

*Xiphophorus montezumae*, Rascon



Female



Male (++)



Male (m+)

Strain code: Rascon

Phenotypes scored: Macromelanophore pattern (M) and wild type (+)

Introduction:

This strain descended from fish collected near Damian Carmona, north of Rascon, San Luis Potosi, Mexico. These fish were collected from the Rio Ojo Frio in the Rio Gallinas system by Kallman and Morizot in 1983. Representatives of this stock were first shipped to the Stock Center in two stages, in 1992 and 1993. This strain is polymorphic for a macromelanophore pigment pattern, which is controlled by a dominant autosomal allele, M. Unlike other *X. montezumae* populations, males from the Rascon population do not show distinctive dorsal fin patterns.

The first shipment of Rascon fish to the Stock Center arrived on October 21, 1992, and was comprised of two pedigrees with 6 spotted (heterozygous, M+) females and 6 wild type males. The next shipment came on May 12, 1993, and contained two pedigrees with a total of 21 females and 22 males. This shipment contained some fish of each sex that were heterozygous for the M/+ alleles.

Sexing:

Fish are sexed at 2 to 3 months of age. The chromosomal mechanism for sex determination is unknown in this species, but sex ratios are close to 1:1.

Scoring:

Expression of the macromelanophore pattern is highly variable. Phenotypes can range from numerous irregular and variable size spots on the flank, to a single, small spot extending from the mid-lateral line. Often irregular spot(s) may be observed on the dorsal fin especially in males. A single spot on the fish is scored as positive expression of this gene. The pattern is more prominently expressed in males than in females, making scoring of females particularly difficult. Therefore, it is best to score the fish when they are mature, just prior to mating. Look carefully for small, black (not brown) spots that may be hiding in the mid lateral line. A deep bronze to red coloration is produced by rows of pterinophores in a few males in all populations, perhaps a sign of dominance.

Stock Maintenance:

5 to 8 matings should be established for each generation to ensure production of enough pedigrees and fish. Typically 3 to 5 matings contain one fish that is M+ and one that is ++. Also in the same generation 2 to 3 matings should be set up with fish that are all presumed to be ++. This will help ensure the + allele is not lost in the event a fish is improperly scored. All matings should be re-scored upon fixing and all offspring should be scored and tallied.

Stock source:

Prof. Klaus Kallman, the New York Aquarium, 10/21/92 and 5/12/93.