

Livebearer News

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Data Protection Act

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Editorial

Eddie Wade, RIP

I didn't know Eddie well, but I chatted with him whenever we attended the same BLA events and found him to be a true gentleman. He was also a highly proficient fish-keeper and breeder and had a huge stock of knowledge about livebearing fish. He was a member of the BLA for many years and always brought a large number of fish to our auctions, showed many fish and won many prizes in our competitions. He was also a ferocious competitor in the auctions and once he had decided that he wanted a particular bag of fish in the auction he would outbid any other person who wanted those fish!

Last autumn I bought a pair of *B. roseni* from him but the female died soon after I got home. When I emailed Eddie he immediately said that he would replace it and he emailed me on 7th March to ask if I would be going to the Bristol show. I replied later that day only to find out that it was too late and he had passed away suddenly. A terrible shock for his family and a huge loss to the fish-keeping community in general and the BLA in particular.

And some “thank you’s”.

Before she died, Pat Lambert very kindly gave me permission to use any of Derek's articles that had appeared in “*Aquarist and Pondkeeper*” [later, “*Today's Fishkeeper*”] magazine. I have included the second part of a short series that Derek produced about platies. Still interesting, but probably somewhat out of date by now. So, many thanks are owed to *Kees de Jong* his article about *Girardinichthys viviparus* and even more thanks are owed to Dan Fromm, in America for the two articles that he sent me, which have meant a lot of work for him. Thanks Dan. But this newsletter would be better if it included at least something up-to-date and from a UK based fish-keeper. So please, get typing, any fish, any subject, keeping, breeding, collecting - I don't mind. And don't worry about spelling or stuff like that - that is the job of the editor, i.e. me!

Bristol

The show and auction in Bristol on 13th April are looking like they will be good ones. Several firms have donated prizes and already we know that there are going to be some very unusual and rare fish in the auction. So come along! This will be your first chance this year to sell those young fish that you bred late last year or to buy the rare and unusual livebearers that just don't ever appear in the shops. I hope to see you there.

Nomorhamphus versicolor – a blunt-nosed halfbeak from Tengah Sulawesi

Reprinted from DLGZ Rundschau 2019-03
By Janina Kraemer; photos by F. Herder

The family of halfbeaks (Zenarchopteridae), which in German is also called halfbeak pikes, currently comprises 62 valid species belonging to the five genera *Dermogenys*, *Hemirhamphodon*, *Nomorhamphus*, *Tondanichthys* and *Zenarchopterus* (Anderson & Collette, 1991; Kottelat et al., 1993; Meisner, 2001; Lovejoy et al., 2004). Representatives of the genus *Nomorhamphus* are mainly restricted to mountain streams and freshwater lakes in Indonesia and the Philippines (Brembach, 1991; Kottelat & Whitten, 1996; Meisner, 2001; Collette, 2004; Kottelat, 2013; Miesen et al., 2016).

All halfbeaks have a highly complex and equally interesting reproductive biology. Although it has been known for several decades that at least the genera *Dermogenys*, *Nomorhamphus* and *Hemirhamphodon* (except *H. tengah*) are viviparous (Anderson & Collette, 1991; Collette, 1995; Meisner, 2001), numerous questions about embryonic development and the function of the male reproductive organ remain unanswered (Brembach, 1976, 1991; Greven, 2006, 2010; Kraemer et al., 2019 a). The first five rays of the anal fin are modified in sexually mature males; in *Nomorhamphus* this is expressed in a shortening and thickening of the relevant rays. The microanatomy of these modifications varies between species and can be used to a certain extent for species identification (Kraemer et al., 2019 a).

Of the 20 *Nomorhamphus* species described, 13 are currently known to be endemic to the Indonesian island of Sulawesi (formerly Celebes); they therefore only occur there (Kraemer et al., 2019 b). Consequently, the island is often referred to as a “biodiversity hotspot” for *Nomorhamphus* (Meisner, 2001; Huylebrouck et al., 2012, 2014). The majority of these species are distributed in the relatively well-researched region of the Malili Seas (Sulawesi Selatan) and the Poso Sea region (Sulawesi Tengah) (Meisner, 2001; Huylebrouck et al., 2012). In contrast, other parts of Sulawesi are largely unexplored and consequently little is known about the diversity of the fish fauna there. For example, a new, colourful *Nomorhamphus* species was recently described from Tengah Sulawesi, which practically lacks the diagnostic feature of most halfbeaks, a significantly elongated lower jaw (Kraemer et al., 2019 b).

Distribution and location:

Nomorhamphus versicolor, as the new species was named due to its magnificent live coloration, is so far only known from the type locality. However, Bleher (2007) also mentions in an article about his trip to Lake Lindu a colourful, as yet unknown, halfbeak with a very short lower jaw that he caught in a small tributary of the Palu River. Unfortunately, this location could not be determined more precisely based on the article; however, it is likely that the Versicolour Halfbeak is more widespread in the Lindu region. The type locality (1°12.245' S, 120°09.79' E) is a cold mountain stream approx. 10 km northeast of Lake Lindu and approx. 3 km south of Tongoa. The mountain stream belongs to the source system of the Palu River, which flows into the sea near the city of Palu. The riverbed is 1.0-2.5 m wide, relatively steep and covered with coarse gravel. Small rapids alternate with calmer edge zones and small “pools” in which individuals of *N. versicolor* were observed and caught. The halfbeaks hid under hanging roots

in the riverbank areas. At the time of sampling, the mountain river was surrounded by relatively natural forest and the vegetation on both sides of the brook was closed. Apart from *N. versicolor*, no other fish species could be observed or caught.



