



**THE GOODEIDS**

**NATIONAL  
SHOW FISH GUIDES  
&  
TECHNICAL INFORMATION**

**Booklet No: 17**

**FEDERATION OF BRITISH AQUATIC SOCIETIES**

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## FOREWORD

With new species and even new genus (to fishkeepers), being made available to aquarist. We have seen class 'T', Any Other Species (A.O.S) Livebearers. Develop from one of the less popular classes to one that has gathered wide support and today is a class to be reckoned with. Fishes that we had only read of a year or so ago are now commonplace on our show benches.

It is inevitable that with this influx of new species appearing on the show bench, information concerning these fishes is sadly lacking. In an effort to redress this imbalance the Federation is pleased to present Book No: 18. THE GOODEI. A further addition to the series of National Show Fish Guides.

We believe that we have gathered together all the known Goodeids into one publication. Including are two pages which totally lack information or drawings. These are of fishes which we know exist but of which so little is known, that we are unable to produce even written information let alone an identification drawing. However the information will undoubtedly come to hand and when it does we will update the publication; by including the pages now we will be able to insert them in sequence.

The Federation is indeed fortunate in having within it's membership aquarists who are willing to provide and collate information for all to share. We are indebted to Terry Waller a member of Southend A.S. a Federation 'A' class judge and speaker. Without his research and drawings this booklet would not have come to fruition. Our thanks to Bob Esson for the no mean task of organising the production of print masters and committing the book to disc for future updating.

Finally we draw the readers attention to the page numbering. Which enables this booklet, in keeping with Federation Standard and Guide publications to be either retained as a separate book or as intended, incorporated into the 'T' section of the Book 3. system. This booklet when inserted into the purpose made ring binders together with the other Federation publications adds up to a formidable source of information.

Pete Cottle,  
Chairman

Judges & Standards Committee.

1986

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## INTRODUCTION.

Livebearing fishes have always been one of the mainstays of the fishkeeping hobby with colourful Guppies, Swordtails, Platies and Mollies being, by far the most popular.

During the last few years a lot of work has been done by both scientists and aquarists with a little known family of livebearing fishes, the Goodeids. However in spite of this upsurge of interest, little of this information has become available in a readable and understandable manner, I hope to alleviate that situation, hence this book.

The information contained within is completely up to date, however one or two of the species described are very new with little information let alone illustrations available, either to the aquarist or the scientific world. It can be seen then, that there is still work to be done, although I feel that the discovery of further new species is nearing an end.

The first Goodeid known to science was named by David Starr Jordan in 1879, *Goodea attripinis*. He named it in honour of the Director of the USA Natural History Museum, George Brown Goode. The first Goodeid to be popular with aquarists was *Neotoca* (now *Skiffia*) *bilineata*, more than 50 years ago, however its popularity was short lived, perhaps due to the surge of interest in the more colourful sword, guppies etc. Like most fish that lose mass appeal the fish soon disappeared from the market and did not reappear in quantity until the late 1970's.

It was in fact 1972 that interest in Goodeids really became apparent. Six pairs of *Ameba splendens*, known as the Butterfly Goodeid, were brought in by the Ministry of Fisheries & Food., and distributed to interested parties. One female died leaving five true pairs and for a long while all the available stock came from this source. Of course with their great interest and enthusiasm aroused, other aquarists have made their own expeditions to the Goodeid homeland bringing back fresh stocks as well as tales concerning collecting the fishes. It is thanks to these individuals that so many species are now available to the hobbyist.

1986.

Terry Waller.  
J & S Committee.



## DISTRIBUTION OF THE GOODEIDS.

As a family the Goodeidae are a very isolated group, confined as they are to the sparsely populated area of Western Mexico. It is not unusual for fishes of all types to be isolated to a particular area. Rasboras and Corydoras are both good examples, but with the goodeids it is often a single biotope that carries an entire population making them very restricted in their distribution and therefore liable to extinction.

A closer and more detailed study reveals that they inhabit the many irrigation ditch systems, rivers, tributaries, lakes and ponds of the Mesa Central area (see location map). This is the highlands area with the basin of the Rio Lerma containing the biggest concentration of species.

The main bulk of the species are found in an area covered by the Rios Panuco and Balsas, and the interior drainage systems of the Rios Mezquital and Purification below and on the plateau, and north to the Rio Grande de Santiago system. All these rivers flow west into the Pacific. The only Eastern flowing system is that of the Rio Panuco. Even so one would have expected some species to have moved Eastwards, to date none have.

The family Ilyodon is to be found in the lowlands below the plateau in the South-West on the Pacific slope around the Colima and Jalisco states. Of course a few species have migrated away from this main concentration and have reached Durango in the North and San Luis Potosi, in the central region.

The species that have migrated have done so through the irrigation ditches and the damming and rerouting of rivers, both naturally as in the 1984 earthquakes and by national government schemes, also by artificial introduction. They are mainly the *Ataeniobius*, *Characodon*, *Xenophorus* and *Xenotoca* genus. The various species are very localised with only *Skiffia bilineata* inhabiting almost the entire range of the genus.

The Goodeid homeland is a very volcanic and mountainous area with much volcanic activity still occurring, sitting as it does across the surface fault line that extends down the west coast of the USA and South America. Although formed in the early Miocene it was during the Pliocene that the most severe activity occurred, causing great changes to the area, with complete river systems and their tributaries being rerouted and even disappearing. The evolution and distribution of the Goodeids is directly linked with these geological events. A similar evolution process seems to have occurred with the Rift Valley Cichlids, particularly with their feeding and dietary habits.

Most of the area is either desert or at its best rough scrubland, with most of the rivers and lakes open to the sun, their substrates being stony and strewn with rocks. A few rivers have a thin covering of silt or mud over the stones. The colouration and pattern of the various species can be linked with the substrate found in their environment (river beds).

There seems to be another evolutionary link this time with the Corydoras in respect that both groups seem to have evolved along a similar path with their colour and pattern being dictated by the environment.

Water flow is slow to practically nil during the dry season but becomes fast and even torrential during the short rainy season. Most of the rivers originate from or flow through the volcanic region making the water both hard and alkaline.

The fish are extremely sensitive to old and/or acid water and must have a considerable amount of their water changed weekly to maintain them in good condition. It helps considerably if they are kept in large tanks, lightly stocked, well filtered and aerated.

The rocky and stony exposed river beds are thick with Algae, most rivers are thick with vegetation. Cteraphylum, Pond Weed, and Water Hyacinth being abundant, this plant life provides the food, shade and shelter for the fishes, young and old alike. Vegetation makes up a large part of Goodeid diet although they seem to be quite omnivorous with only a very few populations being wholly herbivorous or carnivorous.

An interesting trait of Goodeids is the protruding lower jaw, also the variations in the teeth, this variation in dentition is probably linked to their feeding habits. Examination of the stomachs show that some species have short guts while others have a very long entwined gut with no stomach at all.

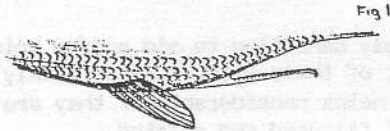
This again is linked to diet, for example an Ameca has a stomach gut  $4\frac{1}{2}$  times the total length of the fish. The fish has a large appetite, and requires very large amounts of food and will in fact gorge itself, if allowed to do so. Other species are shy and can need some help in the aquarium to get them to feed. This process can be encouraged by the introduction of some other types of fishes, like small swordtails or platies.

The temperature range of the Goodeid is variable, being able to tolerate both high and low temperatures. In nature the fish goes through a remarkable range during 24 hours, from very cold at night to blistering hot at mid-day.

## GOODEID REPRODUCTION.

The Goodeids are true livebearing fishes, reproducing by a system called viviparity. Other so called livebearers such as Guppies, Mollies, Platies and Swordtails are in fact not true livebearers, because unlike the Goodeids the female does not nourish the developing embryo. All nourishment for these Poeciliid fishes comes from the egg yolk-sac, when this is consumed and the young born (dropped), they weigh no more than the egg from which they came, often less.

