

FOV model report

8_5_2024

Model V4 with 6 fish

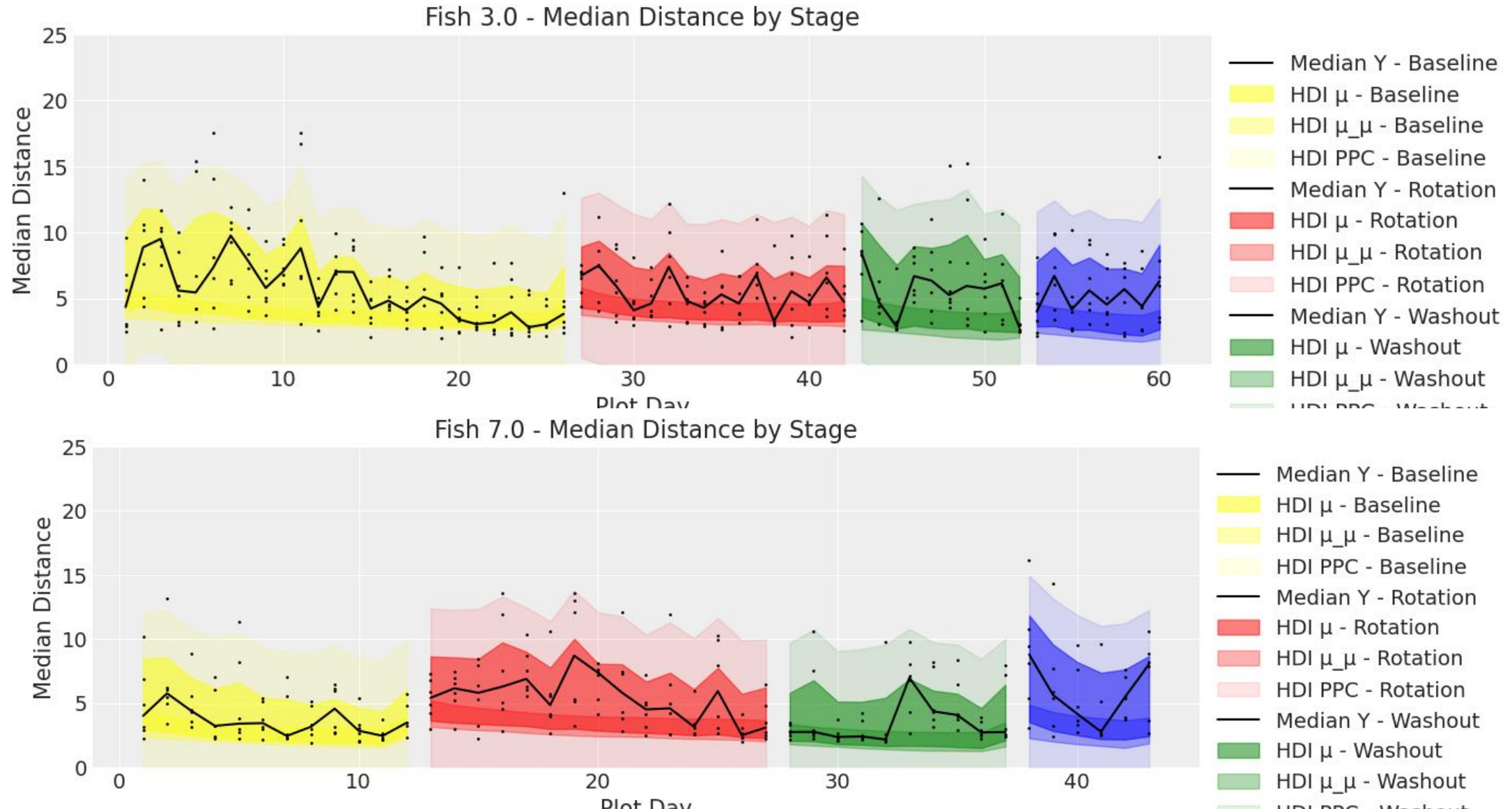
Plots we care about:

1. Learning curve for each fish in each stage
2. Violin plot of $A_{\mu\mu}$ across fish for Rotation stage
3. Violin plot of Learning Rate across fish for Rotation stage
4. Posterior plots of $\mu_{A\mu\mu}$ across fish for Rotation stage
5. Posterior plots of

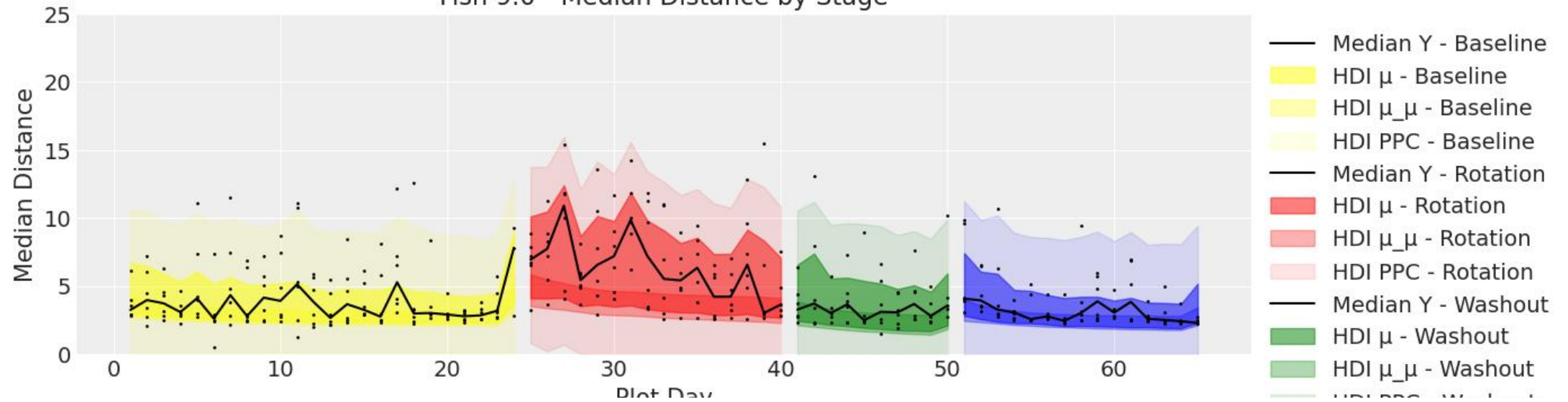
$$\sigma_{LR} = \frac{1}{N_f} \sum_1^{N_f} (LR - \overline{LR})^2$$

Below are the output of distance model

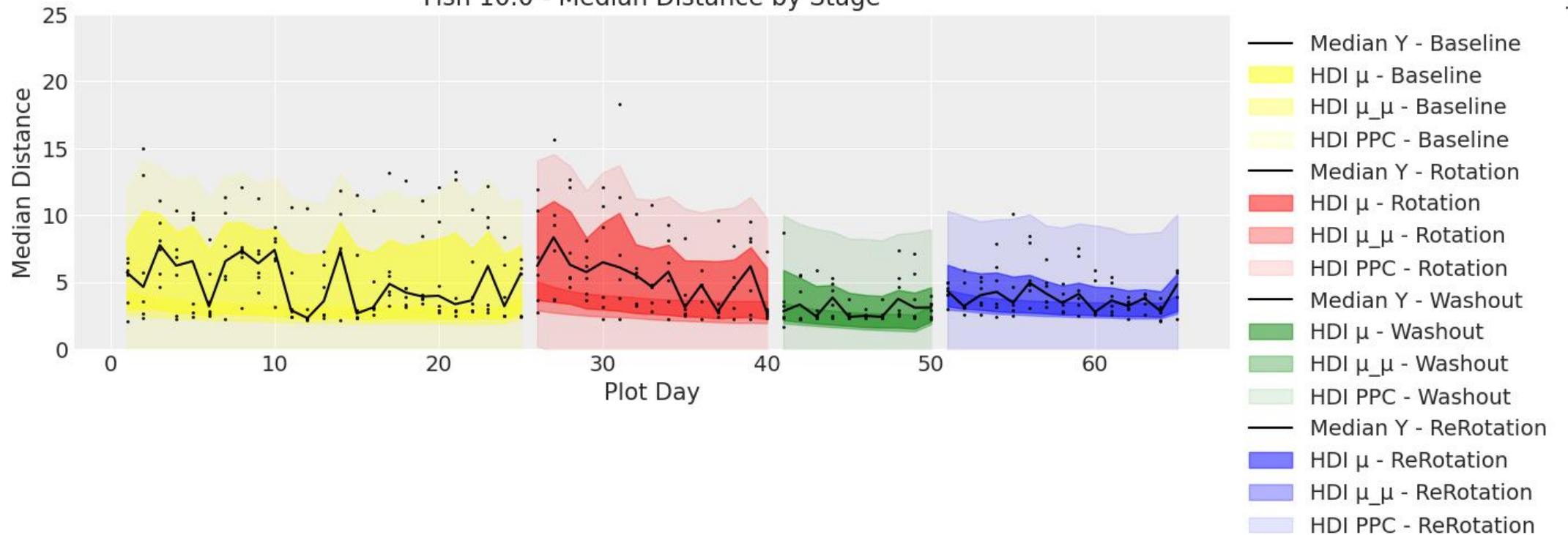
1. Learning cruve for each fish in each stage



