

*Xiphophorus maculatus*, Usumacinta Platy



Female



Male

Strain code: Up-2

Phenotypes scored: Pigment patterns: spotting pattern # 4 (Sp-4); iris yellow (Iy).

Introduction:

The Up-2 stock was collected in 1963 from the Rio de la Pasion (Rio Usumacinta system), Alta Verapaz, Guatemala. The sex chromosomes, W and Y, segregate in this stock; the W chromosome carries no color pattern alleles. The Y-chromosomes carry two different pigment genes: for iris yellow (Iy) or the macromelanophore spotting pattern #4 (Sp-4). Both color patterns are displayed in males and females. No tail patterns occur in this stock.

Females have been documented to display more than one phenotypic color pattern, and dissection revealed that these females contained undifferentiated gonads. This indicates that the females were YY with some secondary sex determining mechanism in effect.

Sex determination / sexing:

Sex determination in this stock is WY / YY. Up-2 broods are sexed at about 2 months of age.

Scoring:

When fish are mature they are scored for Iy and Sp-4.

Maintenance:

The Up-2 stock is maintained through reciprocal crosses among lines, ensuring that the 2 Y chromosomes are present in each mating. The typical mating scheme may resemble the following;

WY<sup>Sp-4</sup> (x) Y<sup>Iy</sup>Y<sup>Sp-4</sup>

or

WY<sup>Iy</sup> (x) Y<sup>Iy</sup>Y<sup>Sp-4</sup>

or

WY<sup>Sp4</sup>(x) Y<sup>Iy</sup>Y<sup>Iy</sup>.

This scheme ensures that the two Y-chromosomes are maintained in the following generations.

Stock source:

Prof. Klaus Kallman, the New York Aquarium, 2/18/93.