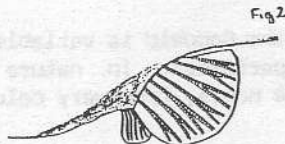
Take a Guppy as a typical Poeciliid example. To inseminate a female and begin internal incubation of the females eggs, the male has an adapted anal fin called a gonopodium (see Fig 1.).



It is with this gonopodium that he attaches himself to the female's genital vent, using a tiny hook, and injects small packets of spermatophore into her genital vent, these find their way to the eggs.

The male can only fertilize a female by actual contact, not by depositing spermatophore into the water in the vicinity of her genital vent. The female Poeciliid is able to store the sperm, a process known as superfetation, this enabling her to produce many broods even when there are no males present. This reproductive system is called ovoviviparity.

The Goodeid system of reproduction is similar but more advanced and refined, almost mammalian in its execution and embryonic development. The male Goodeid differs externally from the the male Poeciliid by lacking the gonopodium. Instead the first few rays of his anal fin are both foreshortened and packed closer together, forming a 'notch' on the leading edge (see Fig 2.),



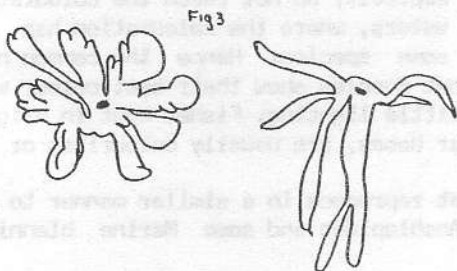


This is the male copulatory organ and is apparent even on very young fishes. Immediately behind the base of the anal fin is a part of the body that is scaleless and fleshy (also see Fig 2.).

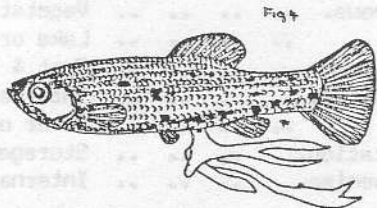
Within this fleshy mound is found the organ that controls the flow of sperms, the Pseudo Phallus. The male Goodeid does not eject his sperms in packets as do the Poeciliids therefore the female is unable to store the sperms and so needs to be fertilised afresh to produce each brood. This lack of superfetation means that the yearly production of young is much less than a Poeciliid female, Goodeids are then not so prolific and the gestation period can be as long as 7 to 8 weeks.

The Goodeid eggs and embryos also differ in many ways from those of the Poeciliids.

Goodeid eggs are small and unlike the Poeciliid's contain almost no yolk. The fertilised eggs are also retained in the follicles part of the ovary until what little yolk there is, is consumed, the eggs are then ejected into the oviduct where ribbon or rosette like structures, Trophotaeniae (see Fig 3.),



Attach themselves to the anal region of the fry, it is through these trophotaeniae that the female is able to secrete nourishment, by means of gaseous exchanges from the wall of the ovary to the fry (see Fig 4.).



In most species the trophotaeniae shrivels and disappears at birth but with others *Amea splendens* being one, the fry may be born with it still attached, however it should soon fall away.

Because of the internal nourishment the fry are born quite large, many times heavier than the egg, well developed bodily and mentally advanced. This means that even new born fry require advance feeding immediatly, sifted *Daphnia*, chopped tubifix and brine shrimp are eagerly taken. The fry are very similar in appearance usually being spotted, this spotting either disappears or deepens depending on species.

Depending on the ability and experience of the male, each Goodeid female should produce a brood every 7 to 10 weeks, but because of his restricted gonopodium a young inexperienced male may have difficulty in fertilising the female. The males are hard drivers and perform an elaborate courtship display, including a strange head flicking movement, therefore it is wise to keep them in ratios of one male to two females. Some species will hybridize, so it is best to house the species in separate containers.

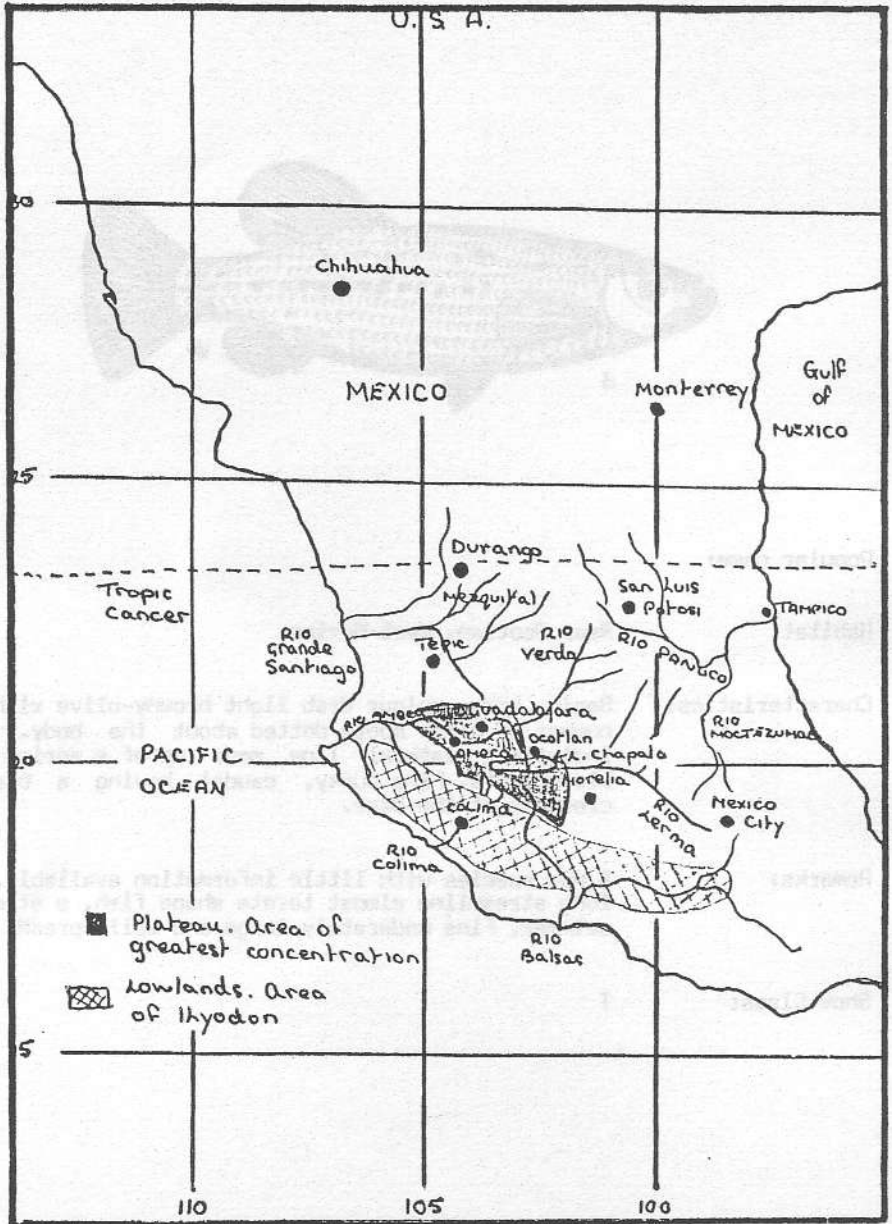
Fishes bred in captivity do not reach the colouration found in fishes from their native waters, where the colouration has been described as unbelievable in some species. Hence the common names 'jewelled' and 'splenden' etc. Most species show their best colour when kept in dark containers with little lighting. Fishes kept in brightly lit containers or those with clear bases, are usually colourless or washed out.

Other families that reproduce in a similar manner to the Goodeid are the Jenynsiidae, the Anablepidae and some Marine blennies of the family Zearcidae.