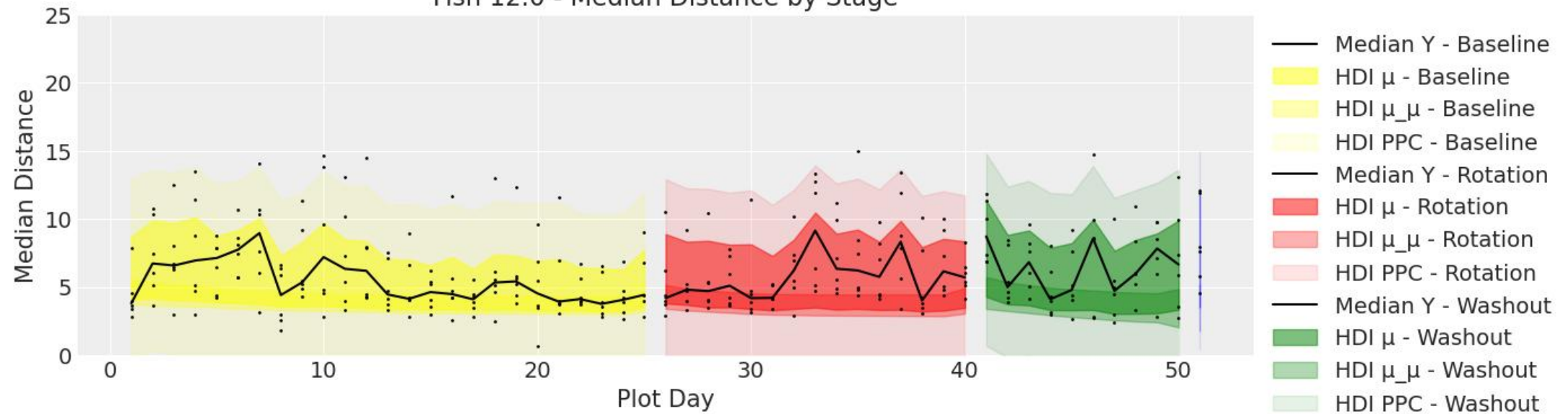
Fish 9.0 - Median Distance by Stage



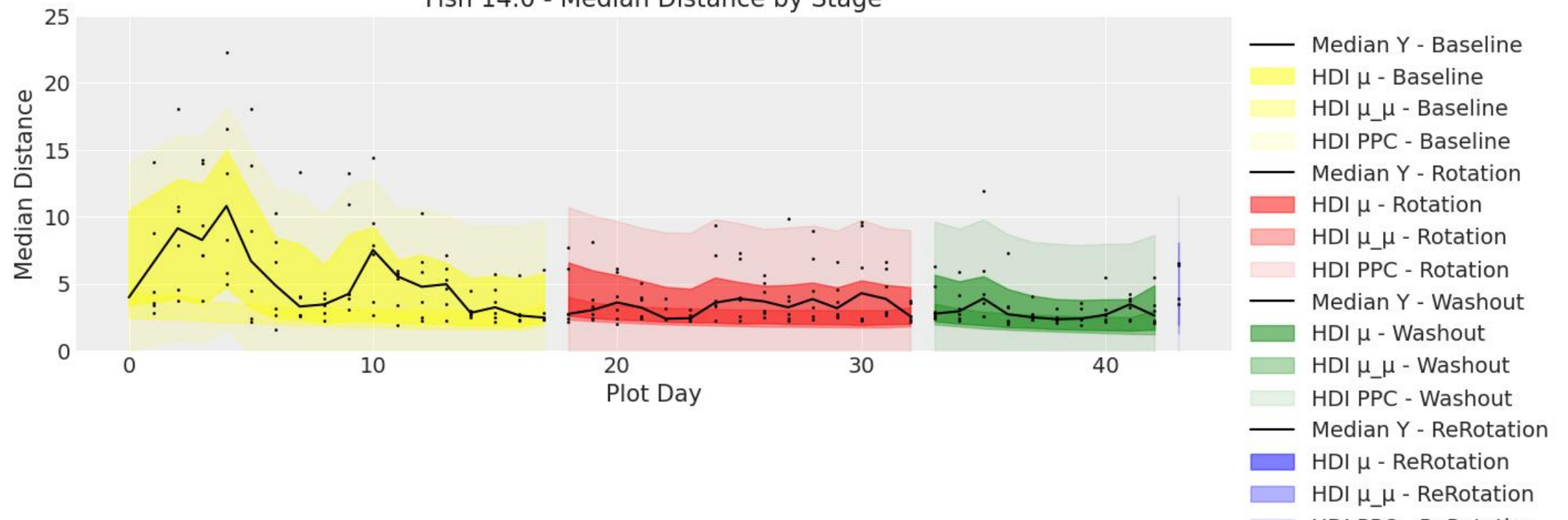
Fish 10.0 - Median Distance by Stage



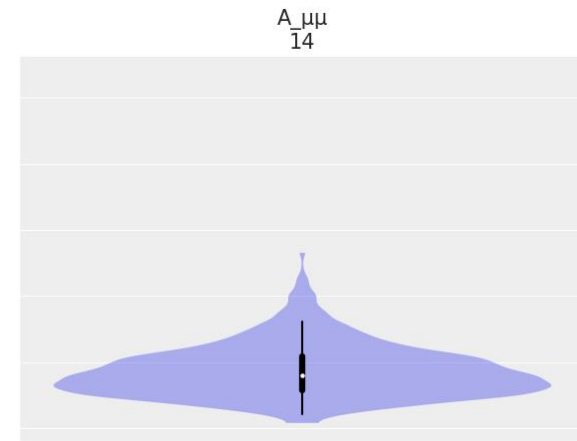
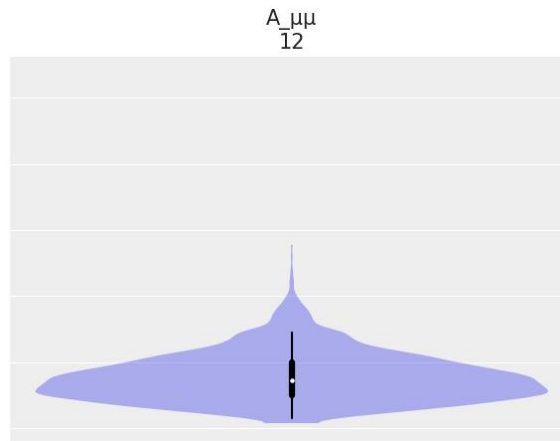
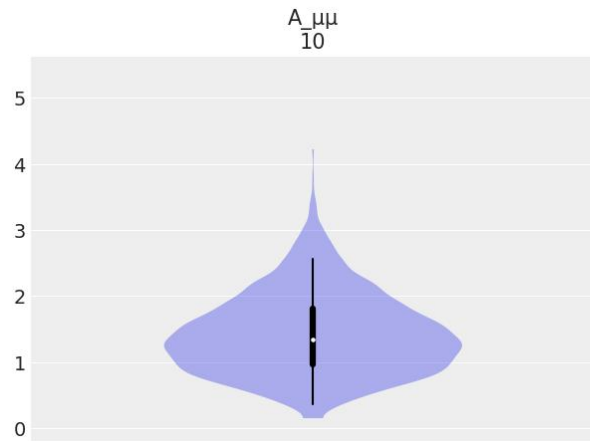
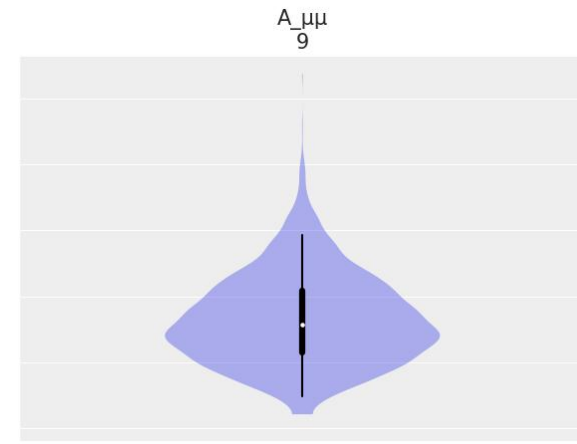
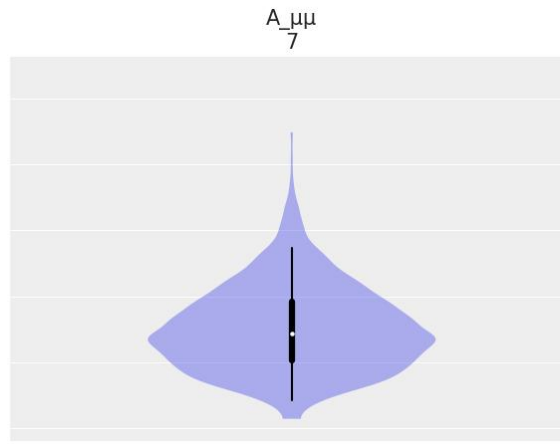
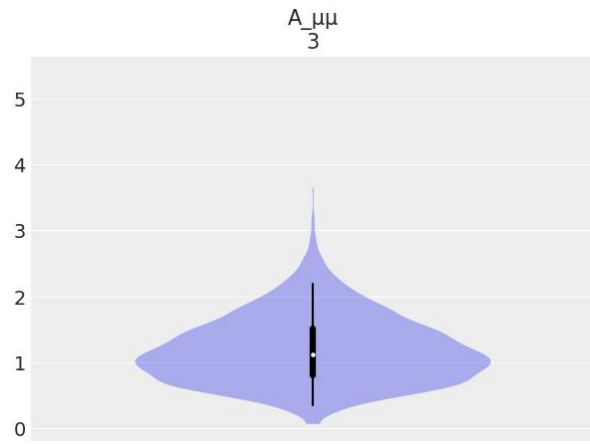
Fish 12.0 - Median Distance by Stage



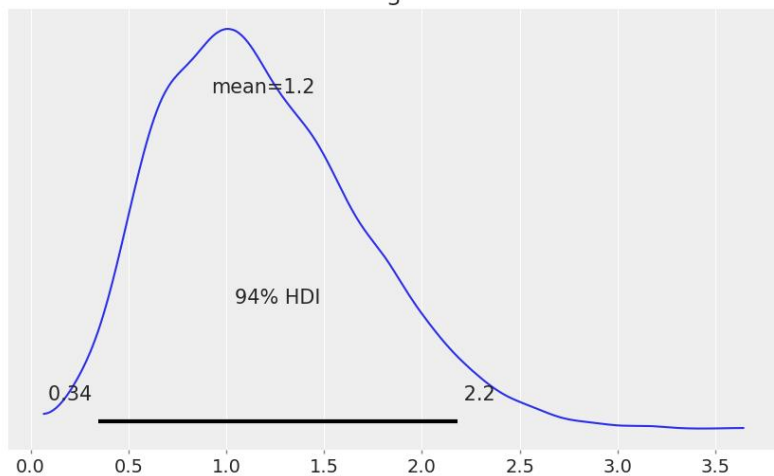
Fish 14.0 - Median Distance by Stage



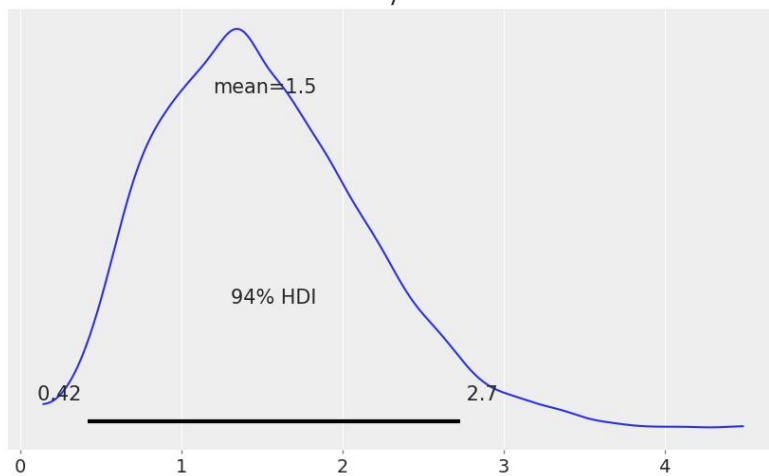
2. Violin plot of $A_{\mu\mu}$ arccos fish for Rotation stage



