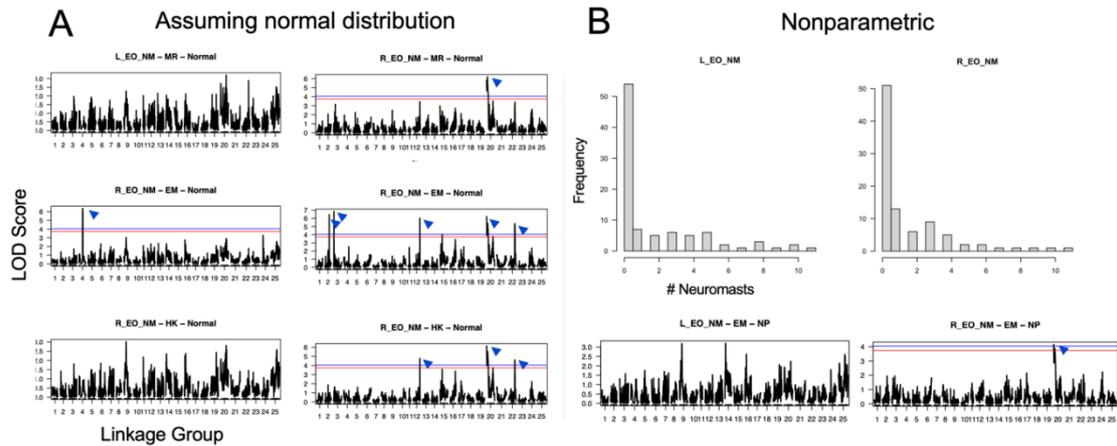
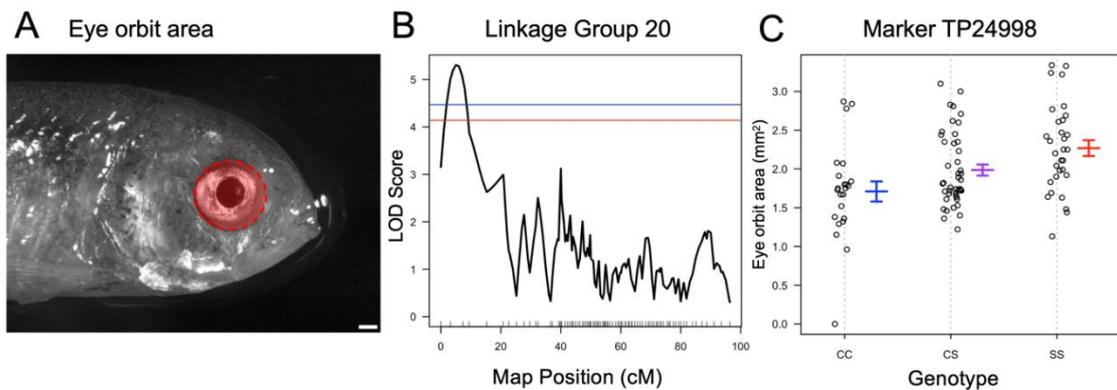


## Supplementary



**Figure S1.** Different statistical methods used during quantitative trait loci (QTL) analysis reveal different genetic associations. We employed three QTL mapping methods: maximum regression (MR), expectation maximum (EM), and Haley-Knott (HK) under normal (A) and nonparametric (B) conditions. Peaks that rose above the significance threshold ( $p < 0.05$ ,  $\text{LOD} = 4.01$ ) are denoted with a red arrow. QTL analysis was performed for the number of eye orbital (EO) on the left and right sides of the face.



**Figure S2.** Eye orbit area and EO neuromast number QTL co-localize to the same locus. Eye orbit size was measured in mm<sup>2</sup> (A) and was significantly associated with LG 20 ( $\text{LOD} 5.306$ ,  $p < 0.05$ ) (B). A larger eye orbit is associated with the homozygous surface fish genotype (SS) (C). White scale bar indicates 1 mm.