, Sleeper Log and Christmas Creeks). Black Mangrove Cichlid has not been recorded in the Burdekin Dry Tropics NRM region.



Maximum length: 50 cm

Common length: Not known

Status: Pest

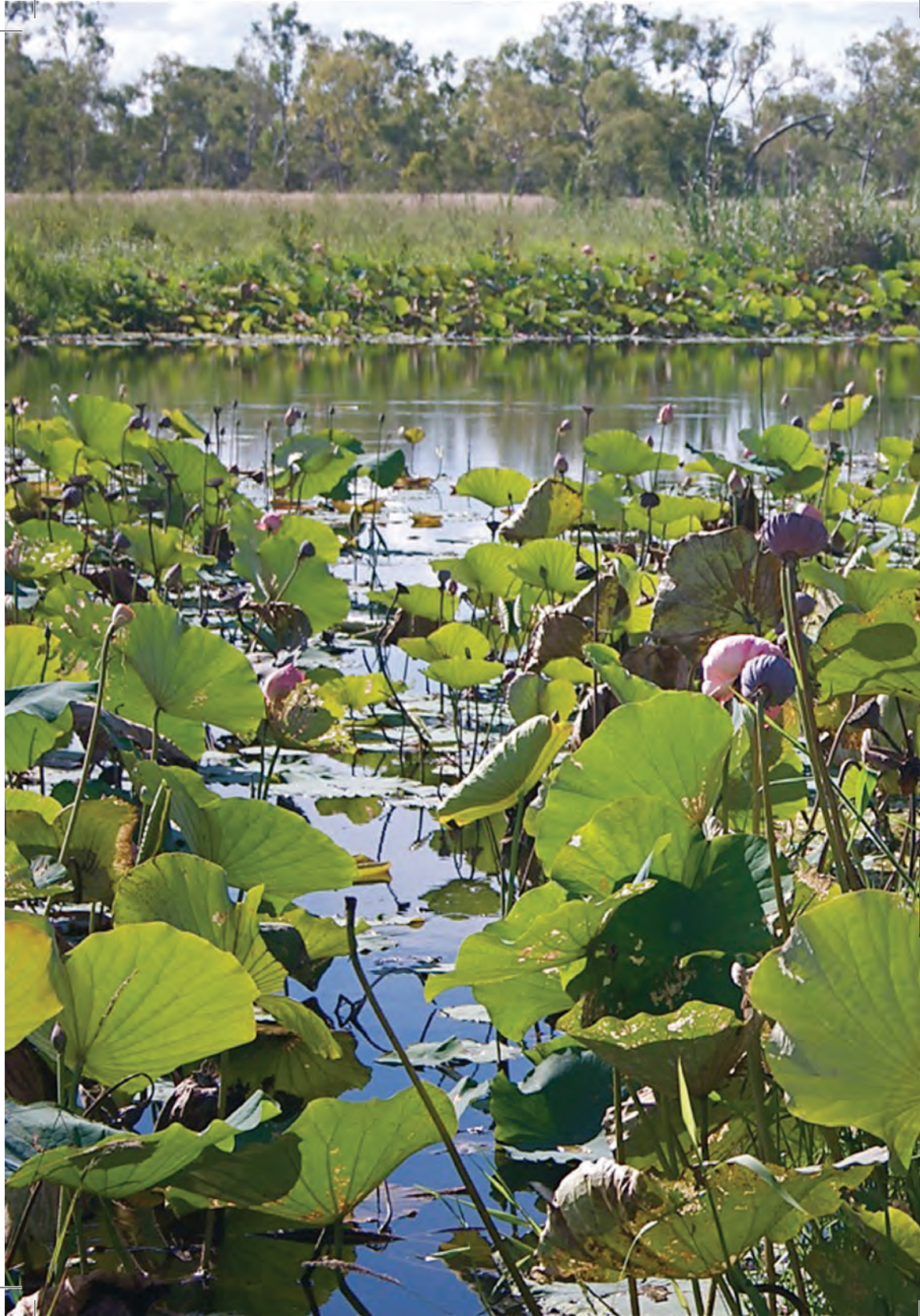
Size limit: None

Bag Limit: None

Conservation status: Declared a noxious species in Queensland under the Fisheries act 1994 It is illegal to possess, sell or buy either species of Tilapia, and an offence to release them into Queensland waterways. If you catch these fish DO NOT return them to the water. Kill them humanely and dispose of away from the water. Do not use as bait alive or dead

Habitat requirement: Movement through fresh water systems required to complete lifecycle

Threats: None





Eels

Long-finned and
Pacific Short-finned Eels
Family Anguillidae

Swamp Eel
Family Synbranchidae

Eels are easily recognisable by their snake-like appearance. Three species are found in the Burdekin Dry Tropics NRM region. The Long-finned and the Pacific Short-finned Eel are marine dependant for spawning. Little is known about the Swamp Eel, but it is thought to complete its lifecycle in the fresh water habitats of coastal swamps and possibly the lower reaches of slow-moving rivers.







Long Finned Eel *Anguilla reinhardtii*

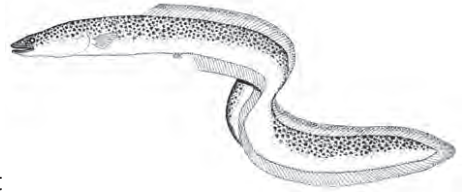
Also called: Marbled Eel

Appearance:

Large, snake-like fish. Distinctive mottled or marbled colour.

Characteristics:

Undertake once-off adult migration of about 5,000 km to deep Coral Sea spawning sites. New born Eels (called glass eels) migrate from spawning grounds to fresh water habitats, where young Eels (elvers) grow into adults before migrating back to sea to spawn. Very capable of colonising upstream habitats, including small streams. Freshwater Eel populations are declining worldwide, primarily due to overfishing.



Distribution:

Widely distributed throughout the Burdekin Dry Tropics NRM region. Historically occurred in all major river systems but is now not commonly found in the river systems above the Burdekin Falls Dam since it's construction.



Maximum length: 200 cm

Common length: 120 cm

Status: Regulated

Size limit: 30 cm

Bag Limit: 10 in total for all Eel species

Conservation status: None

Habitat requirement: Live most of life in fresh water but must go to sea to breed

Threats: • Loss of habitat



Pacific Short-finned Eel *Anguilla obscura*

Appearance:

Snake-like fish. Uniform colour above, silver or yellowish to dark brown and paler underneath.



Characteristics:

Undertake once-off adult migration to marine spawning sites. New born eels (called glass eels) migrate from spawning grounds to fresh water habitats, where young eels (elvers) grow into adults before migrating back to sea to spawn. Freshwater Eel populations are declining worldwide, primarily due to overfishing.

Distribution:

Rarely recorded in the Burdekin Dry Tropics NRM region. Present in Alva Creek and the lower Burdekin River system (below Burdekin Falls Dam). Historically found in the upper Burdekin River system before construction of the Burdekin Falls Dam. Expected to occur in the Bowen, Ross, Black and Haughton Rivers.



Maximum length: 110 cm

Common length: 60 cm

Status: Regulated

Size limit: 30 cm

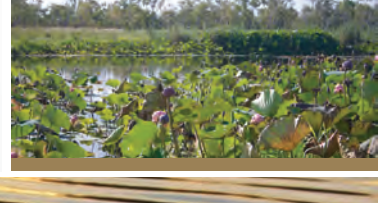
Bag Limit: 10 in total for all eel species

Conservation status: None

Habitat requirement: Live most of life in fresh water but must go to sea to breed

Threats:

- Loss of habitat



Swamp Eel *Ophisternon bengalense*

Appearance:

Snake-like fish. Blackish-green to reddish-brown with a tinge of purple.

Characteristics:

Able to breath air using lung-like organs. Inhabit soft bottom sediments in quiet, well-vegetated backwaters of brackish estuaries and coastal fresh water swamps. Also found in lower fresh water reaches of rivers. Thought to nest in tunnels in marsh mud, with males guarding eggs. Rarely seen or collected.



Distribution:

Recorded in the lower reaches of the Burdekin and Haughton Rivers. Expected to occur also in the lower reaches of Black River.