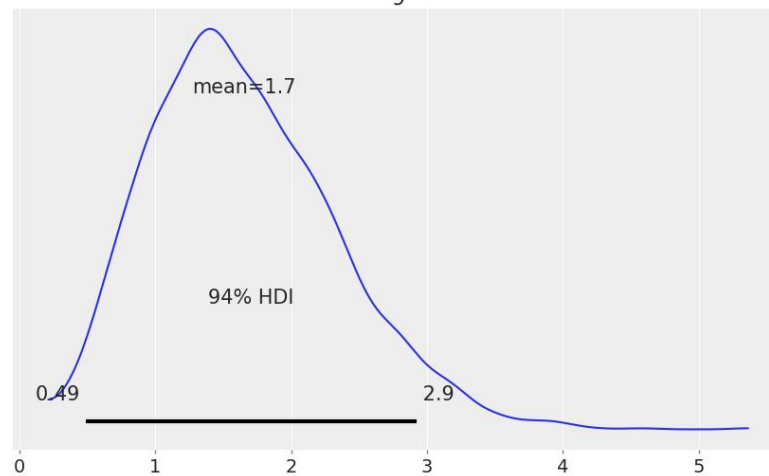
$A_{\mu\mu}$
3



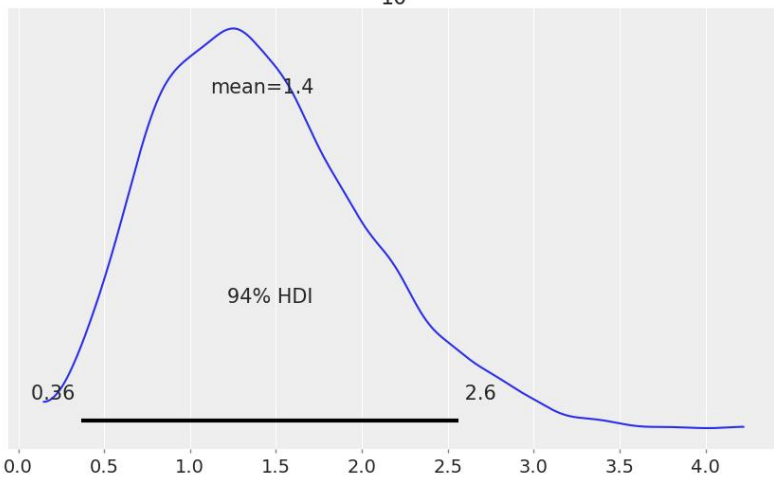
$A_{\mu\mu}$
7



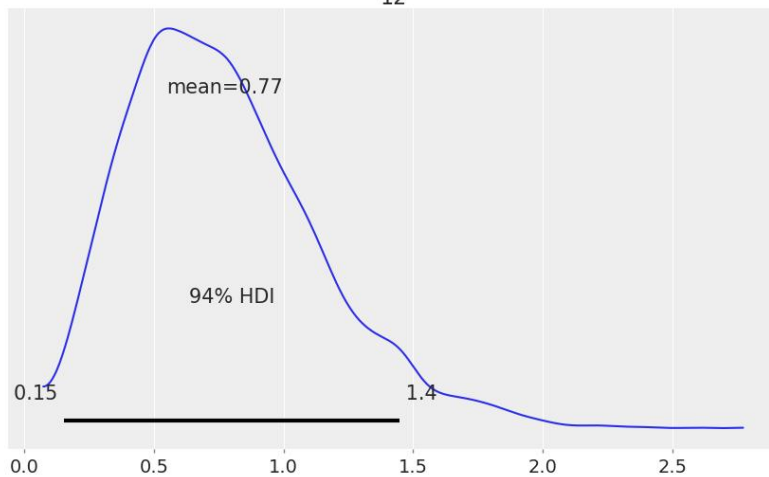
$A_{\mu\mu}$
9



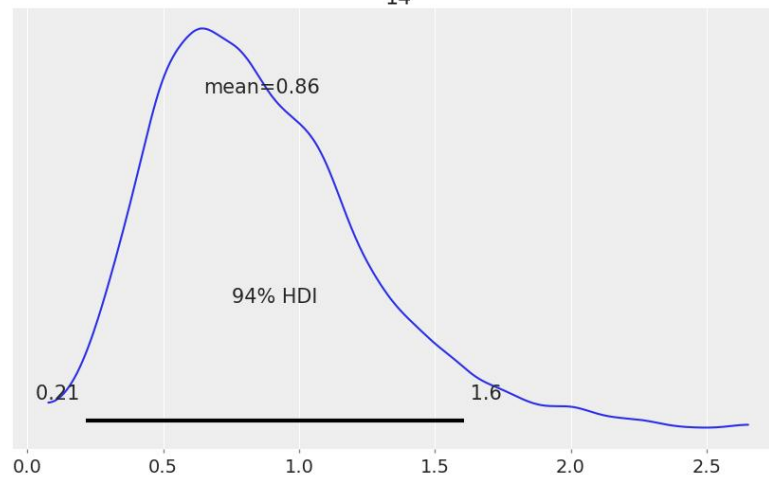
$A_{\mu\mu}$
10



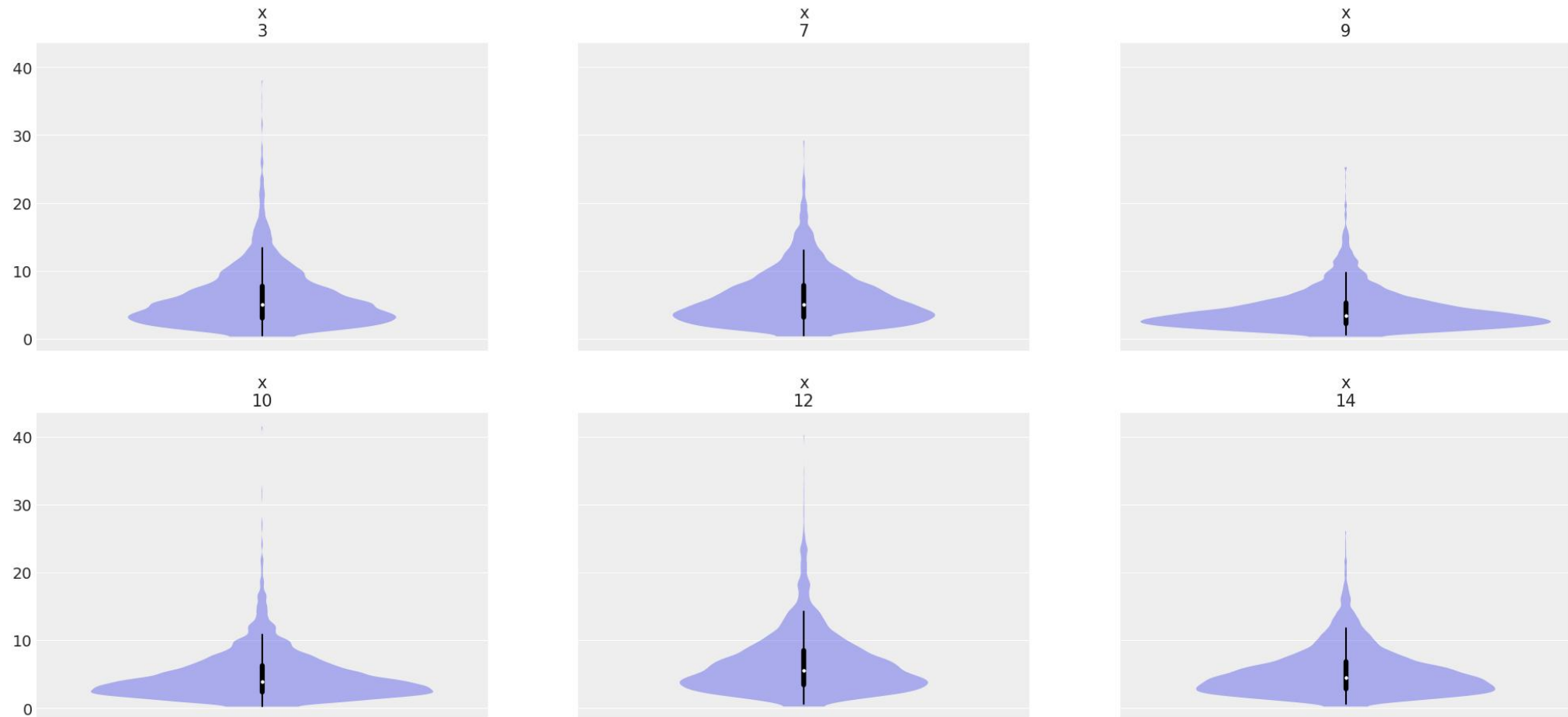
$A_{\mu\mu}$
12



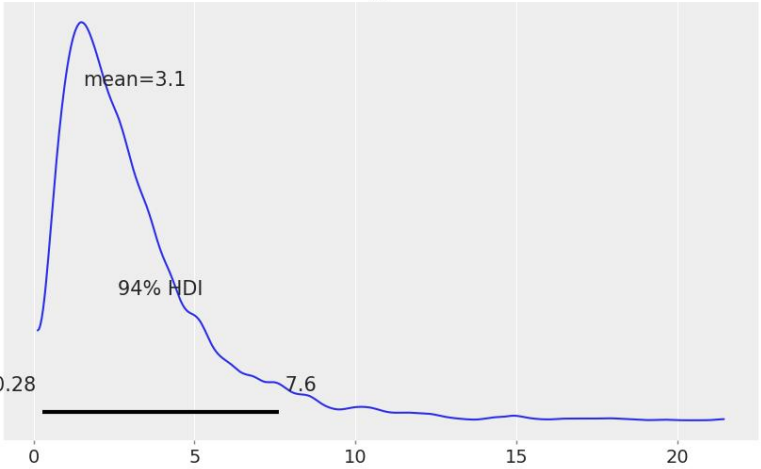
