

*Xiphophorus hellerii*, Sarabia



Female



Male

Strain code: Sara-or  
Sara-gr

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

Introduction:

The Sarabia strain of *X. hellerii* was collected in 1963 from the Rio Sarabia near Oaxaca, Mexico (Kallman, 1975). A subset of this stock was given to Drs. Siciliano and Morizot in Texas and Dr. Vielkind in Vancouver. The stock was shipped to the Stock Center in early 1993. This strain is marked by a bright red stripe, extending from the eye to the caudal peduncle, and one to two horizontal rows of red spots on the dorsal fin. In the female, yellow spots are located on the ventral portion of the caudal fin, and yellow cells also appear in the anal and pectoral fins. This stock is polymorphic for sword color. Two alleles, orange and green, segregate in the stock, and the green allele is recessive to orange. The gene for sword color is Y-linked (Kazianis, 2005).

Sex determination / sexing:

The chromosomal sex determination for this stock is WY / YY. Fish are sexed at 2 to 3 months of age and mature around 6 months.

Scoring:

Expression for sword color is observed only in males from this strain, and a male will express either an orange or green colored sword. As the green allele is recessive, the green phenotype is seen only in males homozygous for this allele.

Stock maintenance:

Two strains are maintained for management of Sarabia. One strain is used to preserve the homozygous green phenotype (Sara-gr), and the other to maintain the orange allele in a homozygous state (Sara-or). Reciprocal crosses between pedigrees in the Sara-

gr strain are used for maintenance and to minimize inbreeding. The Sara-or strain is also maintained with reciprocal crosses.

Stock source:

The Stock Center received 3 males and 3 females from J. Vielkind, Vancouver, Canada, on 10/28/99 establishing the Sara-or strain. 4 males and 4 females were acquired from University of Texas, Science Park Research Division, on 1/24/00 establishing a separate Sara-gr strain.