Maximum length: 55 cm

Common length: 20 cm

Status: Unregulated

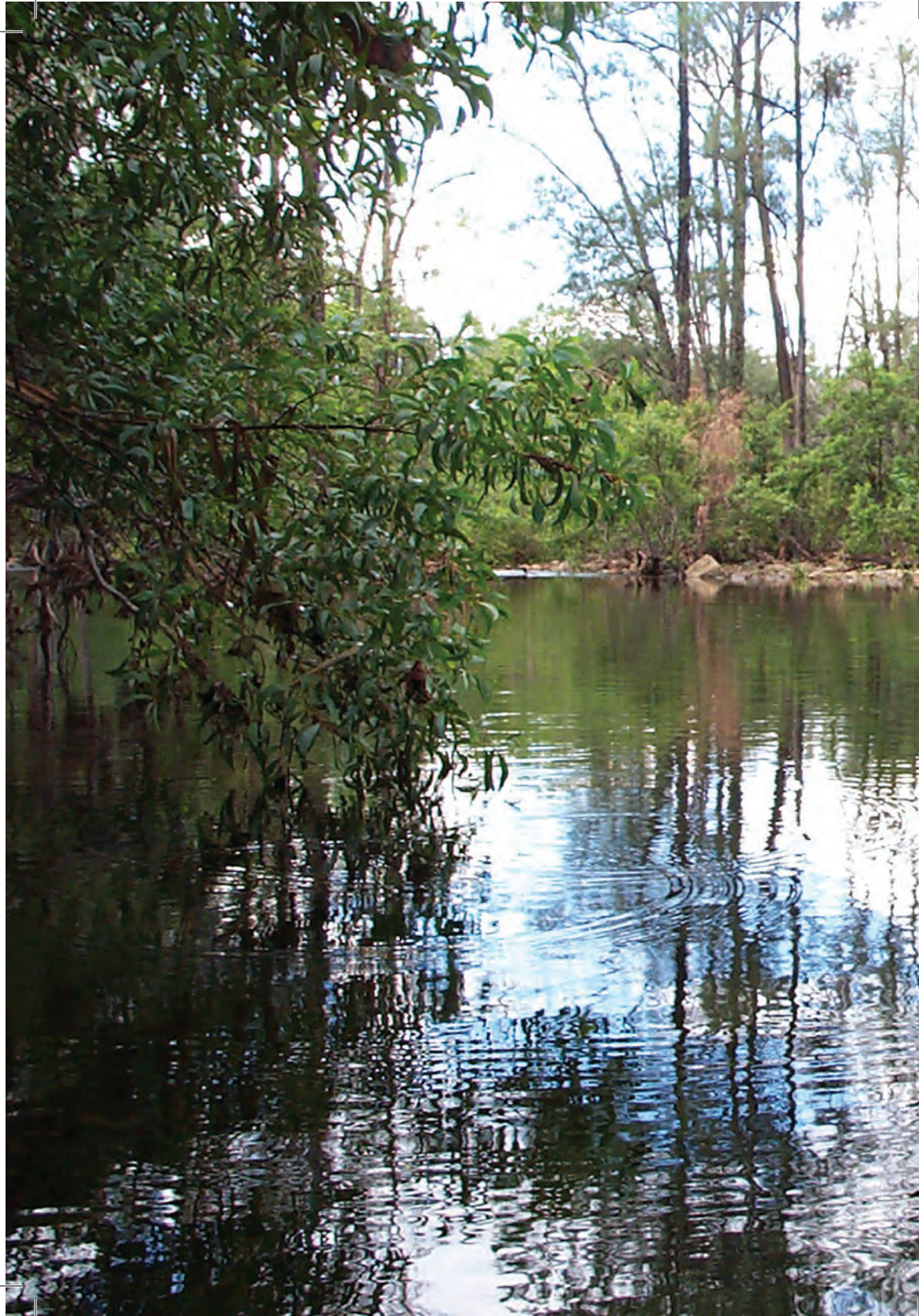
Size limit: None

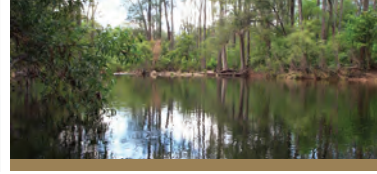
Bag Limit: None

Conservation status: None

Habitat requirement: Presumed to live most of life in fresh water but must go to sea to breed

Threats: • Loss of habitat





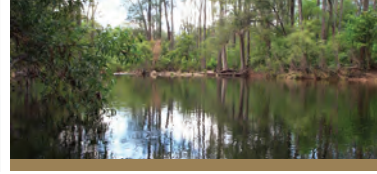
Glassfishes

Family Ambassidae

Glassfishes, like their name suggests, are generally transparent in appearance. Most species are under 10 cm in length and look similar to perches. They have a forked or concave tail, generally three anal spines, seven to nine dorsal spines and a deep, tilted V-shaped notch in the dorsal fin. These fish can often be spotted in large shoals frequently numbering into the hundreds. Freshwater glassfish spawn amongst vegetation and produce adhesive eggs that attach to the surfaces of submerged plants toward the bottom of the waterway. They tend to be more active at night.







Agassiz's Glassfish *Ambassis agassizi*

Also called: Olive Perchlet or Glass Perchlet

Appearance:

Semi-transparent. Dark scale edges form pattern over most of oval-shaped body. Forked tail, clear fins (often with broad black band along edges of pelvic and anal fins). Quite large eyes. Moderately large mouth.



Characteristics:

Prefer areas with vegetation and debris in rivers, creeks, ponds, reservoirs, drainage ditches and swamps. Prefer to swim in mid-water, feeding on small crustaceans. Move within river reaches or from estuaries to lower fresh water habitat reaches but this movement is not necessary for the completion of the species lifecycle or maintaining species numbers.

Distribution:

Recorded in the Burdekin, Black, Ross and Haughton River systems and has been observed at Saltwater Creek (Home Hill). It is expected to occur in the creeks between Home Hill and the Don River.



Maximum length: 7.5 cm

Common length: 4–6 cm

Status: Regulated

Size limit: None

Bag Limit: 20

Conservation status: None

Habitat requirement: Movement through fresh water systems required to complete lifecycle

- Threats:**
- Invasive species (particularly *Gambusia* also known as Mosquitofish)
 - Loss of habitat degradation (loss of woody debris and aquatic and riparian vegetation)
 - Poor water quality (Siltation/sedimentation of waterways)
 - Manmade barriers



Sailfin Glassfish *Ambassis agrammus*

Appearance:

Semi-transparent. Dark scale edges form pattern over most of body. Similar to Agassiz's Glassfish but distinguished by taller, spiny, dorsal fin.

Characteristics:

Prefer rainforest rivers and creeks. Also found in stagnant pools, slow-moving rivulets and margins of swamps, floodplains and lakes. Shelter among aquatic vegetation in large groups. Feeds on other fish, small arachnids, micro-crustaceans, insects and algae.



Distribution:

Recorded in the Haughton River system, Barratta Creek and the Lower Burdekin River. It is expected to occur in the Black, Ross and Don Rivers.



Maximum length: 7.5 cm

Common length: Not known

Status: Regulated

Size limit: None

Bag Limit: 20

Conservation status: Low

Habitat requirement: Movement through fresh water systems required to complete lifecycle

- Threats:
- Removal of creek side vegetation
 - Poor water quality (flow regime changes)
 - Manmade barriers



Gobies

Family Gobiidae

Gobies are typically a small fish found in a variety of habitats throughout the world, ranging from fresh to brackish to marine waters. Features common among the Gobies are a slender body, flattened head, two separate dorsal fins, and a disc-like pelvic fin which allows the fish to rest on the bottom of streams and waterways. Gobies are similar in appearance to Gudgeons. The major identifying difference between the two families is that the Gobies' pelvic fins are joined together whereas those of the Gudgeon are separate.

Gobies are mostly carnivorous and prey on crustaceans, insects, worms, molluscs and small fish. Males and females of a number of species differ in regard to both colour and shape. This is even more apparent during the breeding season, when males take on more bright and vibrant colouration. Eggs are laid in clutches, often in sheltered areas such as narrow crevices. The egg clutches adhere to rocks, logs or any hard surface on the bottom of the waterbody. The parents guard the nest until the young hatch.







Flathead Goby *Glossogobius giurus*

Appearance:

Flattened head and snout. Brown to tan on back; lighter sides with five large square, black blotches along middle of flank.



Characteristics:

Inhabit rocks, gravel or sand-bottomed streams with clear to turbid waters. Known to breed in both fresh water and marine environments. While there is apparently a marine larval stage, accounting for the broad distribution of the species, adults are always found in fresh water environments. Spawn in lowermost fresh water reaches. Diet primarily stream invertebrates.

Distribution:

Recorded in the Lower Burdekin River system (above Clare Weir) the Black River system and Barratta Creek. It is expected to occur in the Ross and Don Rivers. The Flathead Goby is however absent from the Upper Burdekin River system.



Maximum length:	14 cm
Common length:	6-7 cm
Status:	Regulated
Size limit:	None
Bag Limit:	20
Conservation status:	None

Habitat requirement: Needs to move between fresh water and sea, but not to breed

- Threats:**
- Manmade barriers
 - Removal of creek side vegetation
 - Poor water quality



Roman Nose Goby *Awaous acritosus*

Appearance:

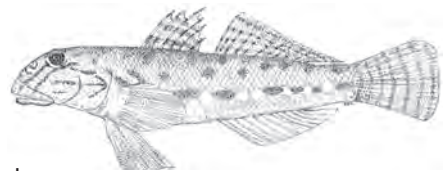
Rounded snout. Eight to ten blackish blotches along sides.

Characteristics:

Can be found in a range of different fresh water habitats. Commonly found near aquatic vegetation on sand or gravel-bottomed clear-flowing lowland streams. Tend to bury themselves, leaving only eyes above sand. Assumed to breed in lower fresh water reaches. Eggs adhesive and stick to stream bottoms. Upon hatching, larvae move downstream to the sea or estuary to undergo a marine larval stage.

Distribution:

Recorded in the Bowen, Lower Burdekin, Haughton, Ross and Black River systems and Crystal Creek. It is also expected to occur in most coastal drainages that have significant seasonal flows. Recent fish surveys above fish passage barriers suggest this species is very capable of moving upstream past structural barriers.



Based on an original by Brad Pusey



Maximum length: 30 cm

Common length: 15–20 cm

Status: Regulated

Size limit: None

Bag Limit: 20

Conservation status: None

Habitat requirement: Movement through fresh water systems required to complete lifecycle

- Threats:
- Poor water quality (sedimentation affects food sources)
 - Manmade barriers



Speckled Goby *Redigobius bikolanus*

Appearance:

Cylindrical. Tan or light grey with dark brown blotches on sides. Small mouth. Prominent diagonal band across cheek from lower eye. Second, equally distinctive, dark bar on dorsal fin runs down body to belly.



Based on an original by Brad Pusey

Characteristics:

Inhabit brackish mangrove estuaries and lower reaches of fresh water streams. Adhesive eggs attach to stream bottoms. Reproductive strategy not well known, but distribution below major barriers suggests dependence upon a marine larval phase. Possibly changes to river flow and excess water withdrawal may cause a threat to this species.

Distribution:

Recorded in the lower Burdekin River (both above and below Clare Weir) and in Bowen River. It is expected to occur in the Black, Ross, Haughton and Don River systems. The Speckled Goby is absent from the upper Burdekin River (above the Burdekin Falls dam).

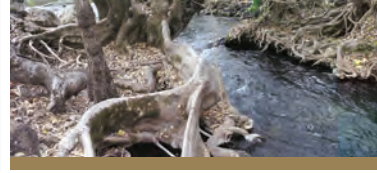


Maximum length:	4 cm
Common length:	2 cm
Status:	Regulated
Size limit:	None
Bag Limit:	20
Conservation status:	None

Habitat requirement: Movement through fresh water systems required to complete lifecycle

Threats: • Manmade barriers





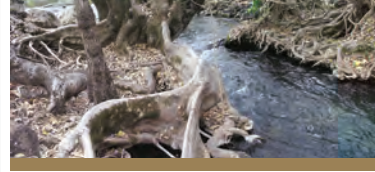
Grunters

Family Terapontidae

Grunters have a single, long dorsal fin that has 11 to 14 spines in the front section and 8 to 14 softer, more flexible rays in the back section. In most species the top row of teeth are absent. Grunters are popular small to medium-sized aquarium fish, although they have a reputation for being aggressive toward other fish. Most species lay their eggs near the bottom of the waterbody; eggs then sink into rocky crevices. Grunters take care of their eggs, fanning them with their pectoral fins and protecting them from predators. They tend to prefer still or slower-moving waterbodies, or deep rocky pools. Some species display tolerance to a wide range of acidities, temperatures and salinities. The name derives from the fact that some make a grunting sound when alarmed or stressed.