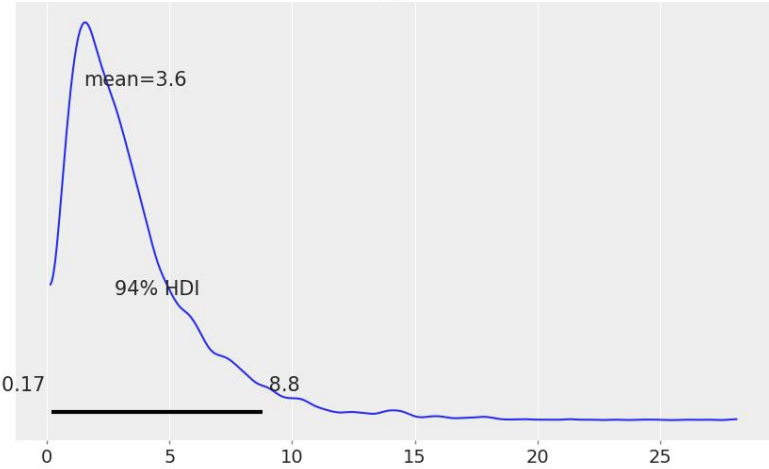
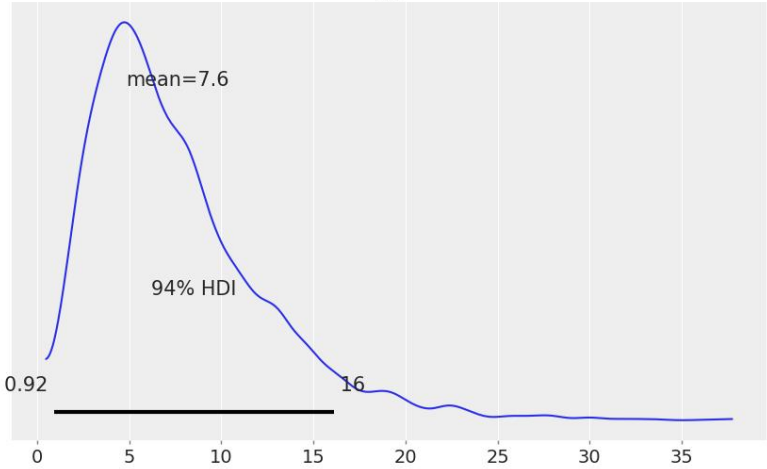
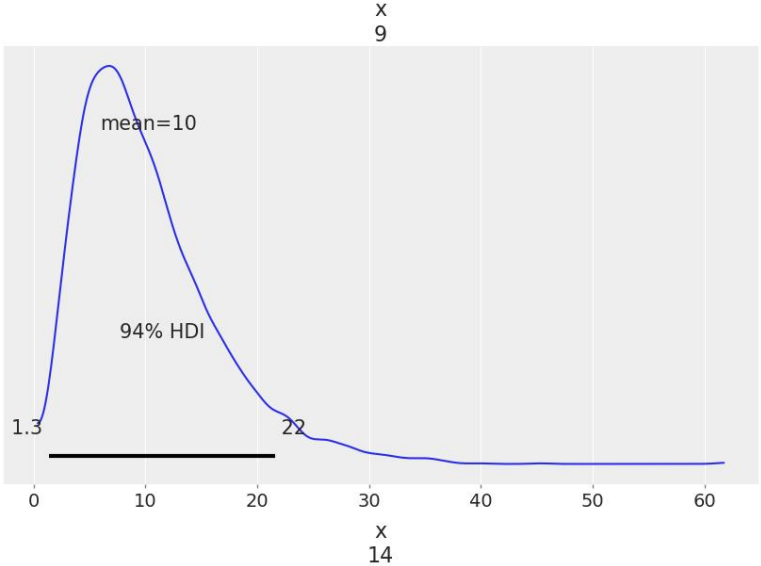
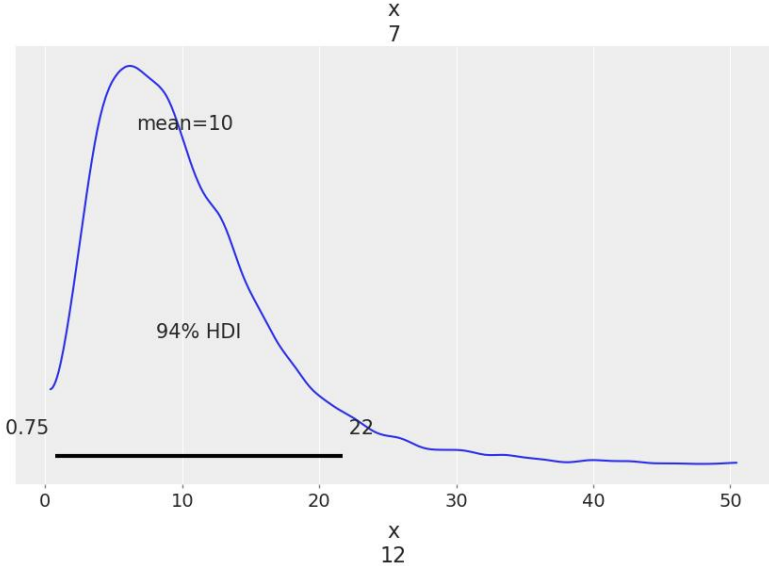
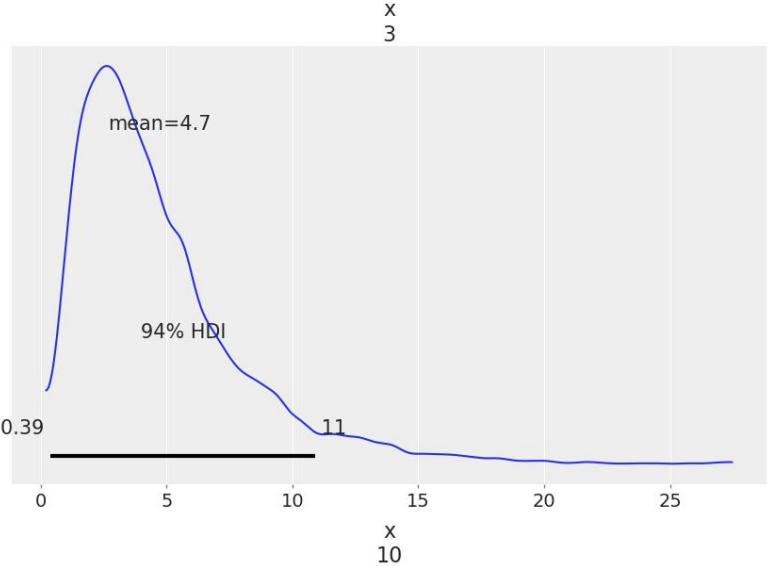
$A_{\mu\mu}$
14



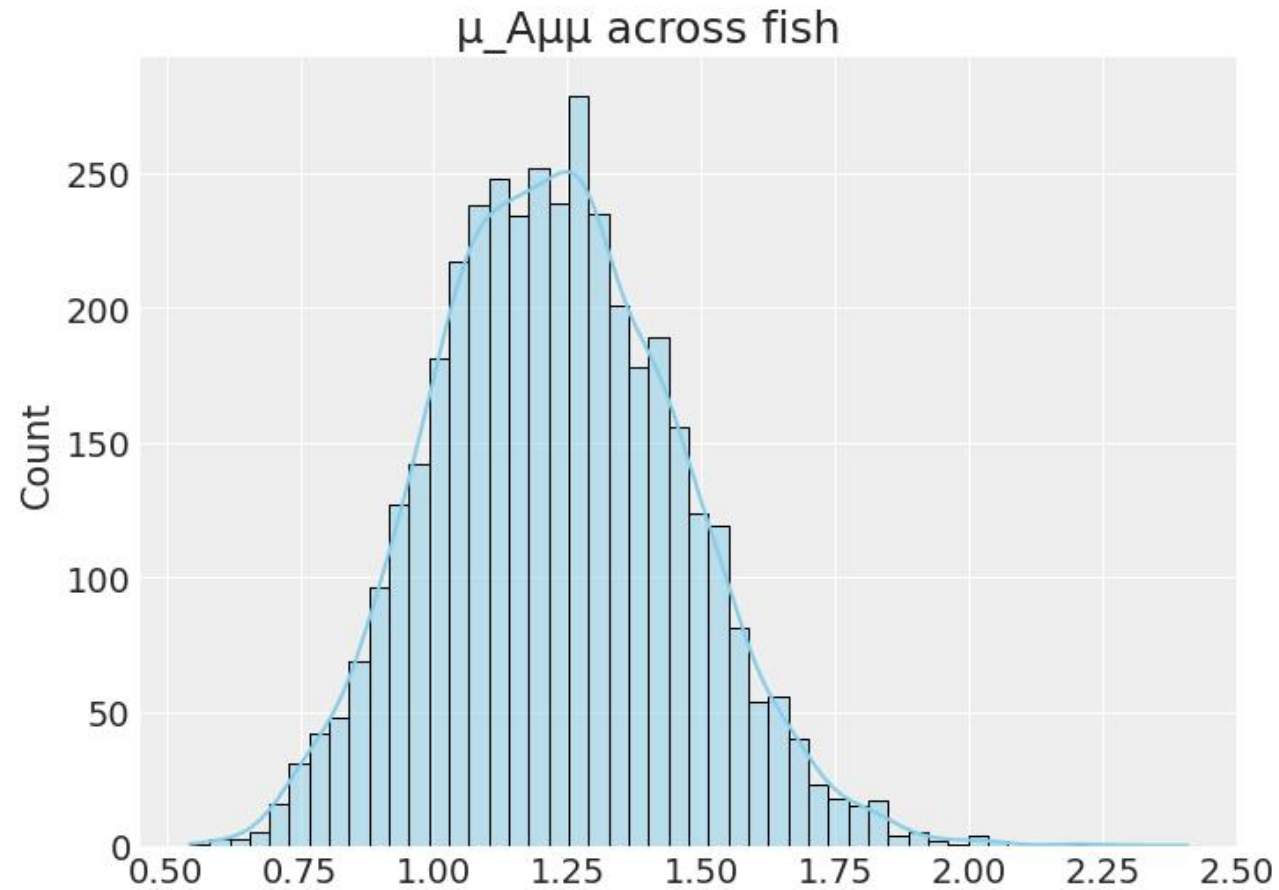
3. Violin plot of Learning Rate across fish for Rotation stage