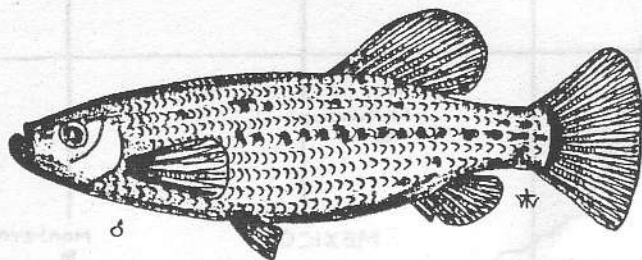
#### A GLOSSARY OF TERMS.

Anal notch.	..	..	..	..	Male Fertilising Organ.
Bifid.	..	..	..	..	Type of Dentition.
Carnivorous.	..	..	..	..	Meat Eater (Insects).
Gestation.	..	..	..	..	Period of Internal Incubation.
Herbivorous.	..	..	..	..	Vegetation Eater.
Lago.	..	..	..	..	Lake or Lagoon.
Omnivorous.	..	..	..	..	Meat & Vegetation Eater.
Ovoviviparus.	..	..	..	..	Internal Incubation.
Rio.	..	..	..	..	River or Tributary.
Superfetation.	..	..	..	..	Storage of Spermazoa.
Trophotaeniae.	..	..	..	..	Internal organ for nourishing the embryo.
Viviparus.	..	..	..	..	True Livebearing.

# MAP OF GOODEIDS DISTRIBUTION



# Alloophorus regalis (Alvarez)



Popular name:

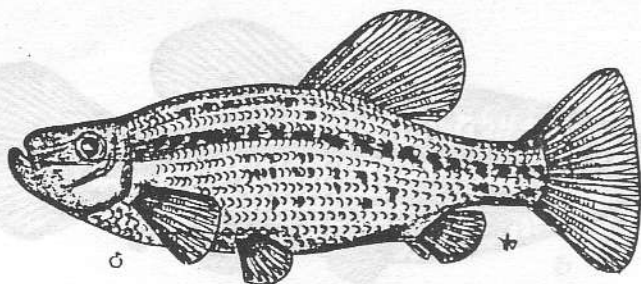
Habitat: Near Ocotlan, West Mexico.

Characteristics: Basic body colour drab light brownish-olive with a number of black spots dotted about the body. An indistinct lateral line made up of a series of black spots. Fins dusky, caudal having a black crescent at the base.

Remarks: A new species with little information available. A long streamline almost terete shape fish, a strong swimmer. Fins moderately large and well spread.

Show Class: T

## Allophorus robustus (Bean)



Popular name:

Habitat: Rio Grande de Santiago on the plateau between  
Ocotlan and Laguna de Chapala.

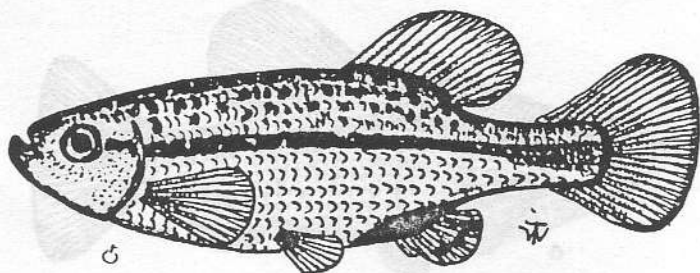
Characteristics: Basic body colour drab olive-fawn, darker on dorsal contour, lighter on belly, a black broken band runs along the lateral line from the operculum to the caudal peduncle, with small amounts of mottling above and below, this varies with age and natural location. Fins light brown, darker at their base.

Remarks: A large and robust species, hence the name. Concave on the head with a large upturned mouth. Finnacle large, in particular the dorsal and caudal, both carried well spread. Inhabits a very restricted area.

Show Class: T



## Allotoca dugesi (Bean)



Popular name:

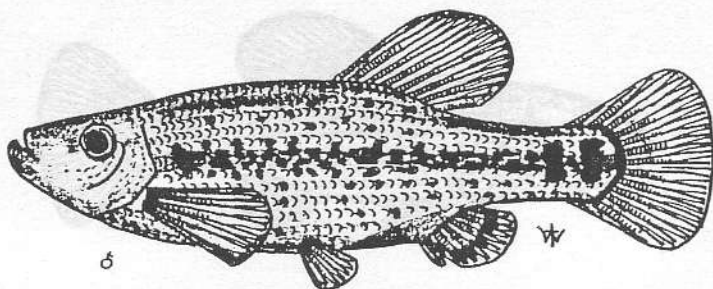
Habitat: Mesa Central & River Lerma near San Marcus.

Characteristics: Basic body colour olive, darker on dorsal contour, silvery on belly, a dark lateral stripe runs from the eye to the caudal peduncle, the stripe is solid in males and broken in females, the male carries orange colouration on the anal contour from the base of the pelvics, to the caudal peduncle, females carry a number of olive or brown bars separated by metallic blue streaks. Fins pale yellow to fawn.

Remarks: A robust species with an upturned mouth and large eye. The anal contour sweeps sharply up to the caudal peduncle. Finnage moderately large carried well spread, caudal well rounded, Although this species has been known for some time, it has received little attention. Very similar in shape to *Allotoca maculata*.

Show Class: T

## Allotoca maculata (Smith & Miller)



Popular name:

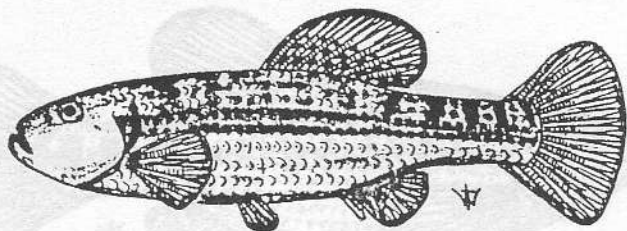
Habitat: Jallisco State, Mexico.

**Characteristics:** Basic body colour light greyish-green becoming silvery on belly, a series of dark spots runs along the lateral line from the operculum to the caudal peduncle becoming darker towards the rear where they terminate in two large dark blotches. The operculum has a bluish tint. Females also exhibit 3 to 6 bars separated by 4 to 7 prominent light iridescent blue blotches, which fade towards the rear. Fins clear to dusky yellow.

**Remarks:** Inhabits shallow lakes and marshes with muddy substrates. A strong bodied fish with flatish head, lower lip protrudes with an upturned mouth and large eye. The anal contour sweeps sharply up to the caudal peduncle. Finnacle large and rounded, carried well spread. Very similar in shape to *Allotoca dugesi*.

Show Class: T

## Allodontichthys hubbsi (Miller & Uyeno)



Popular name:

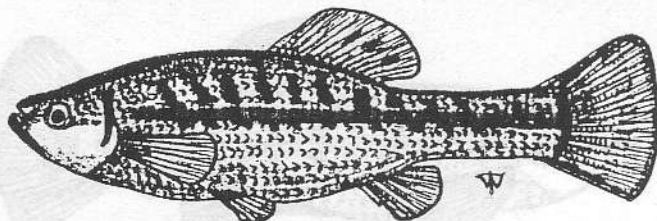
Habitat: Rivers Tamazula, Terrare & Tuxpan.

Characteristics: Body terete. Eyes set well up on head. Basic body colour fawn to light brown, darker above the lateral line, lighter almost white below, a row of black bands make up the lateral line with a number of broad dark bars on the upper body, these are faint behind the head becoming darker and more distinct towards the caudal. The dorsal contour is mottled. Much of the scaling is edged with black and a distinct black mark is present behind the operculum. Fins clear except the dorsal which carries 3 or 5 rows of irregular dark spots, particularly on the base.

Remarks: A distinctly different species to the rest of the family, it is a bottom dwelling fish that skips around the substrate using its large rounded pectorals. Adults are very aggressive. It frequents fast moving streams living around rocks and boulders. Allodontichthys are thought to be the ancestral Ilyodons. This species probably derived from Allodontichthys tamazulae.

