

Xiphophorus meyeri, Muzquiz platyfish



Female(sp/+)



Male (+/+)



Male (sp/+)

Strain code: meyeri

Phenotypes scored: Pigment pattern, spotted (sp) or wild type (+).

Introduction:

The Muzquiz platyfish was collected from Melchor Muzquiz, Coahuila, Mexico in 1983. Dr. Schartl shipped the progeny of wild-caught fish to the New York Aquarium in September, 1983. Two lines displaying a difference in melanophore pigmentation were identified, and have been maintained since that time. The spotting pattern is a polygenic species-specific trait. Variation at an autosomal locus controls its presence or absence. A recessive allele acts as a suppressor for spotting. Evidence for this view is provided by the observation that when unspotted *X. meyeri* are hybridized with unspotted *X. maculatus* all F1 progeny develop deep lying spots at a somewhat reduced rate. In the back-cross generation to *X. maculatus* the spotting is highly variable and becomes significantly reduced (Kallman unpubl.). The pattern is caused by deep lying macromelanophores arranged around blood vessels and myoseptae along the flank.

Sex determination / sexing:

The male of this species is heterogametic, XY; the female is homogametic, XX. Fish are sexed at about 1.5 months of age, and become mature at 3 months of age.

Scoring:

Fish are scored for pigment pattern, spotted (sp) or wild type (++), when being sexed. Only score this stock with the naked eye, do not use the dissection microscope. Upon close inspection with the dissection scope one may notice very small deep lying body spots on a + fish since the fish actually carries the spotting gene, it is only suppressed.

Maintenance:

Each generation is propagated setting up 3 to 6 matings. Occasionally generations have seen a high number of deformed offspring termed sinkers due to their inability to swim properly. If this situation should arise, it is good to set up the additional matings to ensure viable offspring. In the mating scheme at least 2 matings should include a sp fish and a + fish; and at least one mating should be a cross between 2 + fish:

sp female	(x)	+ male
+ female	(x)	sp male
+ female	(x)	+ male

Stock source:

On Jan. 6, 1993, seventeen *X. meyeri* were shipped to the Xiphophorus Stock Center. Six fish were wild type, or unspotted (4 females, 2 males), and eleven were spotted (4 females, 7 males). Another shipment of *X. meyeri* was received on Jan. 21, 1993, containing 10 fish (5 females, 5 males); all fish were wild type (+).