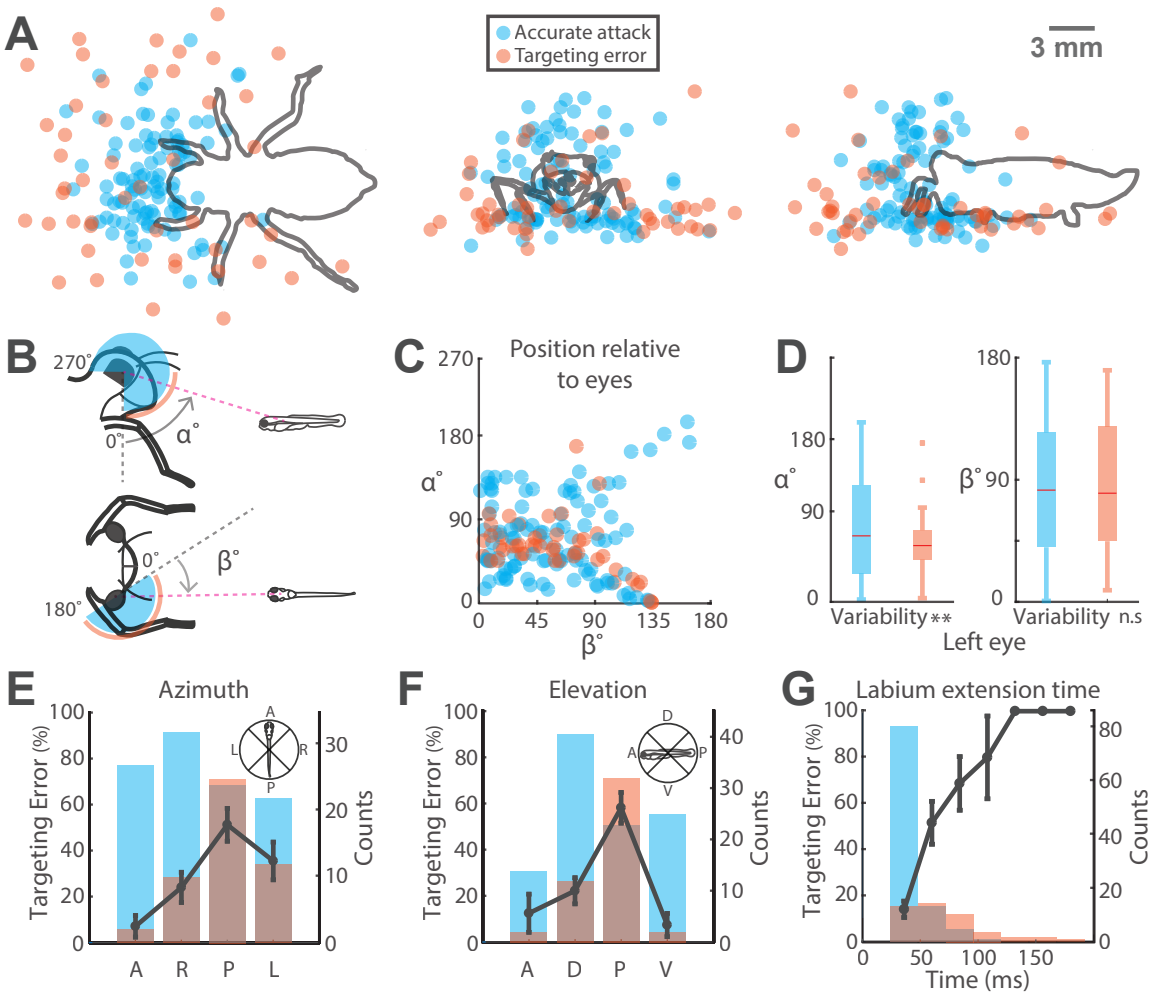

Fig. S1. A) Top (x-y), front (y-z), and side (x-z) view orthographic projections of 3D initial fish positions before the start of the labial strike with points colored to represent an accurate attack or a targeting error by the nymph. Legend provided in the figure (accurate attack n = 65, targeting error n = 28). B) Diagram describing angles α and β measuring the fish swim bladder position with respect to the nymph eye. C) Scatter plots of α and β on both eyes for fish positions not in physical contact with the nymph. D) Box-and-whisker plots demonstrating the distribution of α and β values for accurate attacks and targeting errors just for both eyes. Accurate attacks and targeting errors have significantly different variability of α values (Levene's test p = 0.01) but no significant difference in the medians. There is no significant difference in β values for accurate attacks and targeting errors. E) Targeting error probability based on the azimuthal position of the nymph head with respect to the fish. Azimuthal positions of the nymph were grouped by quadrants shown in the panel. Heights of each bar represent the count of labial strikes within that quadrant (right y-axis) and the color represents accurate attacks or targeting errors. The line plot shows the mean $\pm$ sem targeting error probability for each quadrant (left y-axis). Nymphs are significantly more likely to make a targeting error when in azimuthal quadrant P and significantly less likely to make a targeting error when in azimuthal quadrant A. (Kruskal-Wallis H test: $p < 0.001$, pairwise Mann-Whitney U tests with Bonferroni correction: all $p < 0.01$, number of nymphs = 5) F) Targeting error probability based on the elevation of the nymph head with respect to the fish. Nymphs are significantly more likely to make a targeting error when in elevation quadrant P. (Kruskal-Wallis H test: $p < 0.001$, pairwise Mann-Whitney U tests with Bonferroni correction: all $p < 0.01$, number of nymphs = 5) G) Histogram demonstrating the probability of the nymph making a targeting error based on the labium extension time to the fish position. Measured labium extension times are shown for accurate attacks but labium extension times for targeting errors were estimated with the labial motor volume model. Heights of each bar represent the count of labial strikes within that bin (right y-axis) and the color represents accurate attacks or targeting errors. The line plot shows the mean $\pm$ sem targeting error probability for each bin (left y-axis). Nymphs are significantly more likely to make a targeting error for longer strikes. (Kruskal-Wallis H test anova: $p < 0.001$, pairwise Mann-Whitney U tests with Bonferroni correction: all $p < 0.01$))