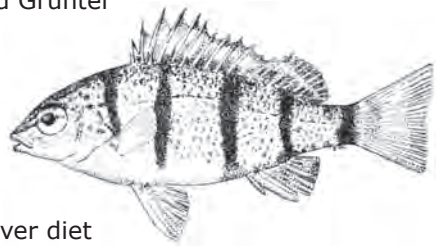


Banded Grunter *Amniataba percoides*

Also called: Barred Grunter or Black-striped Grunter

Appearance:

Silvery colour. Five to six vertical black stripes on side. Some with darkish spots between stripes.



Characteristics:

Partially herbivorous (feeds on plants) however diet consists primarily of insects, crustaceans and algae. Form large schools. Tolerate fairly wide range of temperatures, acidities and salinities. Eggs laid near bottom of waterbody in warmer months (August – March). Females lay up to 400,000 eggs at a time.

Distribution:

Recorded in the Burdekin, Haughton, Black, Ross River systems and Fanning, Star and Running Rivers, also within Barratta, Plantation, Keelbottom and Fletcher Creeks. It is believed to occur in the Don and Elliot Rivers and Alva, Saltwater (Home Hill) and Molongle Creeks.



Maximum length: 18 cm
Common length: 10–12 cm
Status: Regulated
Size limit: None
Bag Limit: 20

Conservation status: None (declared a noxious fish in NSW)

Habitat requirement: Movement through fresh water systems required to complete lifecycle

Threats: • Manmade barriers



Crescent Perch *Terapon jarbua*

Also called: Crescent Grunter, Spiky Trumpeter or Crescent Bass

Appearance:

Distinctive colour pattern featuring series of three to four curved, black stripes on upper sides and dark blotch on dorsal fin.



Characteristics:

Spawning occurs in sea, after which juveniles migrate to fresh water environments.

Distribution:

Primarily a marine species frequenting shallow coastal seas, but also commonly inhabits estuaries and the lower fresh water reaches of rivers.

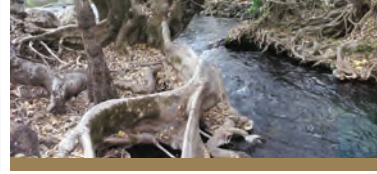


Maximum length: 32 cm
Common length: 15 cm
Status: Unregulated
Size limit: None
Bag Limit: None

Conservation status: None
Habitat requirement: Live mainly in the sea but can move into fresh water, breeds only in sea

Threats:

- Loss of habitat (estuarine wetlands)



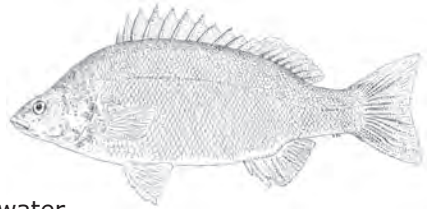
Small-headed Grunter *Scortum parviceps*

Appearance:

Silvery-grey to blackish sides, whitish underneath, possibly with bronze tinge. Sometimes dark spots on heads or bodies. Pearl stripe extends below eye to snout.

Characteristics:

Prefer swift-flowing streams and fresh, clear water. Feed on crustaceans, worms and algae. Spawn during spring and summer months.



Distribution:

Recorded in the Burdekin River system, but have a patchy, restricted distribution. The Burdekin River is the only place in the whole world where this species can be found, affording it a high conservation status.



Maximum length: 40 cm
 Common length: 25 cm
 Status: Threatened
 Size limit: None
 Bag Limit: 20

Conservation status: High
 Habitat requirement: Movement through fresh water systems required to complete lifecycle
 Threats:

- Manmade barriers
- Invasive species (particularly the Sleepy Cod)



Sooty Grunter *Hephaestus fuliginosus*

Also called: Black Bream or Purple Grunter

Appearance:

Uniform sooty-black or brownish-grey overall. Sometimes golden shimmer or golden blotches on body. Larger specimens can weigh up to four kilograms.



Characteristics:

Prefer large, flowing streams. Spawn in wet season in rocky riffle or rapid areas. Generally found over sandy or rocky river beds. Can tolerate fairly acidic conditions and a wide temperature range. Their introduction into new areas (translocated) can negatively affect other species through increased predation.

Distribution:

Recorded in the Burdekin (upper and lower), Bowen, Broken, Cape, Star, Running and Fanning Rivers. Also recorded in the Haughton River, Keelbottom and Barratta Creek. Not recorded in the southern tributaries of the upper Burdekin River system (above Burdekin Falls dam) or the turbid Belyando River. Popular recreational species, commonly translocated (deliberately moved by people) outside its natural range.



Maximum length: 45 cm

Common length: 25

Status: Regulated

Size limit: 28 cm Minimum

Bag Limit: Combined limit of 10 for Sooty Grunter and Khaki Grunter

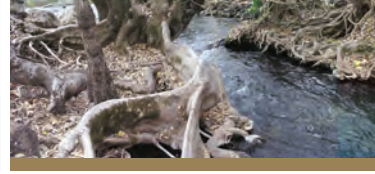
Conservation status: None

Habitat requirement:

Movement through fresh water systems required to complete lifecycle

Threats:

- Manmade barriers
- Loss of habitat
- Removal of creek side vegetation (loss of riparian vegetation and woody debris)
- Poor water quality (sedimentation)



Spangled Perch *Leiopotherapon unicolor*

Also called: Spangled Grunter, Jewel Perch, Bobby Perch, Bobby Cod, or Trout Cod.

Appearance:

Silvery-grey to bluish. Many reddish-brown spangles on head and body.



Characteristics:

Extremely hardy, tolerant of a wide range of salinities, acidities and temperatures. Found in a variety of habitats, including lakes, streams and dams and even wheel ruts. Thought to be capable of surviving drought conditions by burrowing in mud or leaf litter until rains come, however this has not been verified. Diet includes insects, shrimps, fish and some plant material.

Distribution:

Recorded in the Burdekin, Black, Ross and Haughton River systems. Believed to be distributed extensively throughout the Don River system.



Maximum length: 33 cm
 Minimum length: 15 cm
 Status: Regulated
 Size limit: None
 Bag Limit: 20
 Conservation status: None

Habitat requirement: Movement through fresh water systems required to complete lifecycle

Threats:

- Manmade barriers
- Loss of habitat
- Poor water quality





Gudgeons

Family Gobiidae

*subfamilies:
Eleotridinae
and Butinae*

Gudgeons have long slender bodies, are mostly small to medium-sized, and have two dorsal fins. They are often popular with aquarists as males of the species are vividly coloured, especially during the breeding season. Most Gudgeons live near the bottom of the waterbody and are generally quite tolerant of poor water quality. They tend to prefer slow-moving or still waters with plenty of vegetation and shelter, such as undercut banks and fallen logs. Female Gudgeons attach their eggs to submerged rocks, logs or aquatic vegetation and the males guard them protectively until they hatch. The *Hypseleotris* species (Empire Gudgeons, Western Carp Gudgeons and Midgely's Carp Gudgeon) are very effective predators of mosquito larvae.







Empire Gudgeon *Hypseleotris compressa*

Appearance:

Females brownish to golden overall and silvery below with clear to dusky fins. Males spectacularly coloured, especially during breeding season, with vibrant reddish-orange on head and fins. Distinctive black or brown spot near gills. White spots on tails.



Characteristics:

Inhabitant of lowland reaches of rivers. Form massive migrating schools in response to summer wet season flows. Spawn in downstream brackish breeding areas and return upstream. Can reproduce in fresh water habitats. Juveniles often found in estuaries, indicating species may be able to breed and live in either condition. A very important prey species, underpinning much of the productivity of the floodplain.

Distribution:

Recorded in the Black, Ross and Haughton River systems and the lower Burdekin and Bowen Rivers. Known to also occur in Saltwater Creek (Home Hill) and expected to occur in all other creeks between Home Hill and the Don River.



Maximum length: 10 cm

Common length: 3.5 cm

Status: Regulated

Size limit: None

Bag Limit: 20

Conservation status: None

Habitat requirement: Live most of life in fresh water but must go to sea to breed

- Threats:
- Manmade barriers
 - Loss of habitat (lowland wetlands)
 - Removal of creek side vegetation



Flathead Gudgeon *Philypnodon grandiceps*

Also called:

Big-headed Gudgeon, Bull-headed Gudgeon

Appearance:

Broad, flattened head. Black, brown, grey or reddish to greenish-brown. Irregular faint brown markings on sides. Males grow darker during breeding season (spring–summer).



Characteristics:

Prefer to live near the bottom of a water body. Usually found in areas with muddy bottoms and abundant aquatic vegetation. Diet consists largely of small fish, crustaceans, insects and tadpoles. Females attach eggs to rocks or logs.

Distribution:

Recorded in the Black, Belyando and the Burdekin Rivers. The Burdekin Dry Tropics NRM region is the northernmost limit for this species.



Maximum length: 12 cm

Common length: 8-9 cm

Status: Regulated

Size limit: None

Bag Limit: 20

Conservation Status: Medium

Habitat requirement: Movement through fresh water systems required to complete lifecycle.

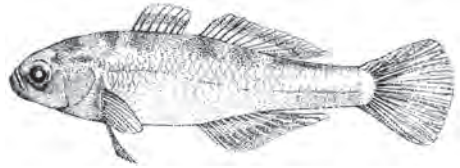
- Threats:
- Manmade barriers
 - Loss of habitat (coastal wetlands)
 - Weeds
 - Removal of creek side vegetation
 - Poor water quality (sedimentation)



Midgley's Carp Gudgeon *Hypseleotris sp. Acitrinellum*

Appearance:

Tan to brown overall with silvery belly. Males with reddish dorsal and anal fins with black median band and whitish to bluish margin. Distinctive steep forehead.



