

Xiphophorus maculatus, Jp163B



Female



Male

Strain code: Jp163B

Phenotypes scored: Spotted side (Sp), anal red (Ar), striped side (Sr), shoulder spot (ss), dot (D).

Introduction:

The Stock Center at San Marcos received Jp163B fish from the New York Aquarium in February, 1993; the fish originally shipped were from the 76th and 77th inbred generations. Currently, the stock housed at the XGSC is in the 94th generation of inbreeding.

This stock of *X. maculatus* is maintained for one X-linked gene, spotted side (Sp), and two Y-linked genes, anal red (Ar), and striped side (Sr). In addition, two autosomally inherited traits, one for shoulder spot (ss) and one for dot (D), are maintained in this stock (Kallman and Atz, 1966). The shoulder spot is expressed only in females, as a gene linked to Sr inhibits the expression of shoulder spot in males. These traits are fixed in this captive stock.

Two P-alleles exist in this stock, the same as with Jp163A. P-1, the earliest p-gene documented in *X. maculatus*, is linked to the X-chromosome. P-2, the second earliest, is linked to the Y-chromosome.

Sex determination / sexing:

The chromosomal sex determination in this stock is XX / XY. Fish are sexed at 1.5 to 2 months of age, and reach sexual maturity at about 5 months of age.

Scoring:

Jamapa Jp163B fish are scored for three sex-linked traits at about 4 months of age, i.e., when sexual maturity is reached: spotted side (Sp), striped side (Sr), and anal red (Ar). Fish should also be scored for 2 autosomally inherited color patterns ss and D.

Maintenance:

Six or more matings are initially set up to produce each new generation, depending on the demand for this stock. Previous generation matings are maintained until broods are produced by the following generation. The younger offspring of the previous generation are also maintained as backups, in case the subsequent generation fails to produce sufficient offspring to maintain the line. Once the successive generation is producing sufficient numbers of offspring, the previous generation matings can be fixed. The fish from the previous generation matings are generally retained for research or used in other matings for strain production. For example, extra fish should be kept for maintaining such stocks as YSdSr, YSdDr, XSrAr, Nigra, and hybrid production.

The first mating to produce a brood in each generation is assigned a pedigree of A, the second mating to produce a brood is designated by pedigree B, and the third mating to produce is designated C. This pedigree assignment system continues for all matings producing within a single generation. For example, the first mating to produce a brood in the 58th generation for Jp163B will have the pedigree number of Jp163B58(A), the second will have the pedigree number of Jp163B58(B), and so on.

The matings for the each generation are reciprocal crosses between the A, B, and C lines. For example, in setting up matings to produce the 59th generation, a female of pedigree Jp163B58(A) is mated to a male of pedigree Jp163B58(B), and vice versa; a female of the Jp163B58(C) pedigree is mated to a male of the Jp163B58(A) pedigree, along with the reciprocal cross. This scheme is followed until the desired number of matings is established.

Stock source:

Prof K. Kallman, the New York Aquarium, 1993.