Fig. 1: Type locality of *Nomorhamphus versicolor*, an unnamed mountain stream and tributary of the Palu River in Sulawesi Tengah.



Fig. 2: Life colouration of a female shortly after capture. Note the multi-coloured, iridescent body and the orange-reddish colored belly, anus and back areas with irregular black pigmentation.

Type series:

The individuals of the type series, consisting of a male holotype and 15 paratypes (six males, nine females), belong to the scientific collections of the Alexander Koenig Zoological Research Museum in Bonn and the Zoological Museum in Bogor, Indonesia. As with all previously known representatives of the genus, *N. versicolor* also exhibits sexual dimorphism: adult females have a larger standard length than adult males. The largest female in the type series has a standard length of 60.3 mm, while the largest male measures only 40.9 mm. The newly described species therefore appears to represent one of the smaller *Nomorhamphus* species.

Characteristics of the new species:

Nomorhamphus versicolor can be clearly distinguished from all other representatives of the genus by a certain combination of characteristics. In addition to the very short lower jaw (the standard length of *N. versicolor* is up to 30 times the length of the lower jaw, while in comparison it is only five times the length of *N. weberi*), the stocky and compact body is characteristic, which contrasts with the elongated and slender body structure of *N. megarrhamphus* and *N. weberi*. While the latter can usually be found swimming freely in the Malili lakes with little current, a stocky body structure and a larger body diameter are an adaptation to the mountain stream habitat with high current speed. Like many *Nomorhamphus* species, *N. versicolor* also has a conspicuous black spot in the area between the head and pectoral fins. However, this strongly pigmented area is located at the upper end of the operculum, while in *N. lanceolatus*, for example, the base of the pectoral fins has an oval black spot. Another unique feature of the Versicolor Halfbeak is the pigmentation of the ventral, anal and dorsal fins in adult animals. The rear half of the paired ventral fins is usually greyish to black in colour, and the same colouring is found very irregularly and patchily on the anal and dorsal fins.

Furthermore, the andropodium, the modified anal fins of the males, in *N. versicolor* has a special feature. The first fin ray consists of only three bone segments, whereas in all previously known species of the genus it is composed of more than three elements. The combination of features described allows the Versicolor Halfbeak to be clearly distinguished from all other known species of the genus. If parameters such as the length of the lower jaw and the structure of the

andropodium are compared, *N. lanceolatus*, which is known from the Wawolambo River in Sulawesi Tenggara, appears to be most similar to *N. versicolor*. But even these two species, which at first glance appear morphologically similar, can be easily distinguished from one another by differences in fin pigmentation.

Colouration

Nomorhamphus versicolor can certainly be described as one of the most colourful halfbeaks. The animals of the type series had a gray base colour shortly after being caught, which took on an orange tone in the rear third of the body, while the operculum was coloured purple. The tip of the lower jaw was also coloured orange, especially in the males. The iris appeared yellowish. The strongly pigmented region at the upper end of the operculum can be seen in both the living and the fixed animal. The abdominal region is a striking yellow colour; the flanks shimmer in various shades. The fin colouring of this halfbeak is also particularly striking. The pectoral fins are inconspicuously grey and translucent, whereas the ventral, anal and dorsal fins have an orange or reddish colouring in addition to the dark pigmentation described above. The caudal fin is also a strong orange-red colour, especially at the base, while the rear half of the fin is almost translucent and barely pigmented. The location of the Versicolor Halfbeak marks the northernmost known site of a *Nomorhamphus* species on Sulawesi, more precisely the only site to date north of the drainage of Lake Poso. This fact highlights the importance of further field studies in unknown regions of the island that host a still unknown fish fauna.



Fig. 3: Several hours after the catch, the coloring of the fins is significantly less intense and the black colouring is no longer visible.



Fig. 4: Females (top) and males (bottom) of the type series, also several hours after the catch.

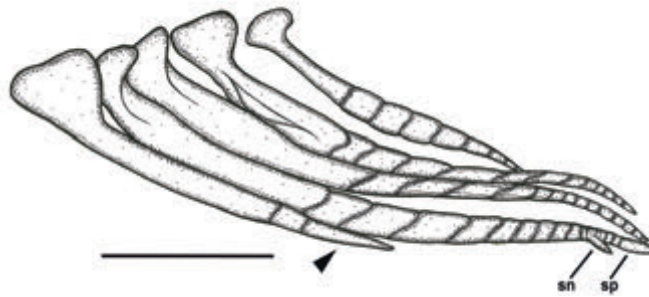


Fig. 5: Schematic representation of the modified anal fin rays (andropodium) of *N. versicolor*; MZB 24608, holotype, 40.9 mm SL. The arrow points to the first anal fin ray, which consists of only three segments; sn, spinae; sp, spiculus. Scale = 1 mm. Adapted from: Kraemer et al., 2019 b.



Fig. 6: Colouration of *N. versicolor* after fixation and storage in ethanol. Top (b): male; bottom (c): female. The dark pigmentation of the ventral, aft and dorsal fins is clearly visible in both sexes. Adapted and modified from: Kraemer et al., 2019 b.

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Two New Livebearers from Costa Rica

Paul V. Loiselle

Photographs by Dan Fromm

This is a revised version of an article published in the October 1966 issue of "The Aquarium".