Characteristics:

Inhabit areas with abundant aquatic vegetation and sheltered areas, such as caves, overhangs and big logs. Usually found in still, slow-flowing waters. Spawn during spring and summer. Feed mostly on small crustaceans. An important prey species.

Distribution:

Recorded throughout the Burdekin Dry Tropics NRM region. Known to occur in the Burdekin, Black, Ross and Haughton River systems and in Saltwater Creek (Home Hill). Expected to be found in the creeks between Home Hill and the Don River.



Maximum length:	4 cm
Common length:	2-3 cm
Status:	Regulated
Size limit:	None
Bag Limit:	20
Conservation status:	None

Habitat requirement: Movement through fresh water systems required to complete lifecycle

- Threats:**
- Loss of habitat
 - Removal of creek side vegetation
 - Manmade barriers
 - Invasive species (particularly Gambusia)
 - Poor water quality (sedimentation affects food resources)



Purple-spotted Gudgeon *Mogurnda adspersa*

Appearance:

Brightly coloured, with purplish-brown to light blue body, white belly and scattered red and white spots on sides. Males with three diagonal red-brown stripes on cheeks, females with two lighter stripes.



Characteristics:

Prefer quiet or slow-flowing sections of rivers and streams.

Distribution:

Recorded in throughout Burdekin Dry Tropics NRM region. Known to occur in most of the Burdekin, Black, Ross and Haughton River systems. Observed in Saltwater Creek (Home Hill) and is expected to occur in the creeks between Home Hill and the Don River.



Maximum length:	12 cm
Common length:	8 cm
Status:	Regulated
Size limit:	None
Bag Limit:	20

Conservation status:

Low
They are extremely rare in inland river systems, where they were once abundant. Presumed extinct in Victoria and South Australia, and endangered in NSW

Habitat requirement: Movement through fresh water systems required to complete lifecycle

- Threats:**
- Invasive species (particularly the Sleepy Cod and Gambusia)
 - Weeds
 - Manmade barriers
 - Poor water quality
 - Removal of creek side vegetation



Sleepy Cod *Oxyeleotris lineolatus*

Also called:
Sleeper Gudgeon

Appearance:
Flattened head and protruding lower jaw.
Generally dark brown or back, lighter on sides and whitish belly.



Characteristics:
Prefer slow-moving or still water with abundant aquatic vegetation and submerged logs and rocks to use as shelter and breeding sites. Highly regarded as a food fish, and have been translocated to areas in Queensland where they are not naturally occurring. Can affect other native species by predation and competition and can carry and pass on certain diseases.

Distribution:
Sleepy Cod has been translocated (Queensland native species introduced to other regions by people) to the upper Burdekin River system above the Burdekin Falls Dam. Also known to occur in the Ross and Haughton Rivers, and expected to occur in Saltwater Creek (Home Hill).



Maximum length: 45 cm
Common length: 30-40 cm
Status: Regulated
Size limit: None
Bag Limit: 20
Conservation status: None

Habitat requirement: Movement through fresh water systems required to complete lifecycle

Threats:

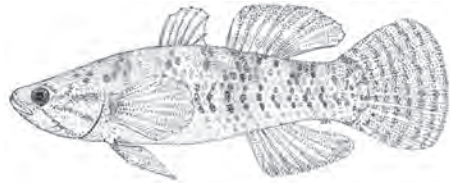
- Loss of habitat (wetland reclamation)
- Removal of creek side vegetation (particularly woody debris and aquatic vegetation)



Snakehead Gudgeon *Giurus margaritacea*

Appearance:

Cylindrical in shape with flattened head and small eyes. Spectacularly coloured with rich brown, steel grey/blue and yellow/ochre markings. Males particularly vivid during breeding times.



Characteristics:

Inhabitant of rivers, swamps, coastal streams and floodplains. Like to hide in thick aquatic vegetation or under undercut banks. Feed mostly on aquatic insects and nymphs; also algae, aquatic plants and small crustaceans. Estuarine-dependent. Adults always found in fresh water environments but larvae have marine stage.

Distribution:

Recorded in the Black, Haughton and Ross River systems. Believed to also occur in Saltwater Creek (Home Hill) and in the lower Burdekin River. The historical range of this species has been impacted by fish passage barriers in the Ross, Haughton and Burdekin River systems.



Maximum length:	25 cm
Common length:	16-20 cm
Status:	Regulated
Size limit:	None
Bag Limit:	20

Conservation status: None (Potential to become a threat to other species)

Habitat requirement: Live most of life in fresh water but must go to sea to breed

- Threats:**
- Loss of habitat (lowland wetlands and estuaries)
 - Manmade barriers
 - Poor water quality (sediment input and habitat degradation)



Spangled Gudgeon *Ophiocara porocephala*

Also called:

Northern Mud Gudgeon

Appearance:

Generally dark brown or blackish overall with pale-centred scales forming scattered white spangles. Juveniles dark brown to black with thin white stripes across back and sides.



Characteristics:

Found mainly in estuaries but able to tolerate fresh water conditions.

Distribution:

Recorded in the Black, Ross and Haughton River systems and the lower Burdekin River (below Clare Weir). Expected to occur in Saltwater Creek (Home Hill). Rarely recorded in fresh waters within the region and only in lower fresh water reaches. Common in estuarine reaches.

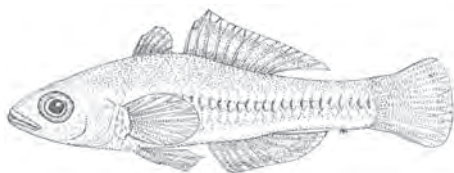


Maximum length: 23 cm
 Common length: 16-18 cm
 Status: Unregulated
 Size limit: None
 Bag Limit: None

Conservation status: None
 Habitat requirement: Live mainly in the sea but can move into fresh water, breeds only in sea

Threats:

- Loss of habitat (coastal wetlands)
- Weeds



Based on an original by Brad Pusey

Western Carp Gudgeon *Hypseleotris klunzingeri*

Appearance:

Slender, pale grey body. Silvery belly and a row of dark scales running lengthways in middle of body.

Fins transparent with white stripe at tip; breeding male's fins red with white stripe.

Characteristics:

Inhabit areas with abundant aquatic vegetation and sheltered areas. Feed mostly on insects, larvae and micro-crustaceans, occasionally plant material. An important prey species.

Distribution:

Recorded in all river systems in the Burdekin Dry Tropics NRM region.



Maximum length: 6 cm

Common length: 4 cm

Status: Regulated

Size limit: None

Bag Limit: 20

Conservation status: None

Habitat requirement: Movement through fresh water systems required to complete lifecycle.

- Threats:
- Removal of creek side vegetation
 - Manmade barriers
 - Invasive species (particularly Gambusia)
 - Poor water quality (sedimentation affects food resources)



Herrings

Southern Spratt
and Bony Bream
Family Clupeidae

Tarpon
Family Megalopidae

Giant Herring
Family Elopidae

Species of the *family Clupeidae* are small to medium-sized silvery fish, with forked tails, soft fin spines, no lateral line and delicate scales. They typically form large schools.

Fish in the *Elopidae* and *Magalopidae* families are moderately sized, elongated, silvery fishes. Spawning takes place at sea and the transparent, ribbon-like larvae drift into estuaries where they reach maturity.







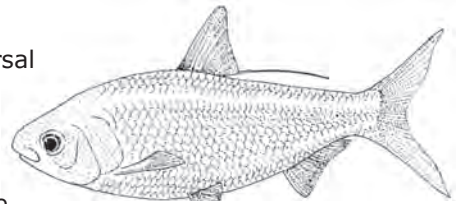
Bony Bream *Nematalosa erebi*

Appearance:

Blunt snout. Silver coloured. Last ray of dorsal fin a long filament.

Characteristics:

Broadcast spawners (fertilisation occurs after the release of eggs and sperm into the waterbody). Eggs hatch on sediment and young have no parental care. Very important prey species underpinning floodplain productivity.



Distribution:

Recorded in the Burdekin, Black, Ross, and Haughton River systems. This species is also believed to occur in the creeks between Home Hill and the Don River.



Maximum length: 47 cm
 Common Length: 15–20 cm
 Status: Regulated
 Size limit: None
 Bag Limit: 20
 Conservation status: None

Habitat requirement: Movement through fresh water systems required to complete lifecycle

Threats:

- Poor water quality (low dissolved oxygen and acidity of water)
- Manmade barriers



Giant Herring *Elops hawaiensis*

Appearance:

Long, slender shape. Large mouth.
Silver-coloured, olive-green upper body.
Distinct fork-shaped tail. Single dorsal fin.



Characteristics:

A renowned sport-fish. Adults found primarily in coastal marine waters; sub-adults often in floodplain lagoons.

Distribution:

Historically ranged above the Clare Weir in the Burdekin River and into the Bowen River system.



Maximum length: 120 cm

Common length: 20-30 cm juveniles in fresh water but much larger as adults in the sea.

Status: Unregulated

Size limit: None

Bag Limit: None

Conservation status: None

Habitat requirement: Live mainly in the sea but can move into fresh water, breeds only in sea

Threats:

- Loss of habitat (estuarine wetlands)
- Manmade barriers



Tarpon *Megalops cyprinoides*

Also called:

Oxeye Herring

Appearance:

Large eyes. Large mouth. Striking silver fish, bluish-green to olive tint. Deeply forked caudal fin. Fish larger than about 6 cm have longish filament extending off rear of dorsal fin.



Characteristics:

Obtain oxygen in poor water quality conditions by 'rolling' at the surface and holding air bubbles in a vascularised mouth cavity. More research is required to accurately assess threats to this species

Distribution:

Recorded in the Black, Ross and Haughton Rivers. Known to occur in Saltwater Creek (Home Hill) and expected to occur in all other creeks between Home Hill and the Don River. The tarpon never occurred in the Upper Burdekin River system but historically occurred in the Bowen River. The range of this species has been reduced due to fish passage barriers within the Ross River and lower Burdekin (Clare Weir) and Haughton (Val Bird Weir) Rivers.