Show Class: T

## Allodontichthys tamazulae (Turner)



Popular name:

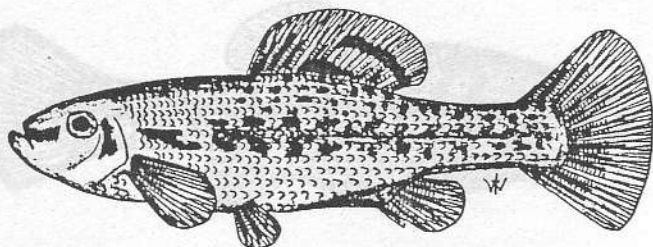
Habitat: Rio's Tamazula & Tuxpan near Tamazula.

Characteristics: Basic body colour fawn-brown, sparsely spotted with light brown above the lateral line, lighter on the belly, in certain light a bluish sheen appears on the anal contour, along the lateral line appears a dark band with 18 to 22 short dark bars. Scales towards the caudal are darker and a dark comma shaped mark is present on the operculum. Fins yellowish with black blotches in the dorsal, caudal exhibiting three light bars, other fins edged with white, black streaking appear in most fins.

Remarks: Rather slender species with a long caudal peduncle, Mouth is slightly upturned and the head slightly concave. The general body shape is more Ilyodon. Dorsal longer in the base with the caudal tending to be squarer, all finnage set well back. A carnivorous species with a short gut.

Show Class: T

## Allodontichthys zonistius (Hubbs)



Popular name:

Habitat: Rio Colima near Colima and Rio Tuxpan near  
Villa Alvarez.

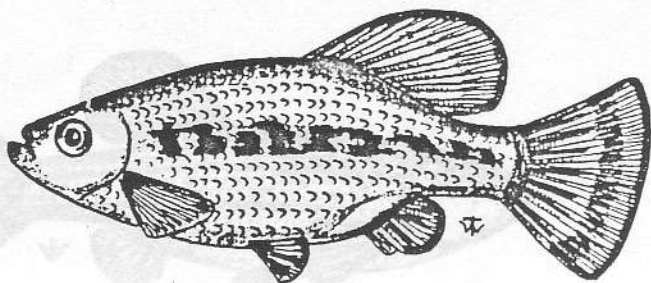
Characteristics: Basic body colour fawn-brown spotted with dark brown above the lateral line, lighter on the belly, in certain light a bluish sheen appears on the anal contour, a lateral line is made up of rather indistinct dark brown blotches. Scales towards the caudal are darker and a dark comma shaped mark is present on the operculum. Fins yellowish with black blotches in the dorsal, other fins edged with white, black streaking appear in most fins.

Remarks: Rather slender almost Ilyodon in shape with a fairly long caudal peduncle, Mouth is slightly upturned and the head rather convex. Dorsal is long based and the caudal large, all fins well rounded.

Show Class: T



## Ameca splendens (Miller & Fitzsimmons)



**Popular name:** Butterfly Goodeid.

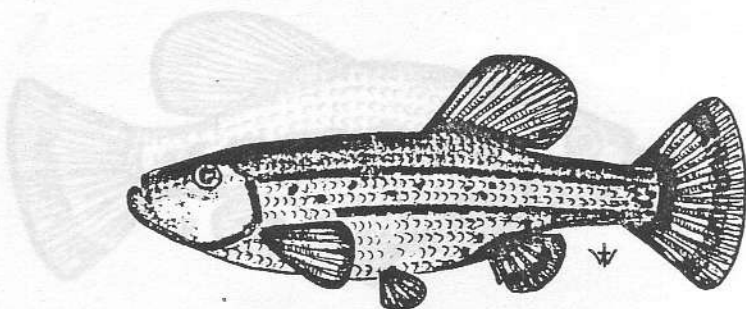
**Habitat:** Rio's Ameca & Techitlan near Ameca & Guadalajara.

**Characteristics:** Basic body colour metallic with a bluish or greenish reflection from the scales and head, dorsal contour brownish-fawn, belly light yellow-brown. A black mottled band runs from the snout through the eye to the caudal peduncle, this band varies in various populations. Females much more mottled. Fins yellowy-brown with a black backed yellow border, this is most pronounced in the caudal where the black backing is wide and intense and the yellow can be almost orange.

**Remarks:** In the wild the colour is extremely intense. A strong bodied fish with an upturned mouth. Large sail like fins. Female fins smaller than the male. Gestation period is long (54 days being reported), the young are large at birth 15mm or more. This species will certainly hybridize with other species, Chapalichthys for example.

**Show Class:** T

## Ataeniobius toweri (Meek)



Popular name:

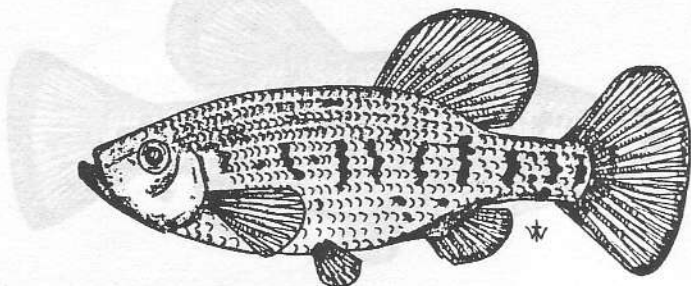
Habitat: Rivers Panuco & Verde near San Luis Potosi.

Characteristics: Basic body colour upper, brownish becoming lighter towards the belly with a certain amount of dark spotting along the lateral line, two dark stripes run either side of the lateral line. Male carries a lot of light blue on the caudal which in certain light reflects a greenish sheen, while the female appears to be lavender.

Remarks: Thought to be the ancestral Goodeid and is the only species not to produce a Trophotaeniae. A slender elongated body slightly convex on the head. Fins are smallish for a Goodeid, with the dorsal beginning behind the pelvics. Peaceful species that is a good jumper. The fish sexes out at about 30mm and one can expect broods of 20 or more.

Show Class: T

# Chapalichthys encaustus (Jordan & Snyder)



Popular name: Barred Goodeid.

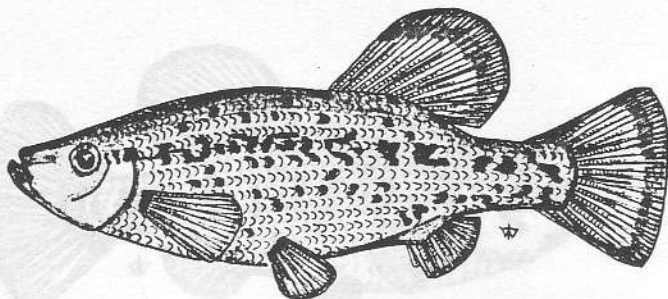
Habitat: Rio Grande & Tributaries between Ocotlan and Laguna de Chapala.

Characteristics: Basic body colour olive-brown to grey overlaid with a series of clear sharp bars that vary considerable in size and shape, these can at times be large spots or blotches, the remainder of the body can be lightly spotted. Fins dusky with a slightly darker margin to the dorsal, caudal and anal.

Remarks: An easy maintained species that is quite active and peaceful, a good jumper and very prolific. A deep longish bodied fish. Fins quite large, dorsal is very large and rounded, the fins are carried well spread.

Show Class: T

## Chapalichthys pardalis (Alvarez)



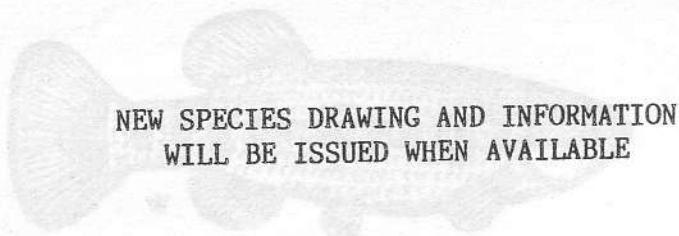
Popular name: Polka Dot Goodeid.

Habitat: River Grande & Tributaries between Ocotlan and  
Laguna de Chapala.