The ranks of aquarium fishes have been recently enlarged by the addition of two species of cichlid from Costa Rica, *Cichlasoma spilurum* (= *Amatitlania septemfasciata*) and *C. spilotum* (= *Hypsophrys nicaraguensis*). Both of these species seem fairly well established, and as both are extremely colorful as well as easily induced to spawn, there seems little doubt that these two species will undoubtedly attain a degree of permanent popularity. Less publicized was the fact that contemporaneously with these two cichlids, a number of livebearers were also introduced to aquarists in the Los Angeles area, again through the efforts of William Bussing, who collected the original specimens in the Rio Puerto Viejo drainage in Costa Rica. New to aquarists was *Neoheterandria umbratilis* (= *Xenophallus umbratilis*), and new to science and the aquarium world alike was *Phallichthys tico*, a striking relative of the formerly popular Merry Widow, *P. amates*, discovered and described by Bussing. Thanks to the initial efforts of Gene Wolfsheimer and their own unabashed inclinations, both species have managed to attain a moderate distribution in the Los Angeles area.

Xenophallus umbratilis is the larger of the two species, and in my experience, the hardier and more prolific as well. Females attain lengths of up to three inches under favorable conditions, with males reaching two inches at maximum. Perhaps the most striking morphological feature of this species is its extremely long, hooked gonopodium. In fact, the generic name, *Xenophallus*, was derived from this characteristic. I know of no commonly kept aquarium live-bearer with such a complex gonopodium. Until this structure is fully developed, males of this species are functionally sterile. As the gross morphology of the gonopodium is readily apparent prior to this point, the isolation of virgin females from their brothers is a facile task.

Colourwise, this is a handsome species. The base colour varies from a warm golden buff to a translucent gold, with an overall blue to violet sheen in incident light. The dorsal is vivid lemon yellow, with its leading edge and distal margin jet black. The leading edge is always well

pigmented, but the intensity and extent of the distal margin are subject to extreme variation. Really choice specimens have a jet black leading edge and distal margin that extends a quarter of the total depth of the fin. The interior zone of yellow is apt to be most vivid in such individuals. The shape of the dorsal is also subject to variation. Occasional males will be found with a strongly developed sail-like dorsal that gives them an exceptionally handsome appearance. The other vertical fins are a pale clear yellow. The eye, both pupil and iris, is jet black, and occasional specimens show a fine black edging on the lips.

X. umbratilis is happy in moderately hard water, such as will satisfy most of the commonly kept livebearers, and a temperature range of 70°-80° is adequate for maintenance. In the wild, *X. umbratilis* is a pronounced detritivore. In captivity dried food is eagerly taken, and a special preference for filamentous green algae often manifests itself, making these little fish occasionally useful in clearing up an overgrown tank. Of course brine shrimp and daphnia are readily taken when offered, and my specimens learned to come to the surface for fruit flies. All in all, any diet that offers them a strong vegetable element will keep *X. umbratilis* happy and in good colour. None of my specimens ever contracted ich [*i.e.* "Whitespot" - Editor], and indeed, I cannot recall ever seeing a specimen of this fish with that disease. To compensate, *X. umbratilis* is exceedingly sensitive to high nitrate levels, and develops the usual symptoms of distress - shimmying, jerky movements and scratching against solid objects- if periodic partial water changes are not afforded it.

Reproduction is in the usual poeciliid pattern. Broods average 25-35, and may go as high as 75, and are delivered with clockwork regularity in 24-28 day periods. If any sort of cover is afforded the fry, a large percentage will be found to survive, not because this species places any special moratorium on maternal cannibalism, but because the fry are almost ¼ of an inch in length at birth and are extremely fast and wary. Growth is rapid on the usual diet for livebearer fry, and is particularly rapid if algae are present for the fry to pick at. Rate of growth is nicely correlated to population density, and the wise aquarist will allow the fry plenty of elbow room. Gonopodium formation is initiated between four and six weeks after birth, but sexual maturity is not until a month or more later, for males. Females are capable of being fertilized after the seventh week.

X. umbratilis is noteworthy for two behaviour patterns. First of all, it is the only poeciliid species in my experience that displays investigatory behavior of sufficient strength to be considered real curiosity. Bussing reports that when new fish were introduced into a tank containing a dozen *X. umbratilis*, the *Neoheterandria* were observed to break off normal feeding and courtship patterns and swim rapidly over to cluster about the newcomer. In one instance, the *Xenophallus* actually formed a circle about a large male *Apistogramma cacatuoides*, and the largest female had the temerity to swim forward and poke the cichlid on the snout, to what can only be described as the extreme astonishment of the cichlid, who was so taken aback by the behavior of the poeciliids that he offered no response. I have observed mature *X. umbratilis* of both sexes follow a newly introduced *Amatitlania nigrofasciata* for fully ten minutes, until the cichlid chased them off. This behavior would be more comprehensible if *X. umbratilis* had no predators to speak of in the wild, but the waters it inhabits are liberally supplied with piscivorous fishes.

Of equal interest is the fact that maturing males of this species apparently go through a long learning process with respect to the proper choice of sexual partner. I have observed juvenile males of *X. umbratilis* make gonopodial thrusts at air bubbles, plant leaves, snails, their own reflection, individuals of both sexes of their own species, other poeciliid species, and even

individuals of widely dissimilar species. The award in this case goes to a brash young male *Xenophallus* who made a bold frontal approach to the male of a spawning pair of *A. nigrofasciata*, executed a flawless thrust, and very nearly missed undergoing a major amputation for his pains. If this sort of mistake is common in the wild, it seems reasonable to assume that such individuals rarely experience the opportunity to repeat their error. By the time his gonopodium has become functional, the male has hopefully discovered its proper object, and the continuation of the species is assured. Similar but less exaggerated learning behavior is common to many poeciliid species, but in my experience, *X. umbratilis* is in a class by itself in this regard.