Maximum length: 130 cm

Common length: 50 cm

Status: Unregulated

Size limit: None

Bag Limit: None – not considered edible due to large number of fine bones.

Conservation status: None

Habitat requirement: Live most of life in fresh water but must go to sea to breed

Threats: • Manmade barriers



Livebearers

Family Poeciliidae

Subfamily Poeciliinae

Members of the *Poeciliidae* family are commonly called Livebearers because they give birth to live young rather than laying eggs. Livebearers are small fish. The Swordtail, the largest of the species currently occurring in the Burdekin Dry Tropics NRM region, is only 12 cm in length. They all share an upward-facing mouths and no lateral line. They have a single dorsal fin and large scales relative to their size. Female Livebearers are always larger than the males.

All the Livebearers in the Burdekin Dry Tropics NRM region are introduced species. They are popular with aquarists and many are thought to have been introduced into waterways from captive populations. They pose a threat to native fish – especially small, surface-dwelling natives – as they are aggressive and out-compete them for food, habitat and breeding sites. Many of them produce large numbers of young. As with other introduced species, such as Cichlids, they thrive in disturbed environments and can often be found in environments of poor water quality that have become too degraded for native species. Livebearers are all sedentary species, having no need to migrate.







Gambusia *Gambusia holbrooki*

Also called: Mosquitofish and Plague Minnow

Appearance:

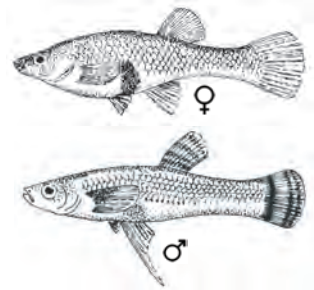
Dull, pale, with bluish sheen on sides. Females larger than males and with dark spot at back of belly.

Characteristics:

Believed to have been introduced into Australia in the 1920s, in an effort to control mosquito populations. They did little to curb mosquito numbers, instead preying voraciously on insect larvae, insects, plants, worms, crustaceans, snails, frog eggs and small fish. Highly aggressive and predatory, and a serious threat to biodiversity conservation. Tolerates poor water quality, dispersed widely and produces large amounts of young, allowing them to out-compete many native species. Once introduced into a waterway can be extremely difficult to remove. *Gambusia* should be destroyed immediately if caught. Heavy fines associated with keeping them or moving them around.

Distribution:

Recorded in the Black, Ross, Haughton and lower Burdekin River systems. Known to occur in Keelbottom and Saltwater (Home Hill) Creeks. This species is also believed to occur in the creeks between Home Hill and the Don River.



Maximum length: Not known

Common length: 2–3 cm

Status: Pest

Size limit: Not known

Bag Limit: None

Conservation status: None - declared pest in Queensland

Habitat requirement: Can complete life cycle in one water body

Threats: None



Guppy *Poecilia reticulata*

Appearance:

Highly variable in colouration. Males may include red, yellow, blue, green and orange body and brightly coloured tails. Females larger and duller in appearance.

Characteristics:

Prefer warm, slow-moving or still waters. Form shoals primarily in vegetated pool margins. Popular aquarium fish.

Distribution:

Guppies are known to occur within the lower Burdekin (above the Clare Weir), Black, Bohle, and Ross Rivers and Alligator Creek.



Maximum length:	Not Known
Common length:	Females 6cm Males 3 cm
Status:	Pest
Size limit:	None
Bag Limit:	None

Conservation status:	None
Habitat requirement:	Can complete life cycle in one water body
Threats:	None



Platy *Xiphophorus maculatus*

Appearance:

Triangular head. Large black blotch on tail. While highly variable in colour, the wild Platy can be olive-brown with blue iridescence on its sides and a green-yellow belly. Aquarium specimens are commonly orange.

Characteristics:

Inhabitant of creeks and swamps. Prefer warm, slow-flowing waters. Populations introduced into Australian waters in the 1960s. Popular aquarium fish.

Distribution:

Recorded in the Ross and Black Rivers.



Maximum length: Not known

Common length: Females 6 cm Males 4 cm

Status: Pest

Size limit: None

Bag Limit: None

Conservation status: None

Habitat requirement: Can complete life cycle in one water body

Threats: None



Sailfin Molly *Poecilia latipinna*

Appearance:

Pearly-grey colour. Several longitudinal rows of spots on sides. Silvery white belly. Dorsal fin originates closer to head than anal fin. Male recognised by tall dorsal fin, after which the species gets its name.

Characteristics:

Inhabitant of small creeks and drains with gently flowing to still waters. Believed to have been introduced into Australian waterways, prior to the 1970s from discarded aquarium pets.

Distribution:

Recorded in the Haughton River.



Maximum length: 12 cm
 Common length: 6–7 cm
 Status: Pest
 Size limit: None
 Bag Limit: None

Conservation status: None
 Habitat requirement: Can complete life cycle in one water body
 Threats: None



Swordtail *Xiphophorus helleri*

Appearance:

Highly variable colouration. In the wild can appear olive-brown to green with red-orange stripe along side, aquarium fish are usually bright orange. Males have prominent sword-like tail, which can range from translucent with black or red-orange stripe on bottom edge, to dark all over. Females similar to Platy in appearance with triangular head but without dark blotch on tail.

Characteristics:

Inhabitant of rivers, creeks and drains. Prefer warm water near edges, among weeds. Thought that wild populations, which have been present in Australia since the 1960s, have originated from the release of the species from aquariums and/or flooding and overflow of outdoor ponds.

Distribution:

Recorded in the Ross and Black Rivers.



Maximum length: 12 cm

Common length: 5–6 cm

Status: Pest

Size limit: None

Bag Limit: None

Conservation status: None

Habitat requirement: Can complete life cycle in one water body

Threats: None



Mullets



Mullets

Family Mugilidae

These silver coloured schooling fishes are marine-dependent, but if there are no barriers to their movement they can be found a long way inland. Mulletts can spend a considerable time in fresh water environments, sometimes several years as is the case of the Sea Mullett.







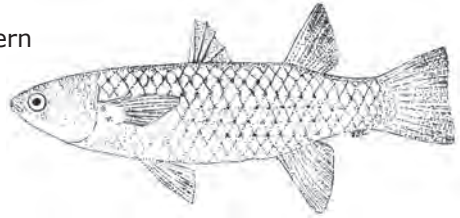
Diamond-scale Mullet *Liza vaigiensis*

Appearance:

Silver coloured. Diamond-shape scale pattern that distinguished it from other mullet.

Characteristics:

Estuarine dependent. Form schools and can weigh over 5 kg.



Distribution:

Recorded in the Black, Ross, Houghton, lower Burdekin and Don Rivers. The inland extent of its range has been impacted on, by fish passage barriers.



Maximum length: 55 cm

Common length: 30 cm

Status: Regulated

Size limit: 30 cm

Bag Limit: 20

Conservation status: None

Habitat requirement: Needs to move between fresh water and sea, but not to breed

Threats: • Manmade barriers



Sea Mullet *Mugil cephalus*

Appearance:

Generally silver-coloured but can vary depending upon location. Specimens from estuaries can be darker and brownish olive with whiter undersides. They have large eyes compared to their body size.



Characteristics:

Often considered a marine species, though individuals can spend years in fresh water environments. Sea Mullet are an important member of the fresh water fish community as they are able to feed and break down dead plants or animal matter, returning essential nutrients to the ecosystem. Can weigh up to 10 kg.

Distribution:

Recorded in the Ross, Haughton, lower Burdekin and Bowen Rivers. The inland extent of its range has been reduced by fish passage barriers.



Maximum length:	75 cm
Common length:	20 cm
Status:	Regulated
Size limit:	30 cm
Bag Limit:	20 Combined Sea Mullet, Blue-tailed Mullet and Diamond-scale Mullet.

Conservation status:	None
Habitat requirement:	Live most of life in fresh water but must go to sea to breed

- Threats:**
- Manmade barriers
 - Loss of habitat



Blue-tail Mullet *Valamugil buchanani*

Appearance:

Silver with bluish tail that distinguishes this species from the Sea Mullet.

Characteristics:

Blue-tail Mullet must migrate between fresh water and the sea at some stage in their life cycle but not for the purpose of reproduction. Estuarine dependent.



Distribution:

Recorded in the Ross, Haughton, lower Burdekin and Bowen Rivers. The inland extent of its range has been reduced by fish passage barriers.



Maximum length: 70 cm

Common length: 20 cm

Status: Regulated

Size limit: 30 cm

Bag Limit: 20

Conservation status: None

Habitat requirement: Needs to move between fresh water and sea, but not to breed

Threats:

- Manmade barriers
- Loss of habitat

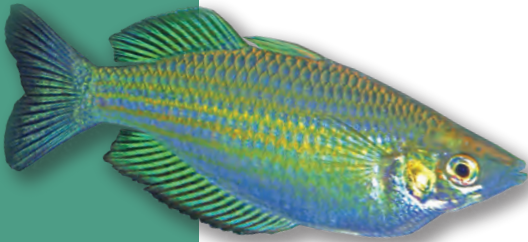




Rainbowfish

Family Melanotaeniidae

The Rainbowfishes are a small, brightly coloured group distinguishable by their two separate dorsal fins, long anal fin and fairly large scales. The first dorsal fin is quite short, comprised of only a few rays, while the second is much longer. The males are usually more colourful than the females, especially during the breeding season, and have more-elongated dorsal and anal fins. They are one of the few species of native fish that are popular with aquarists. Rainbowfish are abundant and diverse throughout Australia but only one species, the Eastern Rainbowfish, lives in the Burdekin Dry Tropics NRM region.







Eastern Rainbowfish *Melanotaenia splendida splendida*

Appearance:

A small, laterally compressed species with males larger and having more elongated posterior margins of the second dorsal and anal fin than females. Generally light blue/silver but colour variation includes variety of rainbow hues including red, orange, blue and green tints.



Characteristics:

Lays eggs amongst aquatic vegetation. Eggs adhere to vegetation near bottom of waterbody. Prefer rocky pools with minimal water flow and shallow sunny areas. This species feeds mainly on algae and also some insects (aquatic and terrestrial). Unnatural flow regimes may have negative impact on larvae and juveniles of this species.