Learning Rate

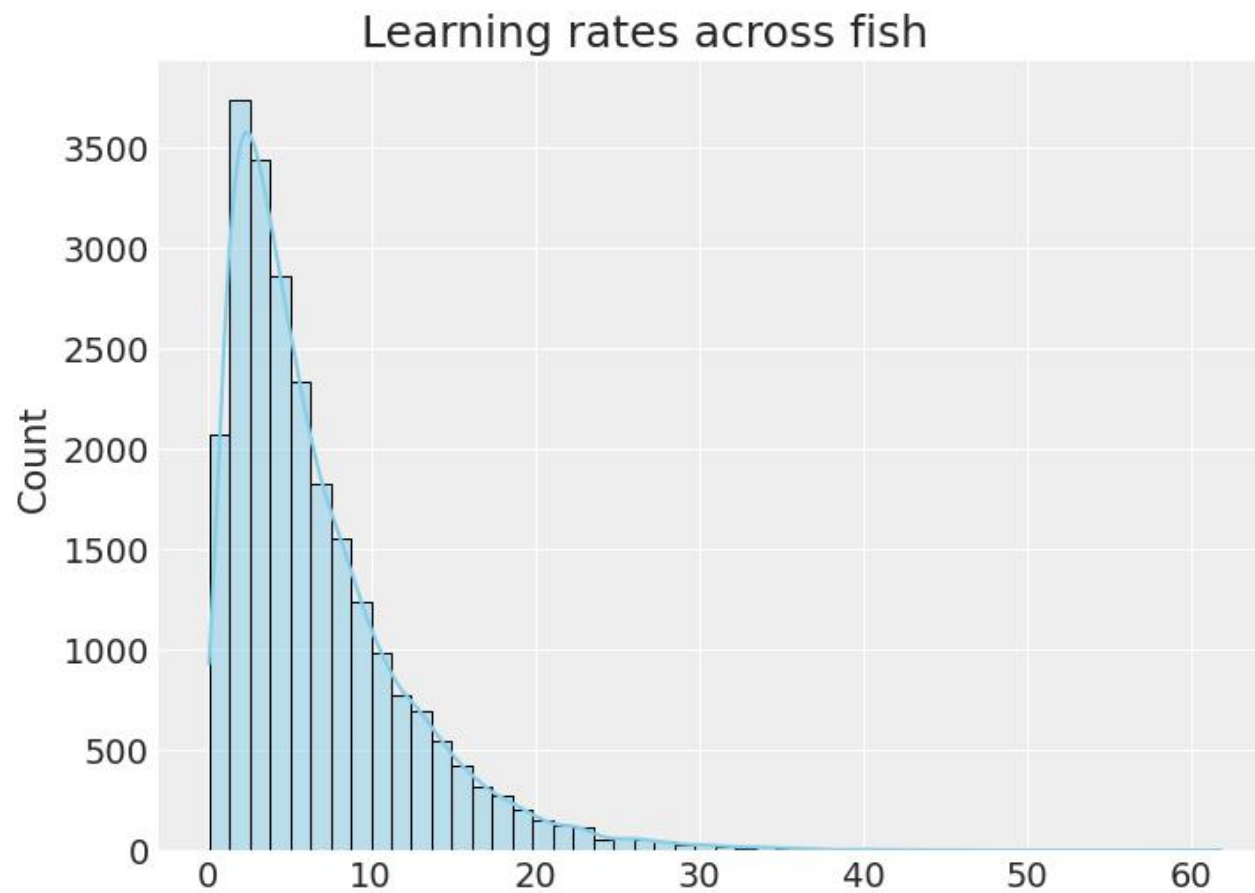


4. Posterior plots of $\mu_{A\mu\mu}$ arccos fish for Rotation stage



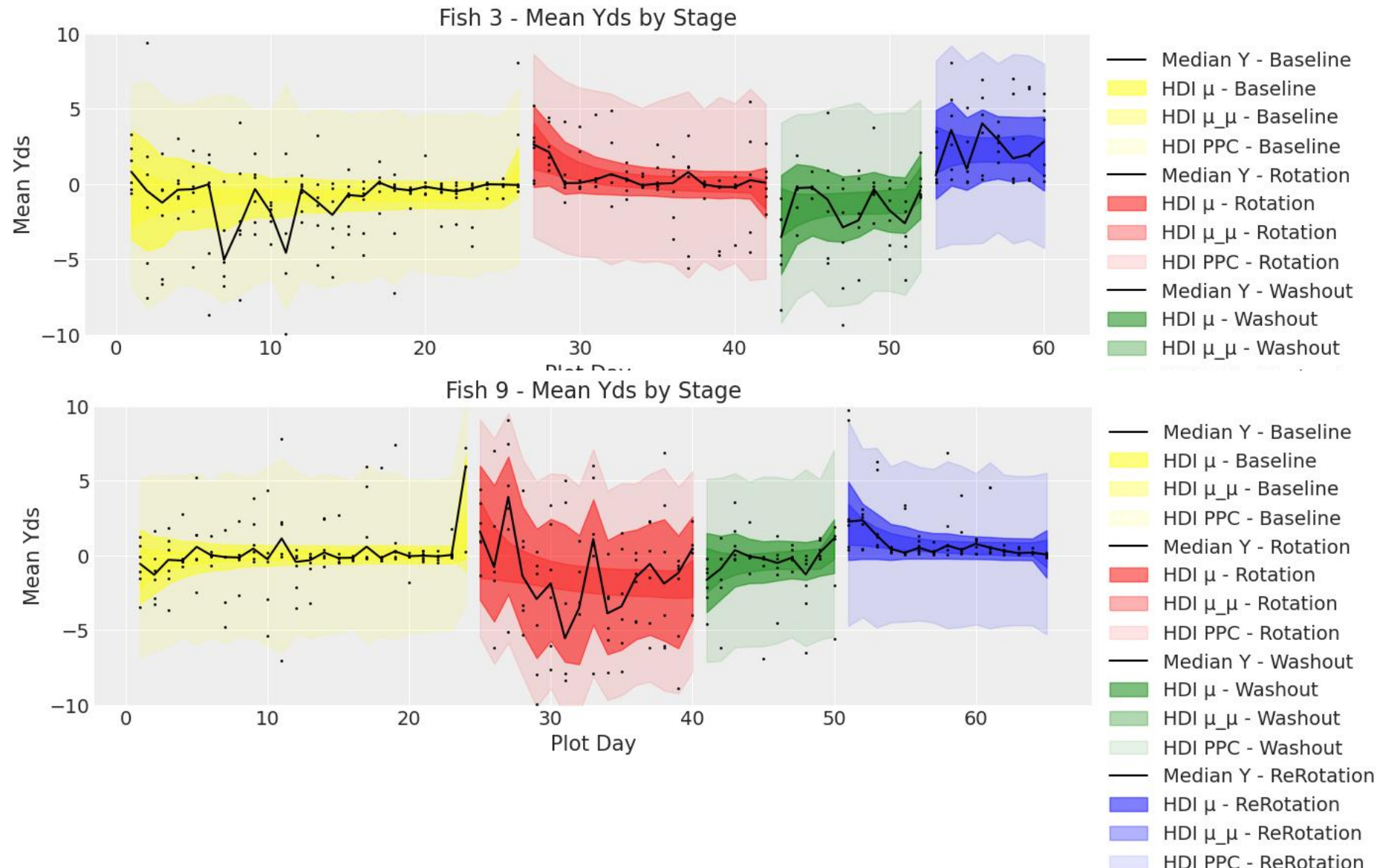
5. Posterior plots of

$$\sigma_{LR} = \frac{1}{N_f} \sum_1^{N_f} (LR - \overline{LR})^2$$



Below are the output of Yds

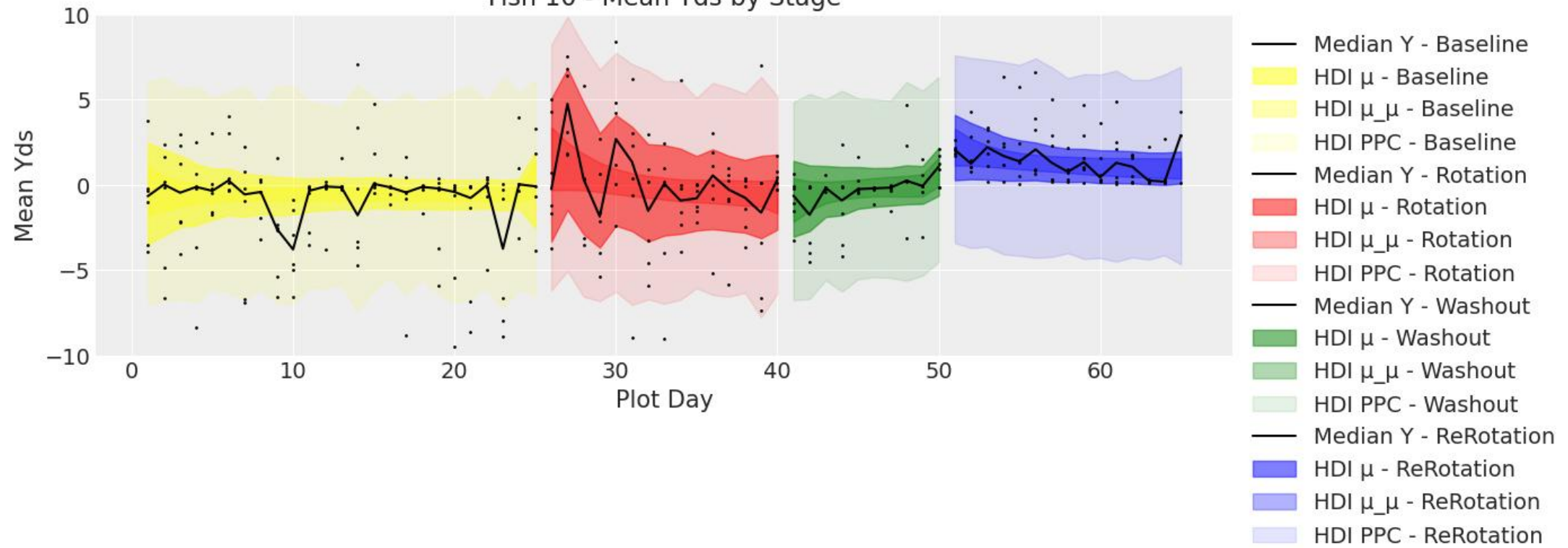
1. Learning cruve for each fish in each stage