Phallichthys tico is somewhat smaller than *X. umbratilis*, large females attaining a length of two inches, and males averaging one inch and a quarter in length. It is also by far the prettier of the two species. The base colour is a warm olive buff, shading to a pale ochre posteriorly. Each scale has a fine dark edge, and under incident light, the whole body has a violet sheen. The dorsal in both sexes is pale orange, with a black submarginal band that widens into a spot on the posterior distal margin, and a vivid neon blue border. The anal of the female is the same shade of metallic blue, the long simple gonopodium of the male being uncoloured. The ventrals are metallic blue in both sexes, and the caudal and pectorals are clear. The eye is the same shade of vivid blue. The blue colouration is structural, and hence strongly dependent upon the direction and nature of whatever lighting the fish is maintained under. The blue of the fins is particularly vivid under GroLux systems. It is interesting to note that the body color of fishes kept on a diet high in algal matter becomes a deep ochre colour that very nearly approaches orange.

This species is easily as handsome as the smaller *Rasbora*, species, and has similar requirements. Unlike *X. umbratilis*, *P. tico* has a definite preference for soft water, and displays its best colors under these conditions. Aside from this, its demands are practically identical to those of that species. A planted tank is recommended, and lively tankmates of similar size will go far in dissipating the initial timidity of this species in new surroundings. This species is also detritivorous in the wild and is capable of doing its owner a good turn with respect to a plague of filamentous algae. Dried food and the usual live foods are taken eagerly.

Broods average 25-30, and are delivered every 26-32 days. The fry are extremely small, but given a well-planted tank, the number of survivors will be high, as *P. tico* does not seem much given to parental cannibalism. Allowance should be made for the tiny mouths of the fry when they are fed. Once the ¼ inch mark is reached, growth is quite rapid, and maturity is attained six to eight weeks after birth under favorable conditions. As is the case with *X. umbratilis*, the fry of this species benefit from uncrowded conditions and from an abundance of green algae to pick at.

P. tico does not seem quite as strongly disposed as *X. umbratilis* to display that a little knowledge is a dangerous thing, and customarily males of this species display few difficulties in the proper choice of sexual object. The males engage in a stereotyped courting display before the females, which consists of a series of shimmying motions, made with dorsal spread almost to the tearing point and generally made in a position lateral and slightly frontal to the female. Males will also engage in spirited contests that usually take the pattern of a rapid head-to-tail circling, with fins spread to their maximum extent. Whatever the psychological damage that may ensue from these altercations, the physical damage produced thereby is nil.

Neither of these species has the flashy beauty of the cultivated strains of the more popular poeciliids, and hence, given the taste of most American aquarists, it seems unlikely that either will ever attain any wide popularity. Both are interesting fish, and it is to be admitted that very

few aquarium fish, and no commonly kept poeciliid species, is as well endowed with blue coloration as *P. tico*. Of interest to the selective breeder is the wide variability of *X. umbratilis* with respect to many morphological and colourational characteristics. There is a pronounced shortage of solid yellow aquarium fishes, and it seems to the author that *X. umbratilis* in its present form offers a promising starting point in that direction. The task certainly seems no more difficult than that of establishing the various platy colour strains that currently enjoy such popularity. Until such time as this goal is attained, both of these fishes will remain the sought-after objects of those interested in the less commonly offered poeciliid species.



Male *Xenophallus umbratilis*



Female *X. umbratilis*

Photographer's comments: My wife and I collected the fish pictured above from the Arenal basin of Costa Rica. *X. umbratilis* is widely but spottily distributed in the San Juan drainage of

Costa Rica and Nicaragua. Many years ago W. A. Bussing told me that his trawls in Lake Nicaragua collected *X. umbratilis* as well as the fishes he expected. There is considerable variation between populations. Some are clear bright yellow, like really good gold guppies. The size and form of males' dorsal fins varies too. I see *X. umbratilis* as a good candidate for selective breeding.

Like *X. umbratilis*, *P. tico* is widely but spottily distributed throughout the San Juan drainage; in Nicaragua it occurs as far north as the south bank of the Río Prinzapolka. American Livebearer Association's list of standard common names of livebearers says that *P. tico* should be called Pallid Widow. Given its normal colouration, Honey Widow seems more appropriate.



Male *Phallichthys tico*



Female *P. tico*



My wife extracted this male *P. tico* from a marsh near the base of Volcán Arenal. Poeciliids with veil tails are usually relatively weak swimmers. I believe that this one survived to maturity because he was protected by the dense emergent vegetation in which he lived. This photo is from a digitized Super8 film. Poor quality, but it makes the point.

Photos from *Dan Fromm*



Alfaro cultratus and *Phallichthys amates* San Juan drainage.



Alfaro cultratus male near Chiriqui Grande



Alfaro huberi female



Alfaro huberi male

The habitat of *Girardinichthys viviparus* (Bustamante, 1837)

By Kees de Jong



A male *Girardinichthys viviparus* . During the breeding season the males can become much blacker. (Photo Markus Heussen)

Introduction

A large proportion of the viviparous goodeids originating from Mexico are threatened in the wild by the disappearance of suitable habitats. The decline in habitat has a number of causes. The most important causes are the increase in wastewater and water consumption due to population growth, the introduction of alien species and the changing climate conditions resulting in periods with little precipitation. The reduction in habitat endangers the survival of many species. Some species now only live in one or a few isolated streams. One of the species for which this applies is *Girardinichthys viviparus*. López-Segovia Et al. (2024) have conducted research into the distribution of this species.