Characteristics: Basic body colour fawn, darker on dorsal contour, belly yellowish, heavy black spotting along the lateral line forms a distinct broken band, below which the body is spotted, a few isolated spots appear above the lateral. Fins clear, dorsal and caudal with a pale yellow margin. Female has less spotting.

Remarks: Similar to Ameca Splendens, they could be mistaken and will cross breed. A strong deep body and caudal peduncle, concave on top of the head. Fins quite large, dorsal is huge. A peaceful species and tends to leave its young alone.

Show Class: T



NEW SPECIES DRAWING AND INFORMATION  
WILL BE ISSUED WHEN AVAILABLE

Popular name:

Habitat: San Juanico de Tocumbo, Michoacan State.

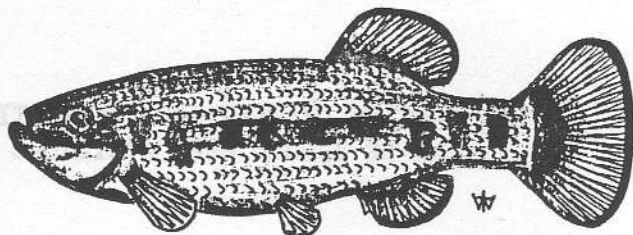
Characteristics:

Basic body color brown with  
darker brown spots on the dorsal  
and sides, lighter on the belly,  
darker below the eye and part  
of the operculum. The  
ventral fin is yellowish. The  
caudal fin is yellowish with  
black spots on the dorsal, caudal  
and anal fins.

Characteristics of the  
species are: dorsal fin  
with 12-14 rays, caudal fin  
with 12-14 rays, anal fin  
with 12-14 rays, pelvic fin  
with 12-14 rays, ventral fin  
with 12-14 rays, and a  
small mouth.



## Characodon lateralis (Gunther)



Popular name: Rainbow Goodeid.

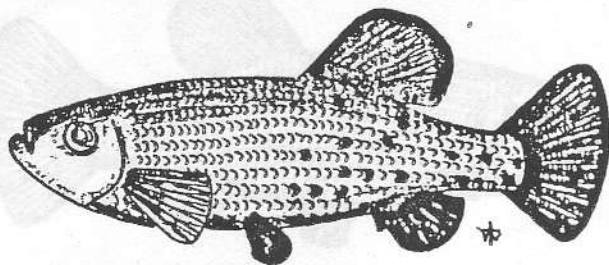
Habitat: Rio Mezquital Headwaters, Sonoran Plateau and  
near Durango.

Characteristics: Basic body colour brown with a lot of red pigment overlay from the front of the dorsal to the caudal peduncle, lighter on the belly, chin, cheek below the eye and part of the operculum is yellow. An amount of speckling forming dark blotches on the flanks becomes lighter towards the rear, blotches variable in size and number. Bands of red, yellow and black appear on the dorsal, caudal and anal, other fins clear.

Remarks: Slender species with blunt head, caudal peduncle is shorter than usual, caudal rounded, dorsal high and well spread. Vegetation makes up most of its diet. Sensitive to old water, benefits from the addition of a small amount of salt to the water. Difficult to breed, broods are small, adults will eat fry. Aggressive when single or in a small group.

Show Class: T

## Characodon audax (Smith & Miller).



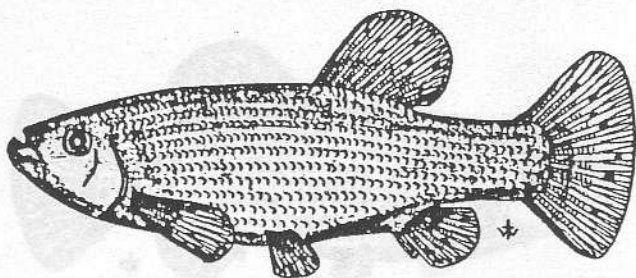
Popular name: Black Prince.

Habitat: Western Mexico.

Characteristics: At the time of writing there is very little information available on this species. It is typical Characodon shape, being chunky and strong bodied. It is a dark coloured fish with jet black finnage, Pectorals are somewhat lighter, there is a pattern of black speckles to the rear of the body. A reasonable size expectation for the males would be 55mm and 65mm for the females. As further information becomes available this page will be updated and reprinted.

Show Class: T

## Goodea atripinnis (Jordan)



Popular name: Black Finned Goodea.

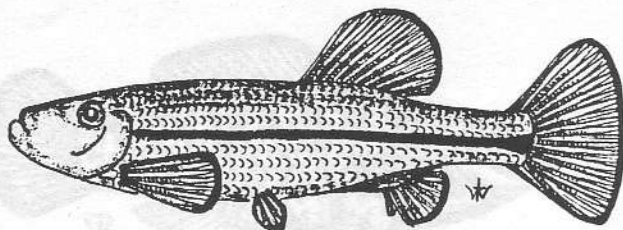
Habitat: Valley de Santiago, near Alberca & Tepic.

Characteristics: Basic body colour olive green, lighter on the belly, in certain light there is a bluish iridescence. Fins dusky yellow with delicate spotting, borders a darker yellow. The finnage colour will change according to the fishes mood from yellow to almost black.

Remarks: Incorrectly know as *Goodea luitpoldi*. A deep elongated body, large upturned mouth, eyes well forward, caudal peduncle thick and strong. Fins large, rounded and well set back, this being typical for the genus. Very aggressive. Fry born large, 20mm not unusual. Is known under two synonyms, *Goodea calentris* and *Goodea luitpoldi*.

Show Class: T

## Goodea gracilis (Hubbs & Turner)



Popular name:

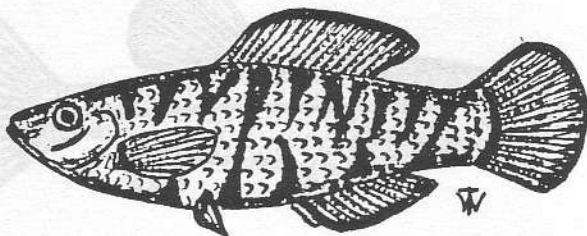
Habitat: Rivers Panuco & St. Maria tributaries.

Characteristics: Basic body colour even olive-green, becoming intense towards the rear, belly yellowy-fawn, flanks have a bluish sheen, scales dark edged giving a weak reticulated appearance. A lateral band runs from behind the operculum to the caudal peduncle, weak at the front becoming deeper towards the rear, the band develops as the fish ages. Fins develop a slightly darker edge.

Remarks: An elongated and robust species, not as full bodied as other Goodeids. Dorsal stumpy, set well back and slopes to the rear. Reported to lose colour if disturbed or moved.

Show Class: T

## Girardinichthys multiradiatus (Meek)



Popular name: Striped Goodea.

Habitat: Lago de Lerma.

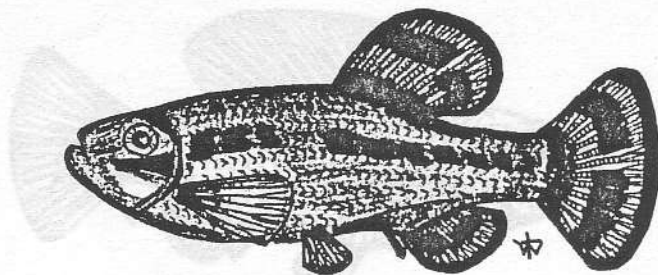
Characteristics: Basic body colour pale brownish to olive, darker on the dorsal contour, flanks overlaid with several dark bars of irregular shape and size. Eye brownish-red. Fins clear to dusky olive with dark borders to the dorsal, caudal and anal.

Remarks: Fairly elongated and deep body, small eye, terminal mouth which is unusual in Goodeids. Dorsal and anal long based and reasonably high, caudal rounded and well spread. A difficult species to maintain.

Show Class: T



## Girardinichthys viviparous (Bustamante)



Popular name: Amarillo.