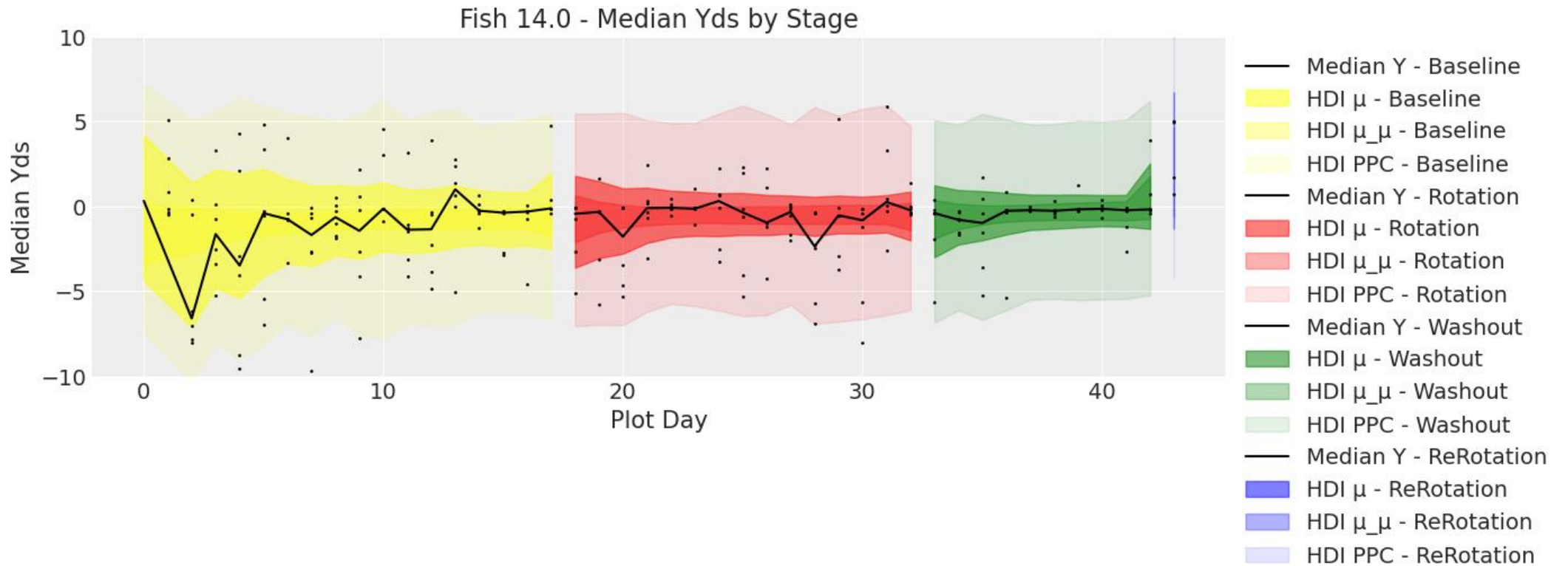
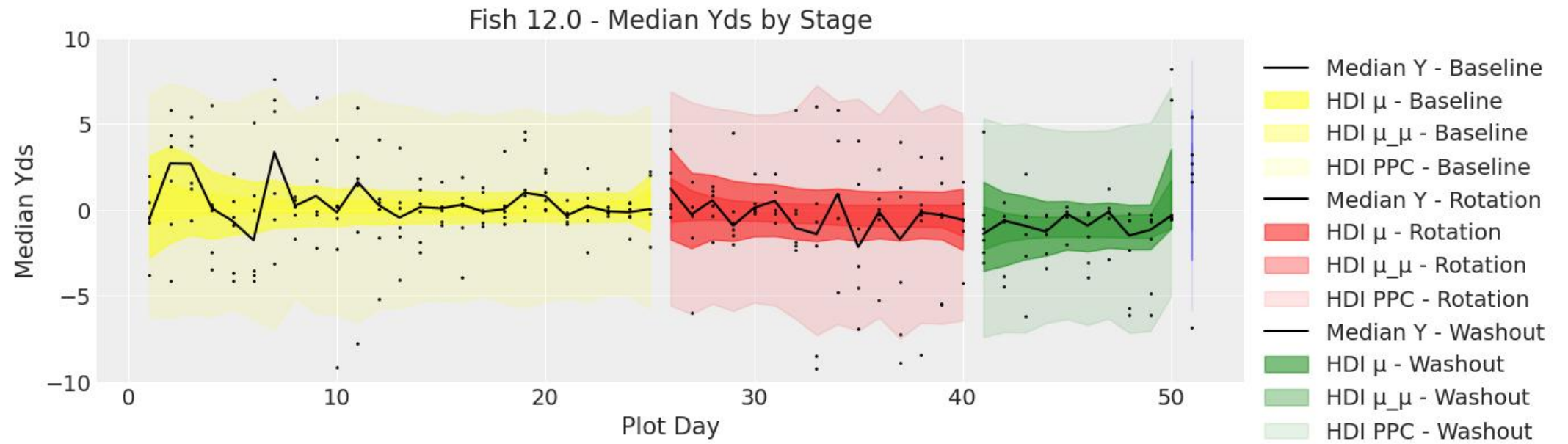