During the breeding season, the males of this small goodeid are pitch black. Furthermore, the broad dorsal and anal fins of the males are striking. The species is not always easy to keep. Keeping it outside in the summer is beneficial to the welfare of this species. *G. viviparus* was the first goodeid to be scientifically described.



Habitats of *G. viviparus* I: Zumpango. (Photo Kees de Jong)



Habitats of *G. viviparus* II: Chapultepec. (Photo Kees de Jong)



Habitats of *G. viviparus* III: Tecocomulco. (Photo Kees de Jong)



Habitats of *G. viviparus* IV: Alameda Oriente. (Photo Kees de Jong)

The original habitat of *G. viviparus* is the valley in central Mexico. This area includes Mexico City and part of the states of Mexico, Hidalgo and Tlaxcala. The species was abundant in the many lakes and wetlands there. Of this aquatic area only 2% remains. In 1957 there were 17 populations in the Valley of Mexico. Due to pollution and intensive water use populations disappeared. For example, the population in Lake Zumpango has disappeared ; here the species was found in 1976 but after that no more populations were found in the lake. One of the last populations lived in the Chapultepec Park in Mexico City. For many years, the *G. viviparus* kept in aquaria originated from this location. In addition, the species occurred in Xochimilco in Mexico City and Lake Nabor Carrillo in the state of Mexico. Dominguez-Dominguez et al. (2005) reported that the species had also disappeared from Lake Chalco and Lake Tescoco. The

decline in the distribution of this small goodeid was therefore extremely worrying.

There has also been good news to report in recent years. Miranda et al. (2008) indicated that the species occurs in Lake Tecocomulco. In 2013 I succeeded in catching the species there and breeding specimens from this catch (De Jong 2013a and 2013b). Hopefully, this population is still present among specialized aquarists. That this fish can sometimes be found in a surprising location was evident from the article by Gómez Márquez et al. (2013). They found the species in Alameda Oriente, a small recreational park near the Mexico City International Airport. A small lake in the middle of the city is enough to support a population of the species.

López-Segovia et al. (2024) searched for the species in the state of Tlaxcala, around Lake Tochac and Atlangatepec, the Tenexac Dam and the “jagüeyes”. The jagüeyes, which resemble ponds, are systems for collecting and storing runoff and rainwater in rural areas. They represent 96% of the water bodies in Tlaxcala and are used to provide water for human consumption, agriculture and livestock, but are also crucial for the survival of the scarce aquafauna. Many of these water bodies are disappearing due to poor maintenance, drying out due to rainfall shortages and changes in land use.