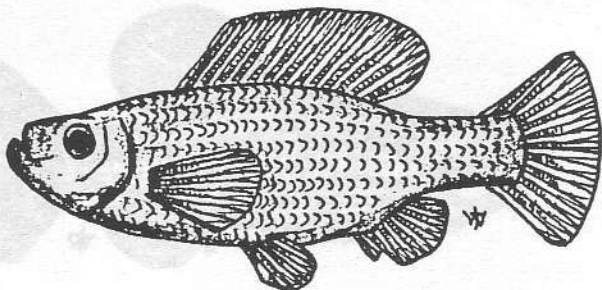
Habitat: Eastern Mexico.

Characteristics: Basic body colour dark brown or grey at times almost black, dorsal contour black. Fins dusky yellow slightly darker in places, Caudal with a black band at the base.

Remarks: Fairly deep bodied, flat on the dorsal contour from the head to the insertion of the dorsal. well rounded below. Fins on the small side with little spread to them.

Show Class: T

Hubbsina turneri (de Buen)



Popular name:

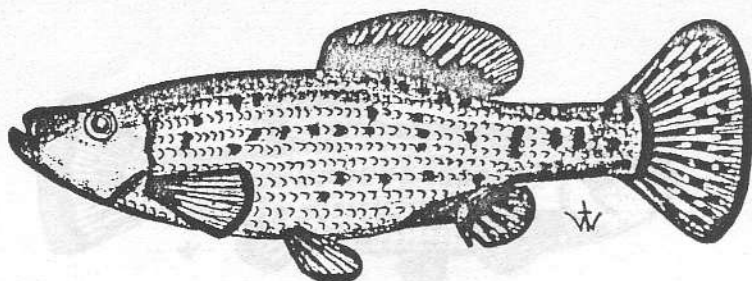
Habitat: Rio Grande de Moralia, & Lago de Cuitxco,  
near Morelia.

Characteristics: None available.

Remarks: Very little information available at the time of writing, only a line drawing in a German publication that gives no details. As information becomes available this page will be updated and reprinted.

Show Class: T

*Ilyodon furcoides* (Jordan & Gilbert)



Popular name:

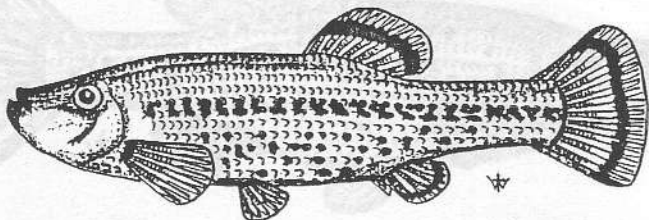
Habitat: Rivers and Lakes in Colima and Jalisco States.

Characteristics: Basic body colour grey to olive above the lateral line, lighter below to creamy white on the belly, with a yellow patch on the chest and a bluish sheen on the flanks. Fins greyish yellow to not quite clear, dorsal with a thick black base. The entire body and finnage covered in black or dark spots and flecks which become more intense towards the rear. Females are larger bodied and show weaker colour.

Remarks: Was formerly known as *Balsadictys furcoides*. This fish does not become so angular as other of the genus. Dorsal long based, caudal well spread but the anal seems small when compared to the body shape, also the anal notch is slightly longer than the anal depth. In common with other *Ilyodon*s this species suffers from deformities such as, mishapen bodies and/or mouths. Older fish seem to lose the ability to close their mouths.

Show Class: T

## Ilyodon lennoni (Meyer & Foerster)



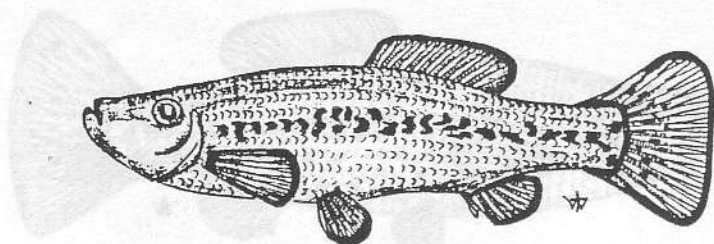
Popular name: Lenbons Ilyodon. (after John Lennon).

Habitat: Rivers Arroyo, Balsas & Chamcambero.

Characteristics: Basic body colour fawn to brown, darker on the dorsal contour, lighter on the belly, a black lateral band comprising a series of blotches runs short of the operculum to the caudal peduncle, considerable flecks and spots usually below the lateral line. Fins pale fawn with lighter margins, dorsal, caudal and anal have a bold black inner margin.

Remarks: Formerly known as *Balsadichthys lennoni*. A little known species that was only named in 1983. Long and slender with upturned mouth, elongated caudal peduncle. Finnage smaller than most of its group although caudal wide and rounded. May be the subject of reassignment when further work is done on the species.

Show Class: T



Popular name:

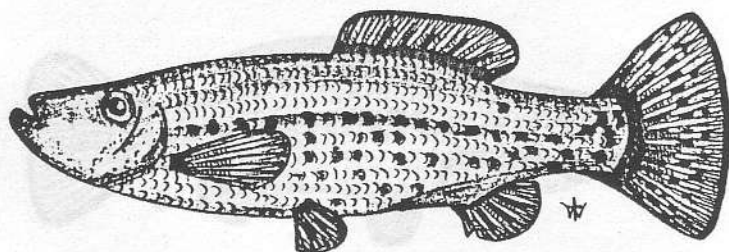
Habitat: River Balsas and the Cuautla near Moreles.

Characteristics: Basic body colour bluish-grey to green that appears iridescent in certain light, lower flank lighter, belly almost white, dark number of dark blotches make up a lateral band which runs from behind the operculum to the caudal peduncle. Fins yellowish with white streaks, dark margins to the dorsal, caudal and sometimes the ventrals.

Remarks: Was formerly known as *Balsadictys whitei*. Long slim fast swimming species, large eyes and upturned mouth with protruding lower lip. The dorsal contour above the head is concave, becomes exaggerated with age or inbreeding. Finnage set well back, dorsal long based and low, caudal longish, not well spread, anal quite small. Will hybridize with *Ilyodon xantusi* and probably *Ilyodon furcoides*. Some specimens seem unable to close their mouths.

Show Class: T

## Ilyodon xantusi (Hubbs & Turner)



Popular name:

Habitat: Rivers Armeria and Colima.

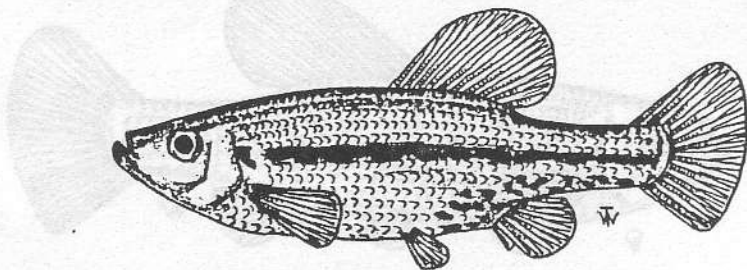
**Characteristics:** Basic body colour above lateral line greyish-green extending down to the caudal peduncle and the rear under body. below the mouth extending to the anal bright yellow, becoming intense with age. A band of black spotting runs along the lateral line, with scattered black spotting about the body. Caudal dark speckled with yellow, caudal and dorsal possess a black outer margin with a wide black bar along the base. Other fins including dorsal yellow, with black streaking.

**Remarks:** Slender species, concave above the head, this becomes exaggerated with age. In fact the whole body shape deteriorates as soon as the fish becomes mature. Some specimens of this species seem to have a definite mouth defect and are unable to close the mouth. Finnacle set well back, dorsal with long base but not high, caudal more squarish than rounded. Boisterous species that will hybridize with both *Ilyodon furcoides* and *Ilyodon whitei*.