Fish 7 - Mean Yds by Stage

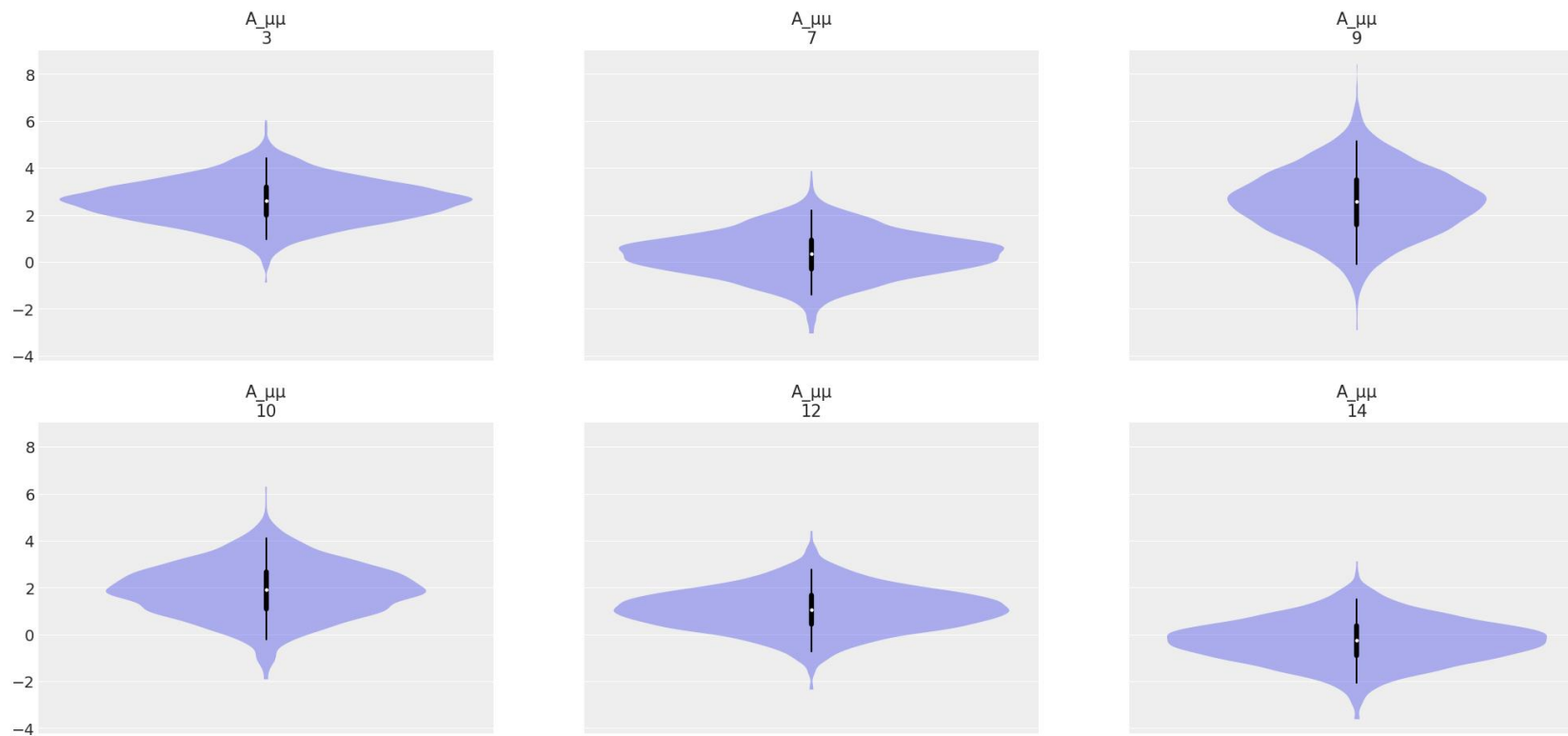


Fish 10 - Mean Yds by Stage

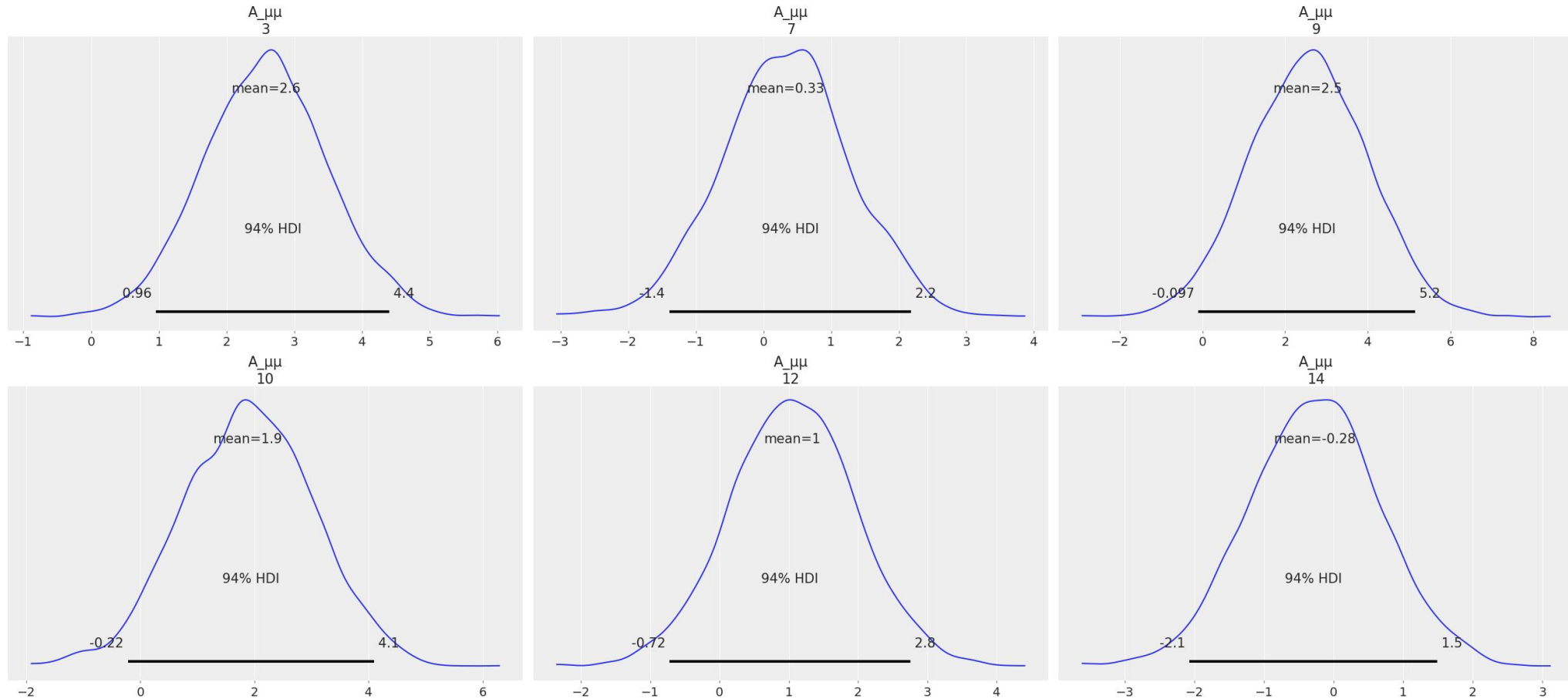




2. Violin plot of $A_{\mu\mu}$ arccos fish for Rotation stage



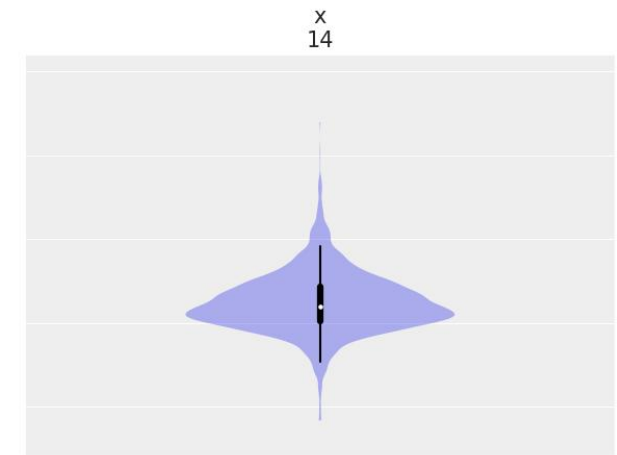
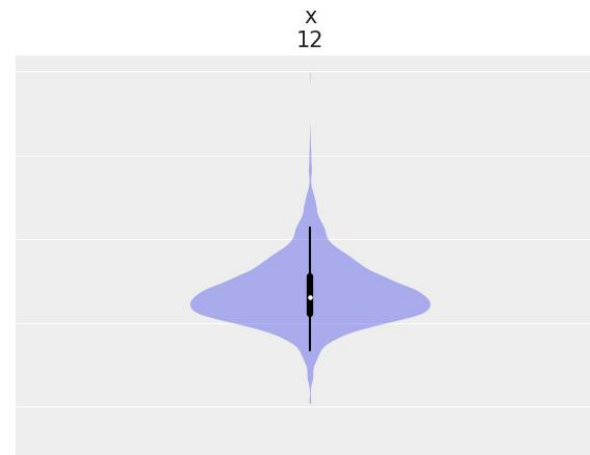
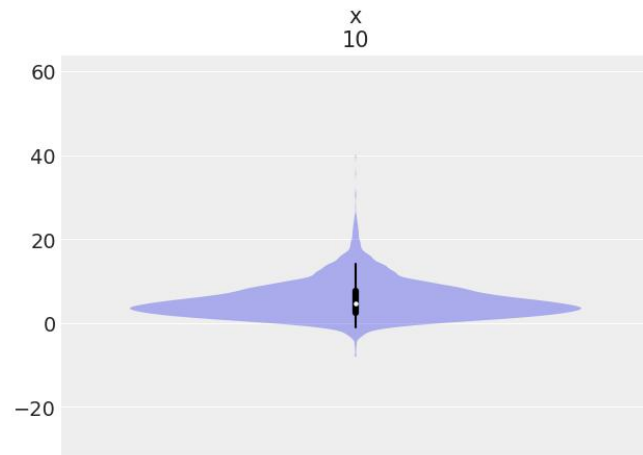
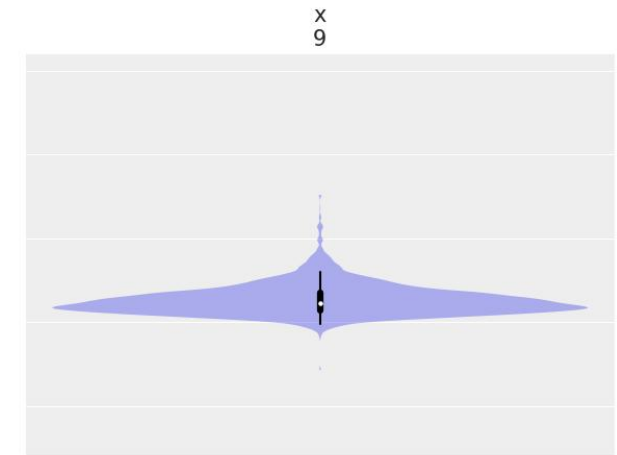
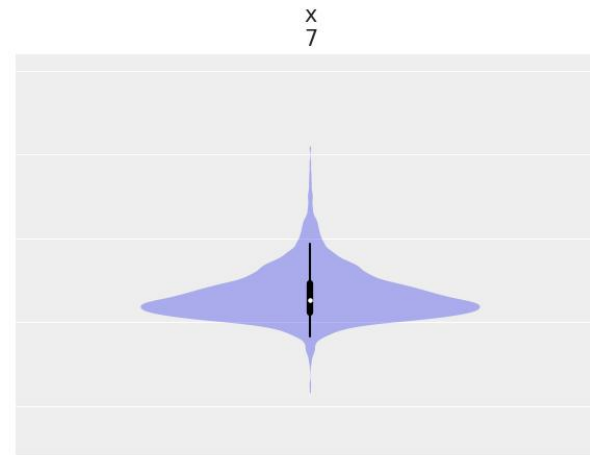
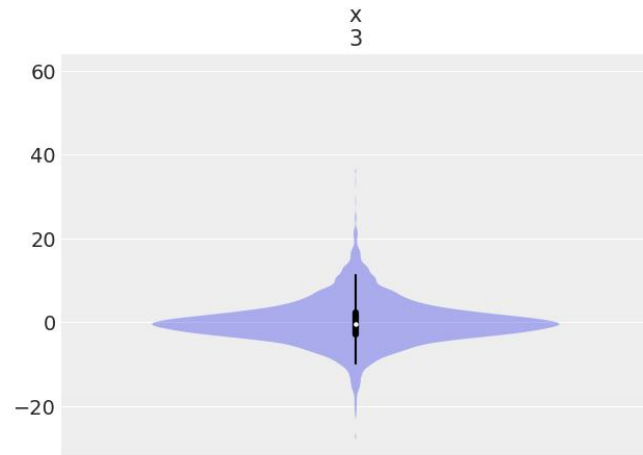
Fish 7 and fish 12 don't learn in rotation stage
because they can do good in the very beginning of
rotation stage