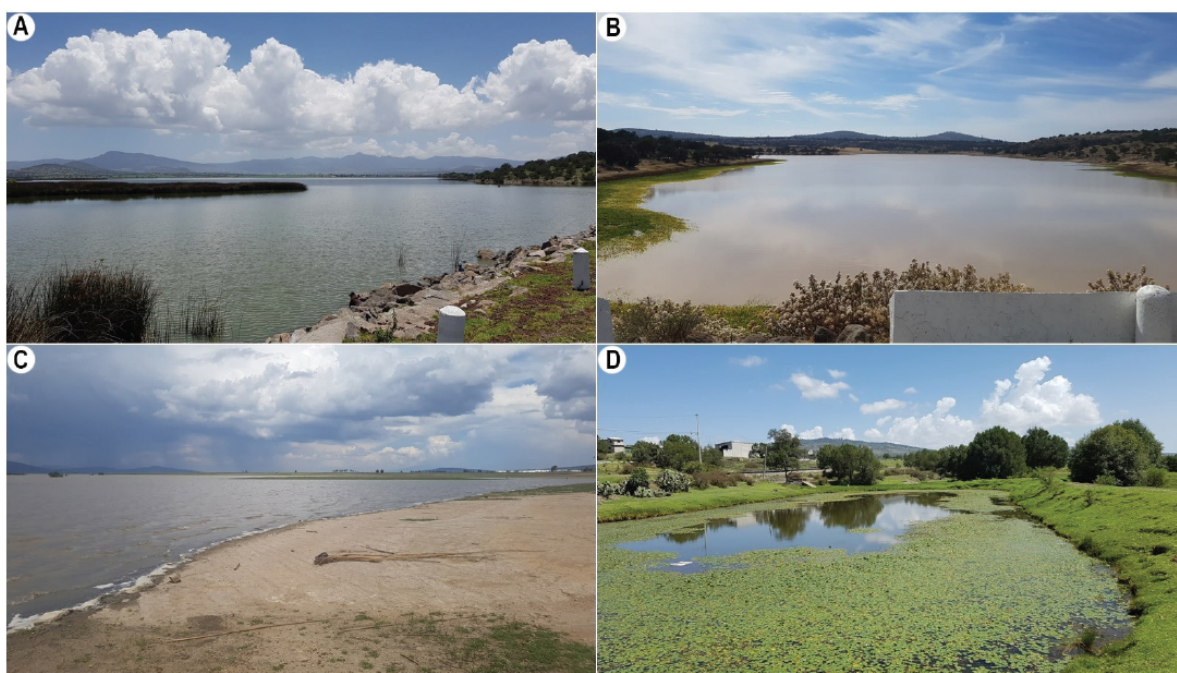


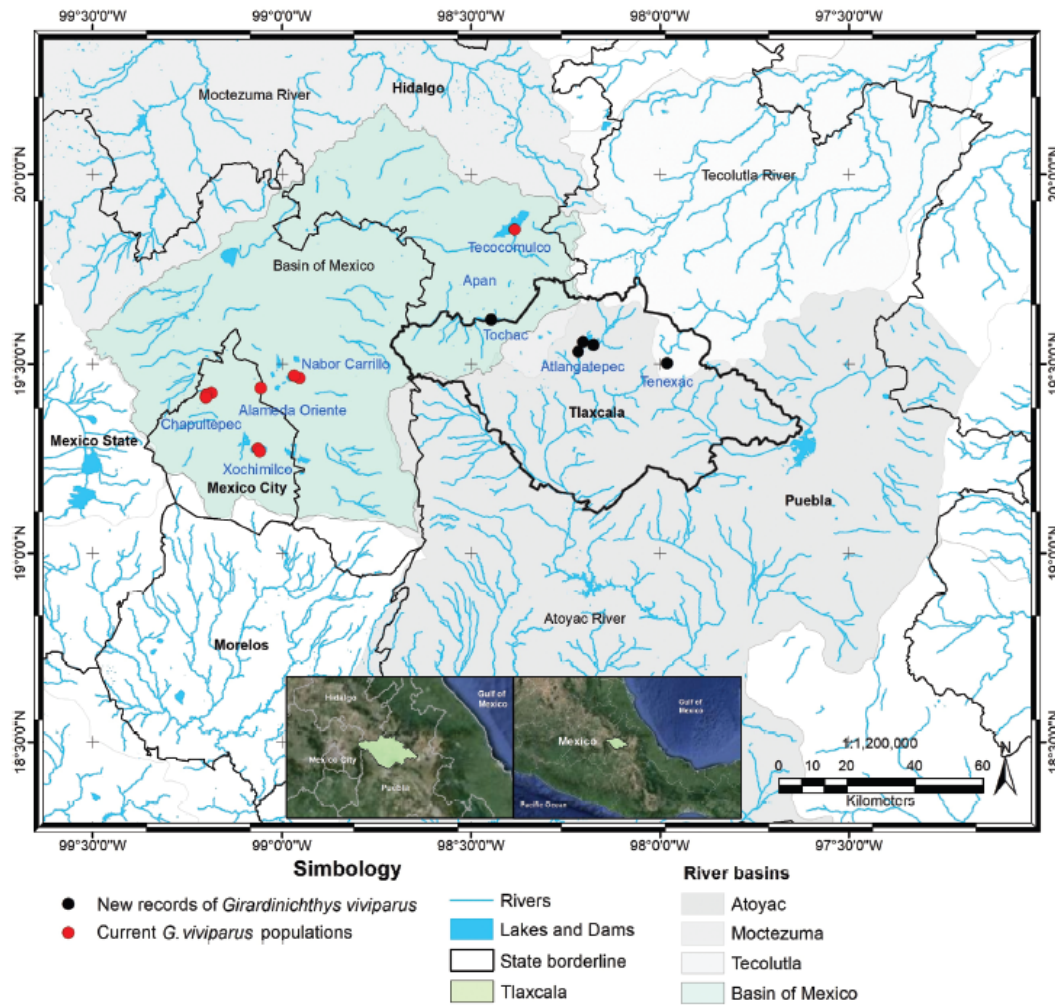
Figure 3. Aquatic systems where *Girardinichthys viviparus* inhabits the state of Tlaxcala A Atlangatepec Lake B Tenexac Dam C Tochac Lake D “Jagüey” in the locality of Loma Bonita, Atlangatepec.

Photos from López-Segovia et al. 2024

The study yielded six new locations in the state of Tlaxcala where *G. viviparus* was found. The fish were found in the central part (Lake Atlangatepec, Jagüeyes, the northwest (Lake Tochac) and the eastern part (Tenexac Dam) located in the upper basins of the Atoyac, Moctezuma and Tecolutia rivers.



A female *Girardinichthys viviparus* from Tecomulco. (Photo Kees de Jong)



Map from López-Segovia et al. 2024

Threats

It is, of course, positive that *G. viviparus* appears to occur in more places than was thought. López-Segovia et al. do have a number of reservations about this positive news. A large part of this water is polluted by the discharge of polluted water from urban and industrial use. The introduction of exotic fish species also poses a threat. Carp have been released for local fishing. But species originating from other areas of Mexico, such as *Chirostoma jordani* and *Algansea lacustris* are also being released in places. In combination with the longer periods without precipitation, the extraction of fresh water for consumption, industry and agriculture poses a threat to *G. viviparus*. López-Segovia et al. therefore advocate sustainable management and selective fishing of introduced species in order to minimize the impact on vulnerable species and protect them.



Figure 2. Specimens of *Girardinichthys viviparus* were collected in Tlaxcala (photographed *in situ*). Female (A) and male (B) specimens from Tenexac dam (CIFI 1598, 18.6–53.4 mm SL); male specimens (C, D) from the “jagüey”, Loma Bonita, Atlangatepec (CIFI 1710, 20.9–29.5 mm SL; female specimen (E) from Tochar Lake, (CIFI 1708, 21.5–48.2 mm SL); and male specimen (F) from Atlangatepec Lake (CIFI 1711, 17.9–31.2 mm SL). The scale bar: 1 cm.

Photos from López-Segovia et al. 2024

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Wild about Platies - Part two : Easy species

By *Derek Lambert*

[Note : *Before she died, Part Lambert very kindly gave me permission to use any of Derek's articles which had appeared in "Aquarist and Pondkeeper" magazine (which later had its name changed to "Today's Fishkeeper"). This article, the second in a short series by Derek, appeared first in the April 1995 issue of "Aquarist and Pondkeeper". All photos by Derek Lambert.*

Derek Lambert introduces three species of platy that adapt well to aquaria and will breed regularly, given a few basic considerations.



