

*Xiphophorus hellerii*, Lancetilla



Female



Male

Strain Code: Lance

Phenotypes scored: Sword color: orange (or) and green (gr)

Introduction:

The History of the HX and Lancetilla strains: Dr. Gordon collected the progenitors of the strain(s) in the Rio Lancetilla, Honduras, 1951. He called this strain “Hx”. “H” stands for Honduras and “x” for *Xiphophorus*, to wit “Honduras *Xiphophorus*”. The stock was heterozygous for the macromelanophore pattern Db<sup>2</sup>. Soon after the fish arrived in his lab in New York, he sent a subset of Hx fish to Dr. Curt Kowsswig in Istanbul. In Turkey he designated the stock “lancetilla.” Eventually the Hx strain died out in New York.

Dr. Kowsswig returned to Hamburg, Germany, in 1957 and brought the Lancetilla fish with him. During the next 40 years a subset of the Lancetilla stock was disseminated to other laboratories: Dr. Anders, Dr. Schartl and Dr. Schroder. When Dr. Kallman visited Dr. Schroder’s lab in 1993 he returned the Lancetilla fish to New York and reverted the stock back to the “Hx” designation. While the Hx stock and the Stock Center was breeding poorly in the mid 1990’s more of the Lancetilla fish were obtained from Dr. Schartl’s Lab at the University of Wurzburg, Germany in 1996. This stock continues to be termed Lancetilla. While the Lancetilla stock expresses bi-colored swords, these fish do not possess the Db-2 pattern.

Sex determination/sexing:

Sex determination is presumed to be WY / YY. Fish are sexed at 1.5 to 2 months of age and mature at about at 3 to 4 months of age.

Scoring:

Sword color is scored in males when they reach sexual maturity. However, the sword color differences are not as pronounced as observed in the Hx strain, making scoring more

difficult. For the most accurate assessment, fish must be anesthetized and scored with a dissection microscope on a black background.

Stock Maintenance:

Matings are designed to preserve both the orange and green alleles for sword color. Two lines, defined by sword color, are maintained: a green line, and an orange-green line. Maintenance of the green line requires mating a female from the green line (W Y-gr) with a male expressing green sword color (Y-gr Y-gr):

$$WY^{gr} (x) Y^{gr} Y^{gr}.$$

The orange/green line requires mating a female from the green line (W Y-gr) to a male exhibiting an orange/green sword (Y-or Y-gr):

$$WY^{gr} (x) Y^{or}Y^{gr}.$$

Females from the orange/green line are generally not used in stock maintenance and can be discarded if they are not needed.

Stock Source:

Dr. Manfred Scharl, University of Wurzburg, Germany, 9/6/96.