Distribution:

Recorded in the the Burdekin, Black, Ross and Houghton River systems. Believed to occur in Saltwater Creek (Home Hill) and the Don River.



Maximum length: 10 cm

Common length: 6–8 cm

Status: Regulated

Size limit: None

Bag Limit: 50

Conservation status: None

Habitat requirement: Movement through fresh water systems required to complete lifecycle

- Threats:
- Poor water quality (sensitivity to pesticides)
 - Removal of creek side vegetation (loss of aquatic vegetation)





Scats

Family Scatophagidae

Scats are round or disc-like in shape and are laterally compressed or flattened, with an arched back. The mouth and head are small. The fins are well developed and are the same colour as the body. The front part of the dorsal fin is typically low to the body while the caudal fin is fan-shaped. Colouration can vary within species depending on age and, in some cases, distribution.



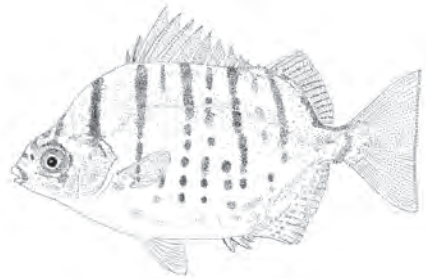




Banded Scat *Selenotoca multifasciata*

Appearance:

Disc-shaped body. Black bars on upper body, which break into spots on lower body. Scales quite small. Sharp fin spines. Similar in appearance to the Spotted Scat but distinguished by black bars on the upper body, which break into spots on the lower body.



Characteristics:

Estuarine-dependent but juveniles and sub-adults enter fresh water environments during summer months.

Distribution:

Recorded in floodplain habitats of the lower Burdekin. Expected to occur in the Black, Ross and Haughton River systems and Barratta and Alva Creeks.



Maximum length: 28 cm
 Common length: 8-12 cm
 Status: Unregulated
 Size limit: None
 Bag Limit: None

Conservation status: None
 Habitat requirement: Live mainly in the sea but can move into fresh water, breeds only in sea
 Threats: • Loss of habitat



Spotted Scat *Scatophagus argus*

Appearance:

Disc-shaped body. Covered with brown or red-brown spots. Juveniles with light and dark bars. Very small scales. Sharp fin spines.

Characteristics:

Usually found in sheltered bays, harbours and lower reaches of fresh water streams. Spawn in estuaries and commonly found in areas with mangrove growth. Juveniles enter fresh water environments during summer months. Eat worms and crustaceans.

Distribution:

Historically known to have occurred in the Bowen and Burdekin Rivers upstream of Clare Weir. Recorded in the lower Burdekin and Black Rivers and in Barratta and Alligator Creeks. Expected to occur in the Don, Elliot, Haughton and Ross Rivers and Molongle and Saltwater (Home Hill) Creeks.



Maximum length: 33 cm
 Common length: 18-22 cm
 Status: Unregulated
 Size limit: None
 Bag Limit: None

Conservation status: None
 Habitat requirement: Live mainly in the sea but can move into fresh water, breeds only in sea
 Threats:

- Loss of habitat



Silver Biddies

Family Gerreidae

All fishes in the family *Gerreidae* have jaws that protrude, and which then extend downward to form a tube. This adaptation is used when the fish feed on bottom-dwelling invertebrates. The body tends to be compressed and silver in colour, with a concave ventral head profile. The teeth are tiny and brush-like. Silver Bidy scales have a rough texture and form a scaly sheath at the base of the dorsal and anal fins. The single dorsal fin is elevated towards the anterior of the body.





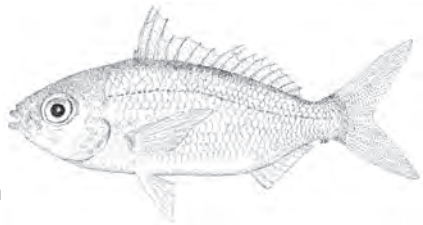


Common Silver Biddy *Gerres subfasciatus*

Also called:
Roach

Appearance:

Silver colour. Jaws extended out (and down) to form a feeding tube. Long-based dorsal fin. Black-tipped anterior spines much longer than those on rest of fin.



Based on an original by WA Museum

Characteristics:

Estuarine-dependent, but small juveniles most commonly seen in fresh water areas, primarily found in lower fresh water reaches.

Distribution:

Recorded in Black and the lower Burdekin Rivers. Believed to occur in the Don, Elliot, Haughton and Ross Rivers and Monongle and Saltwater (Home Hill) Creeks.



Maximum length: 25 cm
 Common length: less than 4 cm
 Status: Unregulated
 Size limit: None
 Bag Limit: None

Conservation status: None
 Habitat requirement: Live mainly in the sea but can move into fresh water, breeds only in sea
 Threats:

- Loss of habitat



Threadfin Silver Biddy *Gerres filamentosus*

Appearance:

Silver-coloured. Oval-shaped body. Forked caudal or tail fin. Distinctively long filamentous first ray on dorsal fin. Protrusible mouth.

Characteristics:

Estuarine-dependent. Small juveniles to sub-adults commonly abundant in accessible fresh water reaches. Known to have penetrated far upstream in the past.

Distribution:

Recorded in the Black, Ross, Houghton and lower Burdekin (below the Clare Weir) Rivers. Believed to occur in the Don River and Elliot Rivers and Monongle and Saltwater (Home Hill) Creeks.



Based on an original by WA Museum



Maximum length: 25 cm
 Common length: less than 4 cm
 Status: Unregulated
 Size limit: None
 Bag Limit: None

Conservation status: None
 Habitat requirement: Live mainly in the sea but can move into fresh water, breeds only in sea
 Threats:

- Loss of habitat



Other fishes

The species in this section are each from a different family group. The Three Spot Gourami is an exotic pest species, however all the others are native to the Burdekin Dry Tropics NRM region. The Yellowbelly, which is an Australian native species, has been introduced to the North Queensland Dry Tropics for angling purposes.





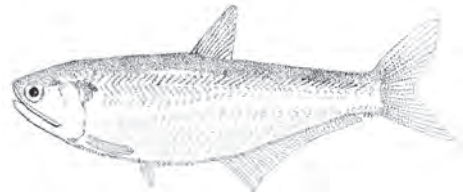


Anchovy *Thryssa hamiltonii* Family Engraulidae

Also called:

Hamilton's Thryssa

Members of this family are typically small in size with a characteristic large mouth, which is usually open while swimming. Species of the Engraulidae family.



Appearance:

Small. Rounded snout. Large mouth, inferior lower jaw. Spot behind gill cover. Tip of snout tends to be level with upper rim of eye and above level of eye centre.

Characteristics:

Primarily an estuarine species, but does penetrate lower fresh water reaches, preferring the open water as opposed to the bottom sediments. Species movement occurs within river reaches or from estuaries to lower fresh water reaches but this movement is not necessary for breeding.

Distribution:

Recorded in the Black, Ross, Houghton, lower Burdekin and Don Rivers. The inland extent of its range has been reduced by fish passage barriers.



Maximum length: 27 cm

Common length: 10-12 cm

Status: Unregulated

Size limit: None

Bag Limit: None

Conservation status: None

Habitat requirement: Live mainly in the sea but can move into fresh water, breeds only in sea

Threats: • Manmade barriers

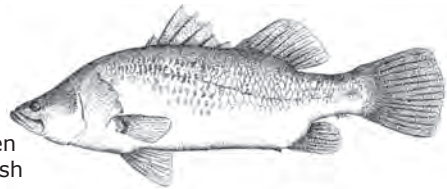


Barramundi *Lates calcarifer* Family Latidae

Also called: Sea Bass, Barra, Giant Perch, Giant Sea Perch and Silver Barramundi

Appearance:

An iconic fish unlikely to be confused with any other species. Silver to bronze with large scales, pink eyes, with large lightly oblique mouth and an upper jaw extending behind the eye. Fins often dark brown or black with strong dorsal spines. Fish from lower reaches may be grey/green. Juveniles may be mottled green/brown with white blotches on back. Vertical bars may be present on very young specimens.



Characteristics:

Important recreational fish but also of ecological and commercial importance. Often artificially bred and used in aquaculture. Born male, becoming breeding females at about 6 years of age, or 80 cm in size. Females lay about 300,000 eggs per kg of body weight. Spawning in spring and summer often at river mouths. Juveniles are highly dependent on estuarine and fresh water habitats. Barramundi fishing is subject to a season – closed midday 1 November to midday 1 February.

Distribution:

Recorded in the Black, Ross, Haughton and lower Burdekin River systems and in Euri, Yellow Gin and Saltwater (Home Hill) Creeks. Believed to occur in the Elliot and Don Rivers. Stocked into the Bowen, Star and Burdekin River (above the Clare Weir and Burdekin Falls Dam). Natural recruitment range in most coastal river systems has been reduced due to fish passage barriers i.e., Clare, Giru, Val Bird and Aplins Weirs.



Maximum length: 180 cm

Common length: 120 cm

Status: Regulated

Size limit: Minimum 58 cm Maximum 120 cm

Bag Limit: 5

Conservation status: Low

Habitat requirement: Live most of life in fresh water but must go to sea to breed

Threats:

- Coastal development
- Fish passage barriers
- Coastal bunds

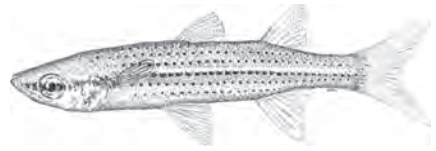


Fly-specked Hardyhead *Craterocephalus stercusmuscarum* Family Atherinidae

Also called:

Freshwater Silverside

Atherinidae family commonly called Hardyheads or Silversides. These are small, silver coloured fishes, which form large schools.



Appearance:

Slender, elongated shape. Distinctive rows of gold lines and black spots laterally on sides. Silvery mid-lateral stripe but no lateral line. Breeding males with yellow belly and females with black blotch near anal fin.

Characteristics:

Prefer slow-moving or still areas of water body with abundant aquatic vegetation. Females breed once water temperatures rises above 24°C. Eggs attached to sites near bottom of waterway. Diet includes mosquito larvae.