Above - Lake Catemaco - home of the appropriately known Catemaco Platy.

In part one of this series I am pleased [*Derek wrote*] to be dealing with one of my favourite livebearers, the Catemaco Platy. This species was the second of the wild platies that I kept; and although the original population in the hobby had little in the way of colour, it still had a quiet charm of its own. The other two species represent the old and the new. The Southern Platy was one of the very first platies to be described by science and Ander's Platy is one of the more recent.

1. Ander's Platy

Scientific Name : *Xiphophorus andersi*, Meyer & Scharthl, 1980.

Synonyms : None

This relatively new species was first described by Meyer M.K. & M. Scharthl (1980) in "Eine neue *Xiphophorus*-Art aus Vera Cruz, Mexico." *Senckenbergiana Biologica* **60 (3-4)**: pp. 147 - 151. The species was named for Prof. Dr F. Anders.

The type locality was the Rio Atoyac by Finca Santa Anita, near the town of Chico in the state of Veracruz, Mexico. This collection was made on 24th February 1979 by E. Hnilicka. The type specimen is a 33.6mm (c 1.3in) S.L. (Standard Length - i.e. snout to base of caudal fin) male. So far, this species is only known from the type locality.

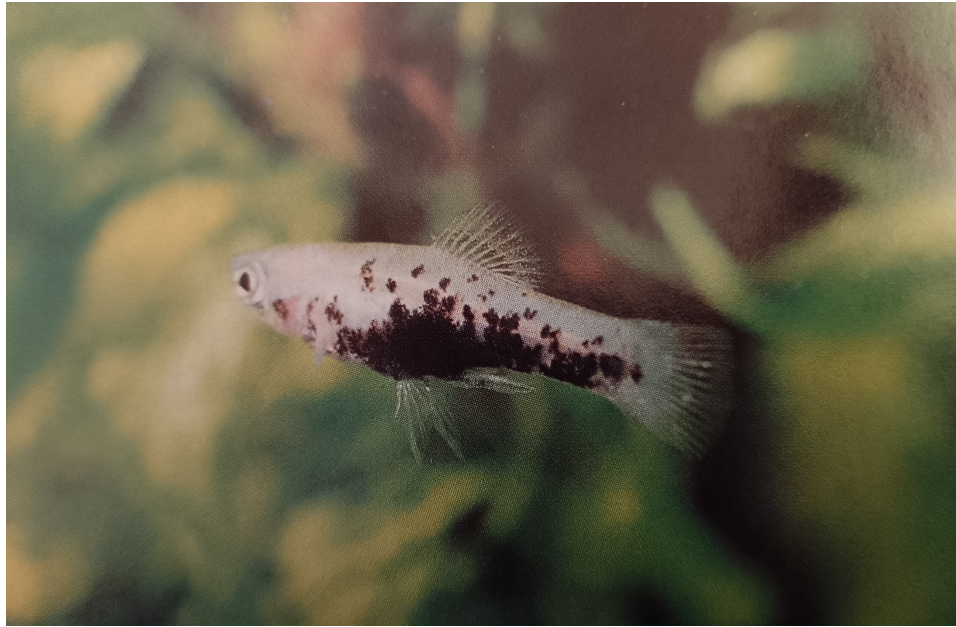
Males can achieve a maximum size of 2.5cm or 4cm (c 1in or 1.6in) depending on size morph, while females reach 7.5cm (3in). This is a relatively drably coloured, slender Platy whose males have a short sword. There are two size morphs in males of this species, with the large one showing a “Pseudo-gravid”spot (“pregnancy” spot found in females) above the gonopodium, the male mating organ. The body has an overall brownish coloration, becoming dirty white in front of the gravid spot. The fins are brown, with several darker crescents in the dorsal fin of both sexes.

Aquarium care

Ander’s Platy is a peaceful species which does well in most conditions. Ideally, a well-planted tank with good filtration suits them; alternately, large regular, partial water changes should be undertaken. In the wild, this fish lives near the banks of a fast-flowing river. If the adults are well fed and the aquarium heavily planted it is possible to breed this species in a natural colony situation, in which case, males will sex out more slowly and achieve a greater adult size.



Male Ander’s Platy - this is a small morph.



Black form of the Catemaco Platy (this is a male).

2. Southern Platy

Scientific Name: *Xiphophorus maculatus* (Gunther, 1866.)

Synonyms: *Platypoecilus maculatus* Gunther 1866.

Poecilia maculata Regan, 1906.

The Southern Platy was first described by A. Gunther (1866) in “*A catalogue of the fishes in the British Museum.*” **London, vol 6:** 368pp. The name refers to the black spot patterns so common in this species.

The type specimens are two females, the largest of which is 32mm (c1.3in) S.L. With a spotted dorsal fin and one spot in the caudal peduncle. The other fish is 30mm (c 1.2in) S.L. And has two tail spot patterns - “One spot” and “Comet”. These fish were purchased by the British Museum from Cuming, who obtained them from Mr. Salle. The collection site was only given as Mexico by Mr. Salle who, it is assumed, collected the fish himself.

The Southern Platy has a very wide range in nature. It is found in the Rio Jamapa in Veracruz state, Mexico, along the Atlantic coastal drainages, to Belize and Guatemala. It is restricted to the lower elevations and coastal plains, where the temperatures are somewhat warmer. This species has now been introduced to many parts of the world by man.

In nature, it is concentrated in spring pools, ditches and swamps. It can rarely be found in slow-moving streams and main river channels, The substrates are normally mud and clay, with dense stands of aquatic plants or emergents. It is rarely found where there is no plant life.