Show Class: T



## Neophorus caterinae (de Buen)



Popular name:

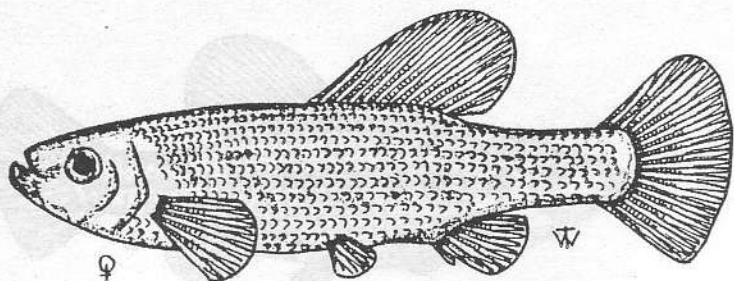
Habitat: Lake St.Caterina, Michoacan State.

**Characteristics:** Basic body colour fawn to greyish-brown, darker on dorsal contour, flank with a silver sheen, belly lighter, dark brown lateral band overlaid with a series of blotches, Black spotting in the anal region and the lower caudal peduncle. Fins clear to fawn.

**Remarks:** Can be easily confused with *Chapalichthys pardalis*. This fish is a long deep body large well rounded finnage. There is a shortage of information concerning this species, as further information becomes available this page will be updated and reprinted.

Show Class: T

# Neophorus diazi (Meek)



Popular name:

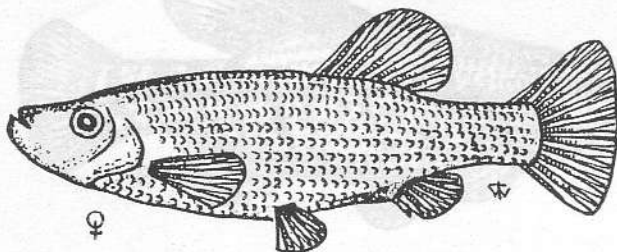
Habitat: Lake de Patzcuarnear, near Uruapan.

Characteristics: Basic body colour greyish-green with a flurescent blue sheen and a series of faint blotches on the flanks, dorsal contour darker, belly lighter. Fins tinted pale brown to clear.

Remarks: Elongated species, with a long slender caudal peduncle. Finnage large and well rounded. There is little information available on this family of fishes but all the Neophorus are similar in body shape.

Show Class: T

## Neophorus meeki (Alvarez)



Popular name:

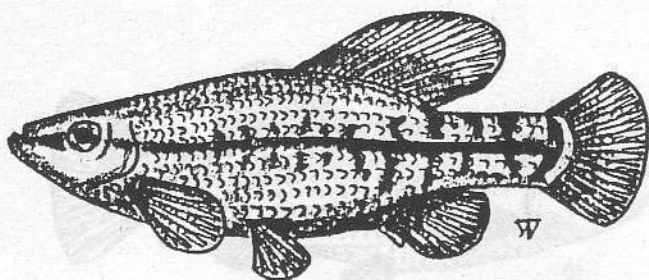
Habitat: Lake Zirahuén, Michoacán State.

Characteristics: Basic body colour greyish-green with an iridescent sheen, darker on dorsal contour, dark blotches on the flank. Fins clear or pale yellowy-brown.

Remarks: Long body, short caudal peduncle. Slightly concave on the dorsal contour above the head. Finnage quite large and well rounded. There is little information concerning this species, as further information becomes available this page will be updated and reprinted.

Show Class: T

## Skiffia bilineata (Bean)



Popular name: Black Finned Goodeid.

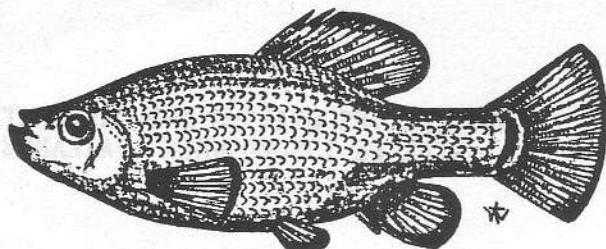
Habitat: Widespread over the Goodeid area.

Characteristics: Basic body colour brownish-olive becoming grey on the belly, which also has an intense bluish sheen (very intense on young specimens), a line runs from the snout to the caudal peduncle becoming more intense towards the rear, terminating in a dark crescent on the caudal peduncle, in front of which there are several dark bars. Fins, dorsal, caudal and anal darkish almost black in some specimens other fins clear. Colour in females weaker with clear finnage.

Remarks: One of the smaller Goodeid species, although quite deep in the body. Finnacle well spread and rounded, largish dorsal, anal notch very small. Best kept in subdued light to maximise colour. Females much enlarged when gravid seem reluctant to drop young, following dropping females seemed quite pinched in, in the belly region.

Show Class: T

## Skiffia francesae (Kingston)



Popular name: Pastel Goodeid.

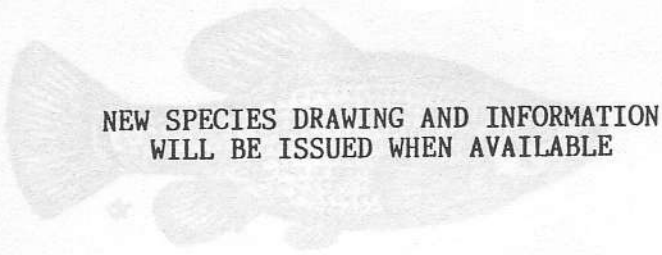
Habitat: Source of River Teuchitlan.

Characteristics: Basic body colour goldish-brown overlaid with a bluish sheen, belly light yellowy-brown, small black crescent on the caudal peduncle. Fins golden-yellow shading to a grey tint on the outer areas. The female body, greyish-green with black speckling along the lateral line and caudal peduncle and clear finnage.

Remarks: An endangered species. Peaceful, should be kept in groups. Extremely sensitive to old water. Deep body, concave above the head. Finnacle large and well spread. Dorsal in the male has a deep cleft in the first few rays. Shy withdrawn species, Prolific breeder. Will hybridize with *Skiffia multipunctata*, producing fertile offspring. Maybe already extinct in the wild aquarium stocks must be conserved.

Show Class: T

# Skiffia lermae (Meek)



NEW SPECIES DRAWING AND INFORMATION  
WILL BE ISSUED WHEN AVAILABLE

Popular name:

Habitat: Rio Lerma and Lago de Patzcuaro.

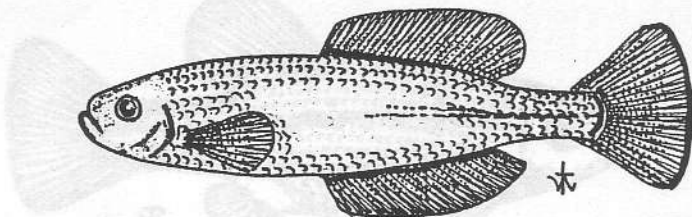
Characteristics:

Remarks:

Show Class: T



## Skiffia multipunctata (Pellegrin)



**Popular name:**

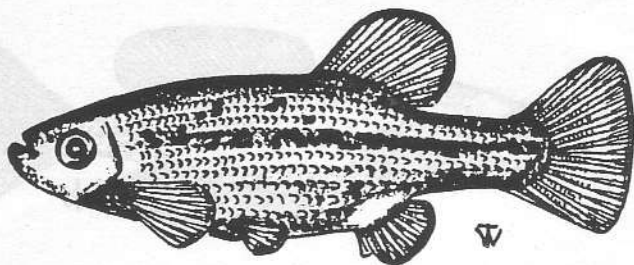
**Habitat:** Near Guadalajara and Ocotlan.

**Characteristics:** Basic body colour light brown with a greenish iridescence, belly pale yellow, a light lateral band with tiny black spots on the scales on the flank, a black bar or crescent present on the caudal peduncle. Fins darkish, dorsal and anal dark brown, dorsal and caudal with greenish-yellow margins.

**Remarks:** The lack of reliable information makes this a difficult species to describe, Sterba's description seems close together with the following, the body is rather elongated and oval with a pleasing roundness, the finnage is moderate large, dorsal long based, however the depth of dorsal's top contour has been exaggerated.