Distribution:

Recorded in the Burdekin, Black and Ross River systems. Believed to occur in the Haughton, Elliot and Don Rivers and in Barratta, Plantation, Molongle, Euri and Saltwater (Home Hill) Creeks.



Maximum length: 8 cm

Common length: 5–6 cm

Status: Regulated

Size limit: None

Bag Limit: 20

Conservation status: None - Still common in Queensland but now rare at the southern parts of its range (the Murray Darling Basin)

Habitat requirement: Movement through fresh water systems required to complete lifecycle

- Threats:**
- Manmade barriers
 - Loss of habitat (aquatic vegetation)
 - Invasive species
 - Poor water quality



Freshwater Longtom *Strongylura krefftii* Family Belontiidae

Members of this family have slender long silver bodies with long needle shaped jaws (upper and lower jaw are equal in length) and a single dorsal fin positioned far back on the body above the anal fin.



Based on an original by Brad Pusey

Appearance:

Long slender fish with silver and olive-green tint. Long jaws of equal length containing rows of sharp pointed teeth. Small scales. Fins translucent. Single dorsal fin positioned far back on body above anal fin.

Characteristics:

Prefer living most of life in fresh water but must go to sea to breed. Some populations known to reproduce entirely in fresh water environments (within Ross River weirs). Upstream movement from lower estuarine reaches and between river channel and floodplain habitats has also been recorded.

Distribution:

Recorded in the Ross, Haughton and lower Burdekin River systems and in Saltwater Creek (Home Hill). Distribution within tributary stream floodplain habitats of the lower Burdekin River has been reduced due to loss of habitat and poor water quality.



Maximum length: 85 cm
 Common length: 30–40 cm
 Status: Regulated
 Size limit: None
 Bag Limit: 20
 Conservation status: Medium

Habitat requirement: Movement through fresh water systems required to complete lifecycle

Threats:

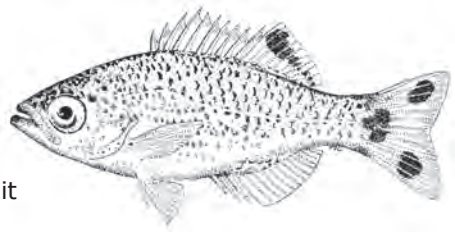
- Manmade barriers
- Poor water quality



Jungle Perch *Kuhlia rupestris* Family Kuhliidae

Also called:
Rock Flagtail

Appearance:
Silver in colour. Dark black scale margins and distinctive black spots on each lobe of caudal fin. Grows to around 3 kg although it is rare to see such a large specimen.



Characteristics:
Prefer flowing, clear water with good quality riparian vegetation. Capable of successfully colonising upland pool habitats, such as the areas above rapids. Undertake wet season spawning migrations to estuarine areas. Access between estuarine and upper catchment areas is critical for the life history of this species. Popular recreational species.

Distribution:
Recorded in the Burdekin River (below Clare Weir), Black, Ross, and Haughton Rivers and Barratta Creek. This species' range has been reduced due to fish passage barriers in the Ross, lower Burdekin and Haughton Rivers.



Maximum length: 50 cm

Common length: 25 cm

Status: Regulated

Size limit: Maximum 35 cm

Bag Limit: 1. (Combined limit with Spotted flagtail)

Conservation Status: Medium

Habitat requirement: Live most of life in fresh water but must go to sea to breed

Threats:

- Manmade barriers
- Removal of creek side vegetation (loss of lowland streams and wetlands)
- Loss of habitat (connectivity)



Mangrove Jack *Lutjanus argentimaculatus* Family Lutjanidae

Also called: Red Bream

Members of this family have robust elongated bodies and a single dorsal fin. The jaws tend to contain well developed canine teeth.

Appearance:

Adult colour can vary from uniform pinkish to copper and bronze to dark reddish-brown. Juveniles have distinctive alternating light and dark vertical stripes with a vertical blue line across cheeks. The adults are much paler than juveniles. Mangrove Jack are often confused with Red Bass *Lutjanus bohar* on colour alone, however they lack the deep pit before each eye that is characteristic of the Red Bass.



Characteristics:

Important recreational and commercial species. The Mangrove Jack is a strong fighter making them a very challenging recreational species. Growing to 16 kg in offshore marine (reef) environments where spawning occurs. Juveniles and sub-adults are found in fresh water habitats. Over fishing of juveniles has impacted on this species. Feeds on smaller fishes and crustaceans.

Distribution:

Recorded in the Burdekin River, however historically the Mangrove Jack was found 100 km inland within the Burdekin River system. Believed to occur in the lower reaches of all the coastal creeks and rivers in the region.



Maximum length: 120 cm

Common length: 30 cm

Status: Regulated

Size limit: 35 cm

Bag Limit: 5

Conservation status: Low

Habitat requirement: Live most of life in fresh water but must go to sea to breed

Threats:

- Loss of habitat (coastal development and estuarine wetlands)
- Removal of creek side vegetation



Milkfish *Chanos chanos* Family Chanidae

Also called: Moreton Bay Salmon

Member of the Chanidae family, which can be identified by a long dorsal fin, a small head with large head scales on top.



Appearance:

Elongated body. Silvery blue/green. Deeply forked caudal fin. Long dorsal fin. Small head with large scales on top. Small toothless mouth.

Characteristics:

Very common schooling fish in both stream and floodplain lagoon habitats. Estuarine-dependent but also found in offshore marine waters, shallow coastal embayments and, occasionally, in fresh water areas. Can weigh over 10 kg.

Distribution:

Recorded in the Black, Ross and lower Burdekin Rivers and Barratta Creek. Believed to occur in the Haughton and Elliot River and within Molongle and Saltwater (Home Hill) Creeks. This species historically extended further up the Haughton, Bowen and lower Burdekin Rivers above Val Bird and Clare weirs.



Maximum length:	120 cm
Common length:	30-50 cm in freshwaters but larger sizes have been recorded
Status:	Unregulated
Size limit:	None
Bag Limit:	None

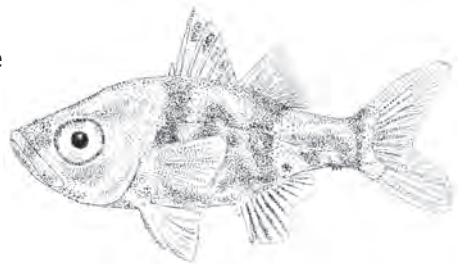
Conservation status:	None
Habitat requirement:	Live mainly in the sea but can move into fresh water, breeds only in sea
Threats:	<ul style="list-style-type: none"> Loss of habitat (estuarine wetlands)



Mouth Almighty *Glossamia aprion* Family Apogonidae

Appearance:

Colour usually greenish to brown and have a mottled appearance. Some specimens showing two to three broad brown bars on sides. Large mouth in comparison with body. Mouth extends slightly further back than eye.



Characteristics:

Inhabit still or gently flowing streams, pools, lakes, swamps and reservoirs, preferring well-vegetated shallow margins. Nocturnal and solitary in nature. Rapacious carnivores. Male mouthbroods fertilised eggs for approximately two to three weeks and hatched young for a short while. Released young fend for themselves. Pose a threat to other native fish species when translocated.

Distribution:

Recorded in the lower Burdekin, Bowen, Black, Ross and Houghton River systems and Saltwater Creek (Home Hill). Expected to occur in the Don River.



Maximum length: 18 cm
 Common length: 8 cm
 Status: Unregulated
 Size limit: None
 Bag Limit: None
 Conservation Status: None

Habitat requirement: Can complete life cycle in one water body
 Threats: None



Pacific Blue-eye *Pseudomugil signifer* Family Pseudomugilidae

Appearance:

Large blue eyes with variable body colours and fin colours ranging from yellowish-tan to silvery blue-grey. Scales outlined with dark colouring on upper flanks. Males intensify colours during courtship. Between Townsville and Cairns a distinctive long-finned variety is found; those from the Ross River in Townsville have strongly exaggerated dorsal and anal fins.



Characteristics:

Pacific Blue-eye populations living in upper catchments can reproduce in fresh water though estuarine based reproduction and recruitment may predominate. Spawn amongst aquatic vegetation. This species requires clear water and well oxygenated habitats and is vulnerable to poor water quality.

Distribution:

Recorded in the lower Burdekin, Bowen, Black, Ross and Haughton Rivers. Believed to be present also in the Don River system.



Maximum length: 7 cm

Common length: 4 cm

Status: Regulated

Size limit: No limit

Bag Limit: 20

Habitat requirement: Live most of life in fresh water but must go to sea to breed

Threats:

- Invasive species (particularly *Gambusia*)
- Poor water quality
- Removal of creek side vegetation

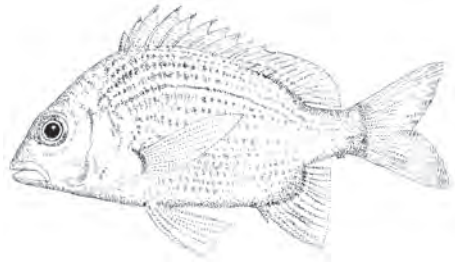


Pikey Black Bream *Acanthopagrus berda* Family Sparidae

Species of this family have oblong to oval-shaped, flattened bodies. They also have a single dorsal fin.

Appearance:

Oblong to oval-shaped, flattened body. Dark grey to blackish or olive-brown with brassy reflections and have lighter grey on belly and chin. Spinous dorsal fin has dark edge spines often silvery. Cheek margins smooth with cheek and gill cover scaly. Can weigh up to 7 kg.



Characteristics:

Popular recreational species. Prefer brackish waters of estuaries and inlets, coastal rivers and tidal creeks. Estuarine-dependent, but occasionally found in lower reaches of fresh water streams.

Distribution:

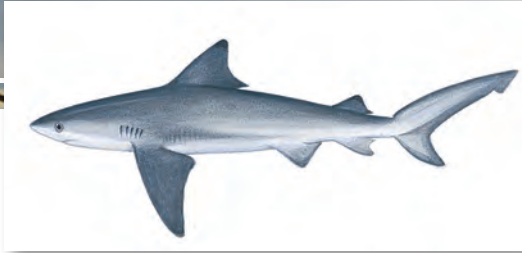
Recorded in lower coastal reaches of the Black, Ross, Haughton, lower Burdekin and Don Rivers.