Males achieve a size of 4.0cm (1.6in) and females 5cm (2in). However, there are great size differences, depending upon which population the fish belongs to. All populations - irrespective of other factors - are deep-bodied and have rounded fins. There are different colour forms in nature, with differences between various populations, as well as between individuals of the same population.

Aquarium care

The Southern Platy is the perfect community fish, being small enough for most community tanks and totally peaceful. It will tolerate a wide range of conditions, but prefers warmer temperatures than most of the Swordtails, with about 26°C (79°F) suuiting them best.

Plenty of plants in the tank ,akes them feel at home and, if well fed and maintained in a species tank, they will flock breed. Broods are born on a monthly cycle and can number upwards of 40.



All the populations of Southern Platy (this female was collected in the Rio Jamapa) are distinguished by their deep bodies.



A beautifully coloured Southern Platy - male from the Rio Belize.



This Rio Jamapa Southern Platy male exhibits a black dorsal fin and body speckling.

3. Catemaco Platy

Scientific name: *Xiphophorus milleri* (Rosen, 1960)

Synonyms: None

The Catemaco Platy was first described by Donn E. Rosen (1960) in “Middle-American poeciliid fishes of the genus *Xiphophorus*.” *Bull. Florida State Mus., biol. sci.*, vol. 5, No. 4 pp57 - 242. This species was named for Dr Robert Rush Miller, who collected it and many other new species of fish.

The type locality is a small tributary of Lake Catemaco about 2 miles southeast of the town of Catemaco. The holotype* is a male 23.2mm (0.9in) S.L. And the allotype* is a female 28.5mm (1.1in) S.L. (*see Part 1 which was in the last newsletter for definitions of these, plus other technical terms). Both fish were collected by R.R. Miller and M. Miller on 29th March 1957, together with 241 young to adult fish. It is only known from the lake and its surrounding feeder streams.

In general, this species is found in the shallow areas close to the banks of the lake, where there is some growing vegetation, but it is most prolific in the small shallow streams which flow into the lake, where there are considerably more growing plants and hiding places.

Different size morphs of this species exist, with males from 1.5cm up to 3cm (0.6 - 1.2in) long and females up to 4.5cm (1.8in). Despite its very limited range, this small platy has also evolved into a number of different colour morphs. The commonest form has a brownish-green body colouration fading to white on the belly.

The male may exhibit fine black speckling, particularly towards the rear of the body. Where the lateral line meets the tail there is a single dark spot. The fins in general are clear, with the dorsal having two dusky crescents, one in the mid region of the fin and the other at the edge.

Other morphs include a black form in which the fine black speckles on the male are intensified, so that the fish is almost completely black. Females of this strain usually have several black stripes along the flanks. This seems to be the smallest morph, with males barely reaching 1.5cm (0.6in). The largest morph has black stripes along the body of both sexes and the male may

exhibit a false gravid spot and a black gonopodium. Females of this morph, when in good condition, take on a dusky appearance over the ventral regions. Full adult size for males of this strain seem to be about double that of the black form, and even the females are larger.

Aquarium care

This is an easy fish to maintain in the aquarium, being at home both in a species tank or a community tank with other small peaceful fish. While good tank conditions are appreciated, this species will stand a certain degree of neglect. Ideally, the temperature should be approximately 23°C (73°F) but they will tolerate anywhere between 20 - 27°C (68 - 81°F), without any obvious signs of stress. In mimicry of their natural habitat, some plant cover in the tank is appreciated, as it gives the females somewhere to hide from the over-amorous males.

The diet should consist of small live foods such as *Daphnia* and baby brine shrimp, but they seem to survive on a diet consisting of flake food alone, if that is all that is offered. Broods are born on a monthly cycle, with up to 50 being known, but about 20 being average.

The fry grow fairly quickly and males start to sex out in only three months. These early maturing males will remain small and carry the genes for small size and early maturation. Therefore, careful selection of your breeding stock is a must, if the size is to be maintained over the generations.

The large morph strains of this fish are more prone to eating their fry, so it is wise to isolate a gravid female to give birth. Once the fry are about one month old, they can be returned to the adult tank. The small morphs can be colony bred without any problems.



This large morph Catemaco male has a distinctively marked (black) gonopodium.



A nicely speckled black morph female Catemaco Platy.

Diary Dates

1. Spring Show and Auction - Bristol

When : Sunday 13th April

Where : Hengrove Community Centre,
Fortfield Road,
Bristol,
BS14 9NX.

What : Guest Speaker, Q & A session, Livebearer Show, Fancy guppy show, Sales table / Trade tables, Raffle, Hot & cold drinks, cakes and sandwiches,

Auction: For your auction letter and booking form, please see the BLA website.

2. Summer Show Number 1 - Basingstoke

When : Sunday 1st June.

Where : Kempshott Village Hall,
Pack Lane,
Basingstoke,
Hampshire,
RG22 5HN.

Further details will be on the BLA website nearer to the time.

Auction: For your auction letter and booking form, please see the BLA website.

3. Summer Show Number 2 - Cumbria

When : Sunday July 6th

Where : Harraby Catholic Club,
Edgehill Road,
Carlisle,
CA1 3PQ.

Further details will be on the BLA website nearer to the time.

Auction: For your auction letter and booking form, please see the BLA website.

4. Autumn Convention - Midlands

When : Saturday and Sunday, September 20th and 21st.

Where : Shenstone Village Hall,
Barnes Lane,
Shenstone (Near Lichfield),
WS14 0LT.

Further details will be on the BLA website nearer to the time.

Auction: For your auction letter and booking form, please see the BLA website.