**Show Class:** T

## Xenophorus captivus (Hubbs)



Popular name: Green Goodeid.

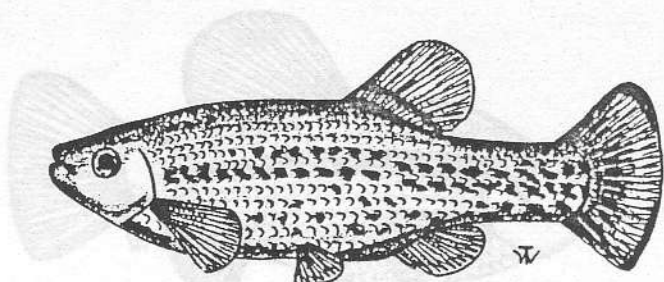
Habitat: River Panuco, tributaries near Jesus Maria.

Characteristics: Basic body colour brownish-fawn, belly lighter, flanks overlaid with a metallic green sheen, is more intense towards the head and clear in natural light, some scales tinted black to dark brown giving a mottled appearance, a series of these scales are grouped together to form a variable indistinct irregular lateral band, almost non-existent on some specimens and always less intense on females. Fins opaque or hyaline, in the best coloured specimens a pale yellow margin particularly in the caudal is present.

Remarks: A fairly elongated species. Body deep, convex with smooth rounded lines not high and angular. Finnage moderately large and rounded, anal notch quite small. Suffers from mishapen mouths. Should not be confused with *Ameca splendens*. Very sensitive to old water. Is known under two synonyms, *Xenophorus erro* and *Xenophorus exsul*.

Show Class: T

## Xenotaenia resolanae (?)



**Popular name:** Leopard Goodeid.

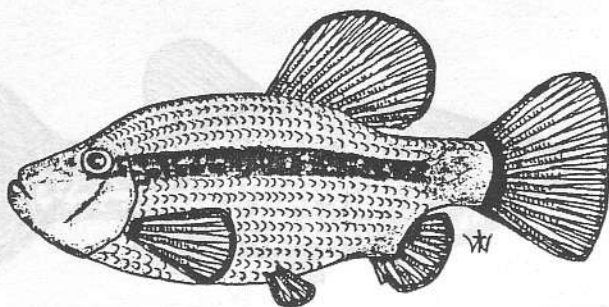
**Habitat:** River Resolana, near Autlan.

**Characteristics:** Basic body colour light creamy-yellow with the scales tinged with brown, along the lateral line there are a number of irregular dark blotches. Dorsal and caudal with brown markings, the caudal much more heavily marked, caudal partially edged with light brown or yellow.

**Remarks:** A strong, deep well bodied species, strong caudal peduncle, rather a blunt head and most unusual in the genus a small terminal mouth. Finnacle small for a Goodeid except the caudal which is quite large and well spread. An active species with a large appetite. An aggressive bully and fin nipper. Best kept in subdued light.

**Show Class:** T

## Xenotoca eiseni (Rutter)



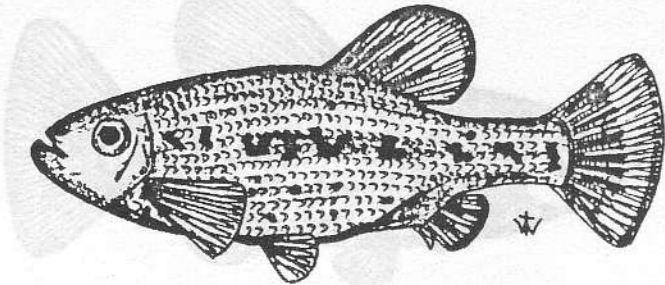
Popular name: Mexican Red Tailed Goodeid.

Habitat: River Grande de Santiago, tributaries.

**Characteristics:** Basic body colour variable, generally a drab brownish-grey, belly lighter, flanks with a bluish sheen (quite intense in some populations), an intermittent dark grey or blue lateral bar runs from the operculum to the caudal peduncle, becoming more pronounced towards the rear. The caudal peduncle on the male is bright red to orange, the colour sometimes spreading into the caudal. The female is a uniform drab greyish brown without markings. Fins clear or hyaline.

**Remarks:** The commonly seen body shape is too squat and square, this has been brought about by inbreeding as only a limited number of specimens have come into the country. Very aggressive, fin and body damage being quite common.

Show Class: T



Popular name:           Jeweled Goodeid.

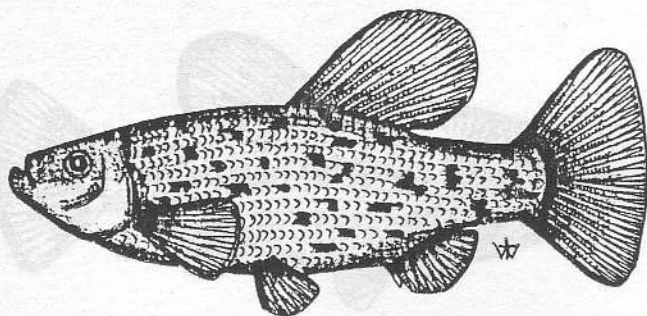
Habitat:                 Rivers Grande de Santiago, Panuco and Verde.

Characteristics:       Basic body colour light brown becoming dusky yellow towards the rear, a bluish sheen can be seen in certain light, a dark broken lateral bar runs from the operculum to the caudal peduncle, gold speckling on the rear with black irregular speckling all over the body (this varies with populations). Fins in juveniles, clear to dusky, in adults darker with a yellow band at the margins of the dorsal and caudal, all fins carry black streaking.

Remarks:               Oval deep bodied resembling Xenotoca eiseni. Eye large, finnage largish and rounded, male finnage considerable larger than female. totally herbivorous. Aggressive to its species and with females, courtship involves head flicking movement.

Show Class:            T

## Xenotoca melanosoma (Fitzsimmons)



Popular name: Dark Bodied Goodeid.

Habitat: Rios Ameca, Grande de Santiago, Tamazula, Tuxpan and Lago de Chapala.

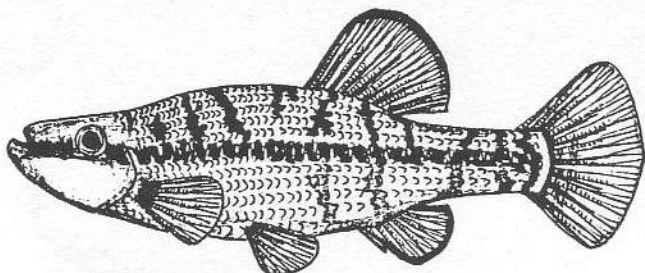
Characteristics: Basic body colour dark grey, dorsal contour darker, belly much lighter almost white in some specimens, small indistinct black flecks cover most of the body. Caudal and anal very dark almost black, other fins dusky grey or clear.

Remarks: A very big bodied species, convex above the head, the anal contour rises sharply to the caudal peduncle. strong caudal peduncle. Finnage very large and well spread, high dorsal. Omnivorous feeder, variable habitat, found in river, stream, lake and pond, in clear and murky water. They seem to prefer shallow water.

Show Class: T



## Zoogoneticus quitzeoensis (Bean)



Popular name: Picatee Goodeid.

Habitat: River Grande de Santiago and Lake de Quitzeo.

Characteristics: Basic body colour light brown with a dark brown lateral band running from the snout through the eye to the caudal peduncle (in some specimens the band commences behind the operculum), a series of dark brown irregular bars on the upper flank, which are lighter and restricted to the rear below the lateral line. Fins pale brown, dorsal with bright orange and anal with bright red margins. The females body pattern is much lighter.

Remarks: Head pointed and concave above, thick caudal peduncle rising quite high to the dorsal, well rounded belly. Finnage large and well rounded. Small broods, 7 or 8. Males harass the females.

Show Class: T