Maximum length: 50 cm
Common length: 35 cm
Status: Unregulated
Size limit: 25 cm
Bag Limit: 30

Conservation status: None
Habitat requirement: Live mainly in the sea but can move into fresh water, breeds only in sea

Threats: • Loss of habitat (estuarine wetlands)



River Whaler Shark *Carcharhinus leucas* Family Carcharhinidae

Also called:
Bull Shark

Member of the *Carcharhinidae* family and identifiable by their streamlined body, an asymmetrical caudal fin, sharp triangular teeth and grey colouration.

Appearance:

Large, broad-headed shape. Grey above, white underneath. Flattish snout. Black-tipped dorsal fins and black rimming on rear of asymmetrical caudal fin in juveniles. Sharp triangular teeth.

Characteristics:

Large specimens considered dangerous to humans. Population within the Burdekin River are estuarine-dependent, though fresh water breeding populations are known internationally. Shark finning is a serious problem for this species in some regions of the world. In Australia, populations are known to use fresh water habitats as nursery areas.

Distribution:

Recorded in the lower Burdekin (below Clare Weir) and Haughton Rivers. Believed to occur in the Ross River up to Aplins Weir and in Crystal Creek.



Maximum length: 300 cm

Common length: Highly variable

Status: Regulated

Size limit: less than 150 cm

Bag Limit: 1

Conservation status: None

Habitat requirement: Live mainly in the sea but can move into fresh water, breeds only in sea

Threats:

- Loss of habitat (estuarine wetlands)



Sawfish *Pristis* Family *Pristidae*

Appearance:

Very distinctive, appearing as mix between shark and ray. Extended snout with teeth-like projections on both sides.

Characteristics:

Prefer living mainly in estuarine waters but can move into fresh water, breeds only in the estuaries. This rarely seen fish has not been recorded in the region for many years.

Distribution:

Recorded in the Houghton River system (Horseshoe Lagoon). Expected to occur in estuarine reaches of the lower Burdekin, Ross and Bohle Rivers.



Maximum length: 400 cm
Common length: 76–250 cm
Status: Threatened
Size limit: No take
Bag Limit: No take

Conservation Status: High
Habitat requirement: Live mainly in the sea but can move into fresh water, breeds only in sea

Threats:

- Manmade barriers
- Loss of habitat (estuarine wetlands)



Seven-spot Archerfish *Toxotes chatareus* Family *Toxotidae*

Also called:

Common Archerfish

Appearance:

Body shape unusually, flat top line with mouth in line with the dorsal fin. Whitish overall with six or seven irregular black blotches or bars on sides. Dorsal and anal fins are near caudal fin. Dark blotch on base of caudal fin.

Characteristics:

Prefer estuarine waters. Live near water surface from where they spit a jet of water to dislodge insects from riparian vegetation. Broadcast spawners, releasing eggs and sperm into open water for fertilisation. Larvae left to fend for themselves. Popular with recreational fishers and is an interesting aquarium specimen.

Distribution:

Recorded in the Burdekin, Black, Ross and Haughton River systems. Believed to occur in Yellow Gin and Saltwater (Home Hill) Creeks.



Maximum length: 40 cm
 Common length: 25 cm
 Status: Regulated
 Size limit: None
 Bag Limit: 20

Conservation status: Low
 Habitat requirement: Movement through fresh water systems required to complete lifecycle
 Threats:

- Manmade barriers
- Removal of creek side vegetation
- Poor water quality



Silver Batfish *Monodactylus argenteus* Family Monodactylidae

Also called:
Diamondfish

Members of this family are silver in colour with small scales, a flattened diamond/oval-shaped body, and long-based dorsal and anal fins with triangular lobes.

Appearance:

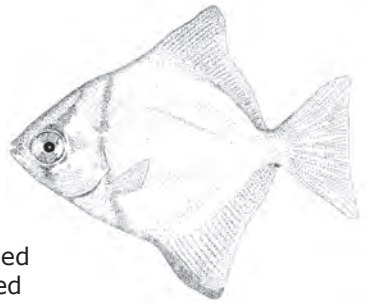
Silver Batfish have strong flattened diamond-shaped bodies. Triangular brown to black-tipped long-based dorsal and anal fin with triangular lobes. Adults with reduced or absent pelvic fins. Two black bars generally present on head, one running through eye, the other, slightly narrower, running parallel just behind head.

Characteristics:

Popular aquarium fish. Live in the sea but also inhabits lower reaches of coastal fresh water streams, particularly, during summer months. Can spawn in fresh water environments though generally considered a marine breeder.

Distribution:

Recorded in the Black, Ross, Houghton and lower Burdekin Rivers and Saltwater Creek (Home Hill).



Maximum length: 27 cm

Common length: 20 cm

Status: Unregulated

Size limit: None

Bag Limit: None

Conservation status: None

Habitat requirement: Live mainly in the sea but can move into fresh water, breeds only in sea

Threats:

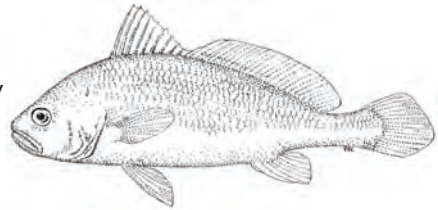
- Loss of habitat (estuarine wetlands)



Silver Jewfish *Nibea soldado* Family Sciaenidae

Also called: Soldier Croaker

Sciaenidae family species have an elongate to oval body shape with a long-based deeply notched dorsal fin, a blunt snout, obvious pores on the lower jaw and snout and a bony flap above the gill opening.



Appearance:

Elongate to oval body shape. Generally greenish above and silvery below. Blunt snout, obvious pores on lower jaw and snout. Bony flap above gill opening. Long-based deeply notched dorsal fins dusky, ventral fins white, other fins yellow. Distinguished from the Spotted Jewfish by not having dark blotches on the back or the fins.

Characteristics:

Juveniles occur in brackish estuaries and lower reaches of large, turbid rivers.

Distribution:

Recorded in the lower Burdekin River and lower reaches of the Ross and Black Rivers.



Maximum length: 76 cm
Common length: 30–40 cm
Status: Unregulated
Size limit: 45 cm
Bag Limit: None

Conservation status: None
Habitat requirement: Live mainly in the sea but can move into fresh water, breeds only in sea
Threats:

- Loss of habitat (estuarine wetlands)



Snub-nosed Garfish *Arrhamphus sclerolepis* Family Hemiramphidae

Appearance:

Stout-bodied. Protruding lower jaw, more pronounced in juveniles. Olive green on dorsal side, with a silvery to white colouration on underside. Sometimes with silver mid-lateral stripe and number of broken vertical black stripes. Fins transparent and dusky towards the edges.



Based on an original by Brad Pusey

Characteristics:

Inhabit shallow coastal waters, brackish estuaries, lower fresh water reaches of rivers and some reservoirs. Shoal and graze in large numbers, particularly around dense aquatic vegetation.

Distribution:

Recorded in the lower Burdekin River, however distribution has been reduced due to habitat loss and poor water quality. Known to occur in the Ross and Haughton Rivers and Saltwater Creek (Home Hill).



Maximum length:	22 cm
Common length:	10-15 cm
Status:	Regulated
Size limit:	No minimum size
Bag Limit:	Combined limit of 50 for all garfish species

Conservation status:	None
Habitat requirement:	Live most of life in fresh water but must go to sea to breed
Threats:	<ul style="list-style-type: none"> • Manmade barriers • Poor water quality (sedimentation, especially seagrass beds)



Three Spot Gourami *Trichogaster trichopterus* Family Osphronemidae

Also called: Blue Gourami

Appearance:

Usually pale blue. Two long, hair-like ventral fins. Two dark spots on body. Eye appears as third spot.

Characteristics:

Extremely hardy introduced species. Inhabit heavily vegetated, shallow, sluggish or standing water in seasonally flooded habitats. Lung-like labyrinth organ allows breathing of atmospheric oxygen in gulps allowing survival in warm, shallow, oxygen-poor water where native species cannot survive. Build floating nests producing up to 4,000 eggs in a spawning event. Opportunistic carnivores. Territorial and aggressive, compete successfully with native species for resources.

Distribution:

Recorded in the Lower Burdekin River and Barratta Creek.



Maximum length: 15 cm

Common length: 11 cm

Status: Pest

Size limit: None

Bag Limit: None

Conservation status: None

Habitat requirement: Can complete life cycle in one water body

Threats: None

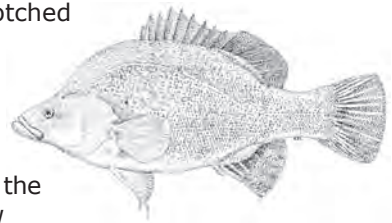


Yellowbelly *Macquaria ambigua* Family Percichthyidae

Members of this family typically have a single notched dorsal fin, small scales, a lateral line, elongate anterior pelvic fin rays, and a large mouth.

Appearance:

Deep bodied, more pronounced as adults with distinctive curve to the forehead and hump above the head. Adults bronze, olive or brown overall, yellow underneath. Single notched dorsal fin. Elongated anterior pelvic fin rays with continuous dorsal fin. Rounded tail and small scales. Large mouth with protruding lower jaw and large eyes.



Characteristics:

Inhabit a variety of riverine habitats but prefer warm, slow-moving, turbid sections of creeks and streams. Spawning migration can be over 1,000 km. Spawning occurs three to five hours after sunset. Popular recreational fishery species.

Distribution:

Yellowbelly have been both deliberately and accidentally introduced to the Burdekin River system, where they have formed breeding populations. Recorded in the Belyando, Suttor, Campaspe and upper Burdekin Rivers. Native to the Fitzroy and Murray Darling River systems and has almost disappeared from large areas of the Murray Darling tributaries.



Maximum length:	76 cm
Common length:	40–50 cm
Status:	Regulated
Size limit:	30 cm
Bag Limit:	10
Conservation status:	None

Habitat requirement: Movement through fresh water systems required to complete lifecycle

Threats: None

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