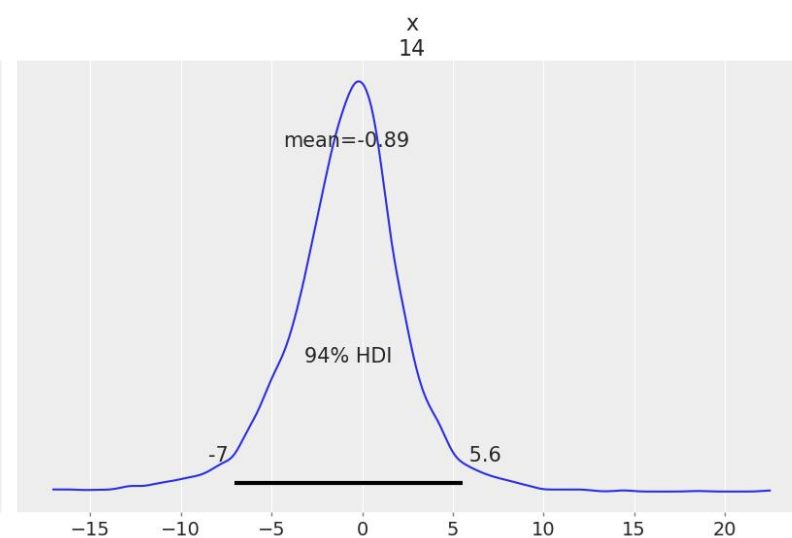
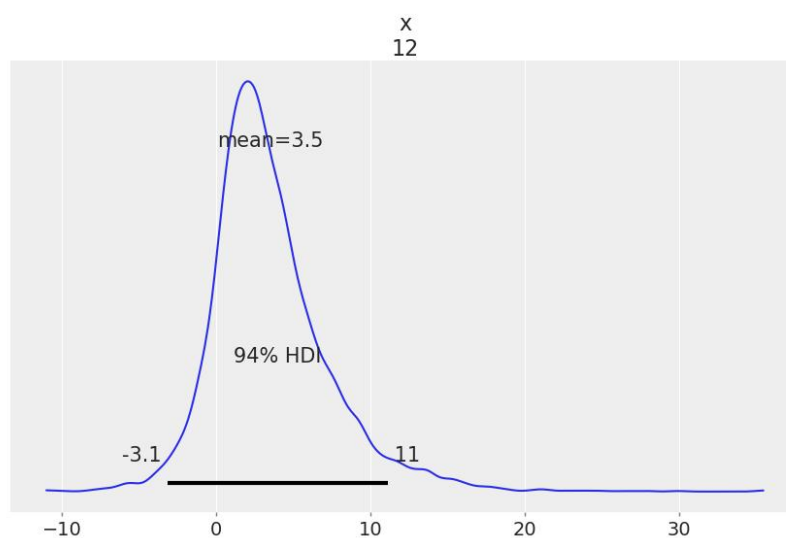
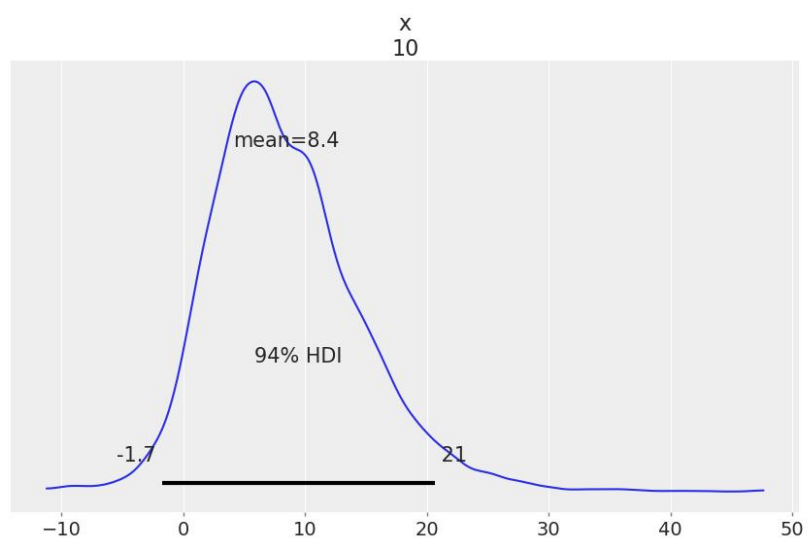
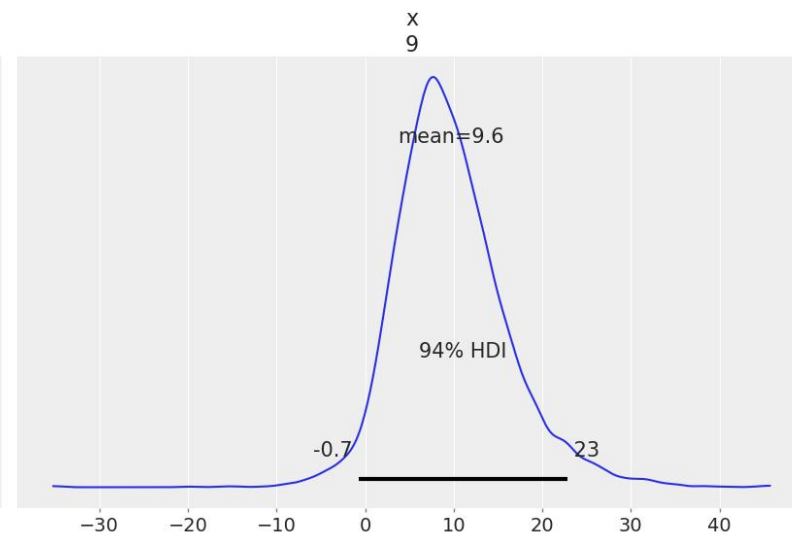
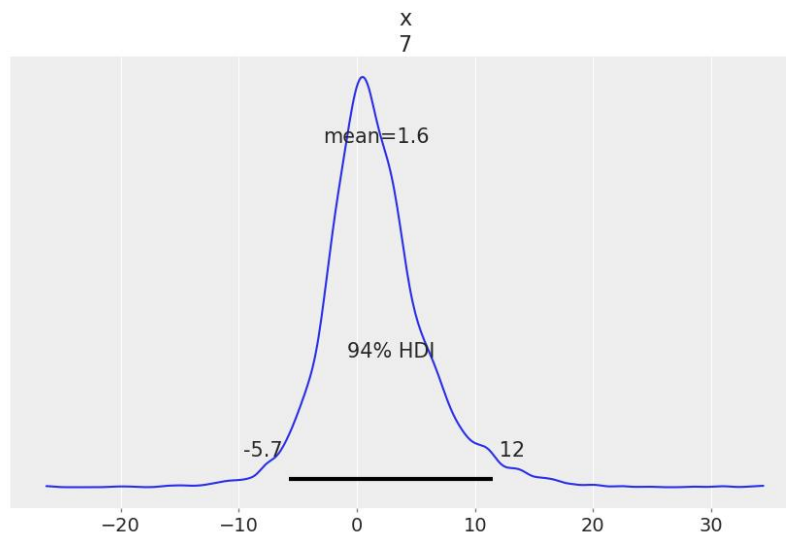
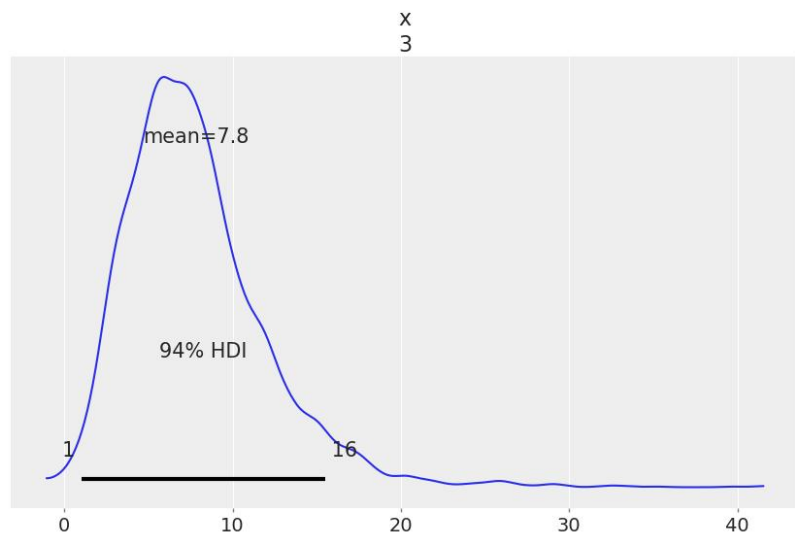
3. Violin plot of Learning Rate across fish for Rotation stage

Learning Rate

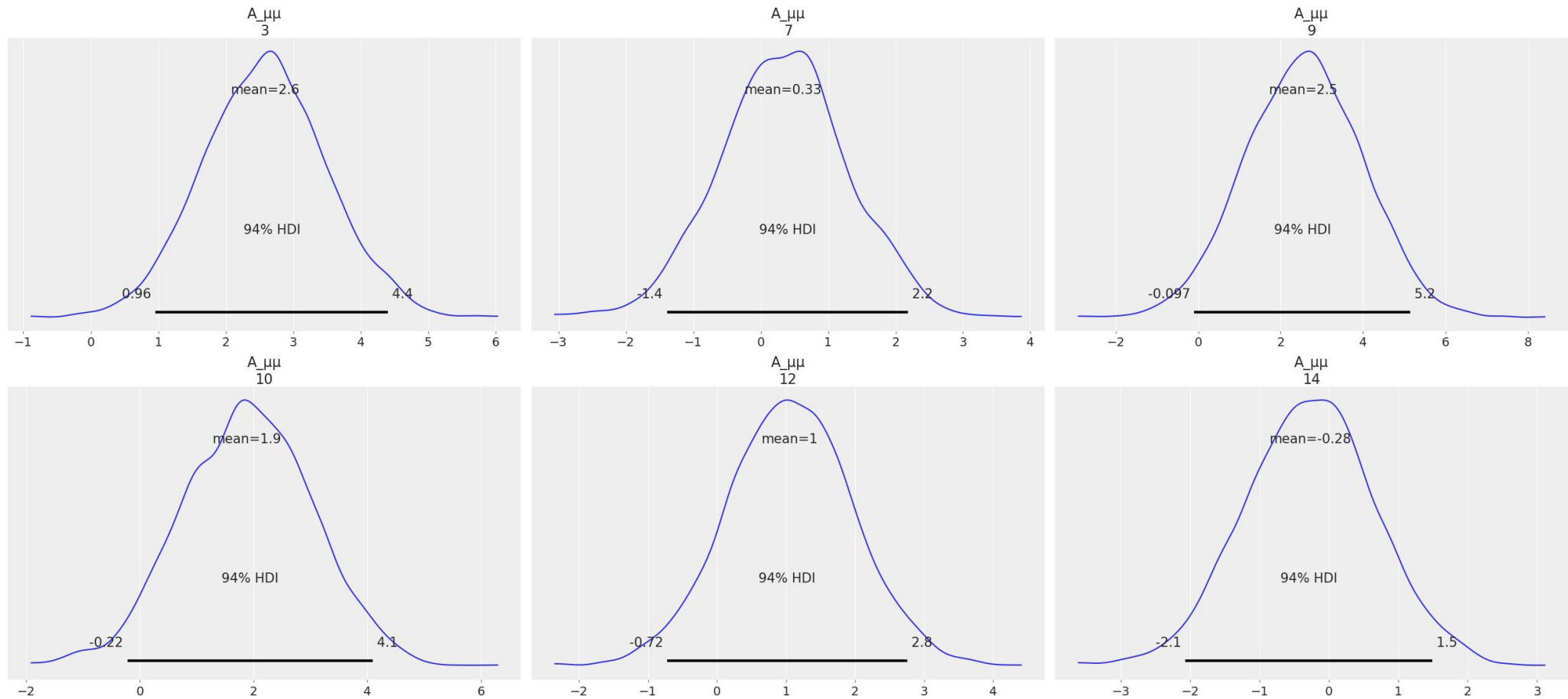
$LR = \text{posterior.A}_{\mu} * \text{posterior.}\tau_{\mu}$

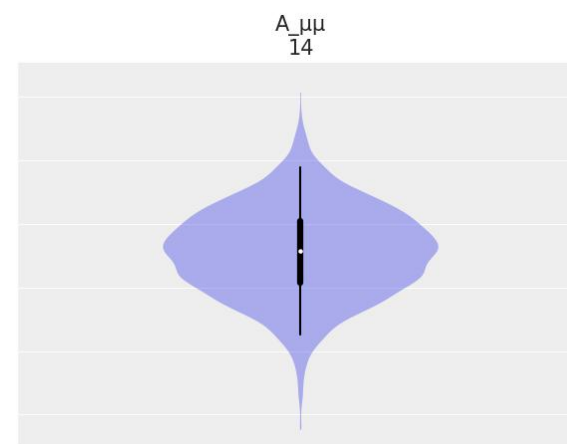
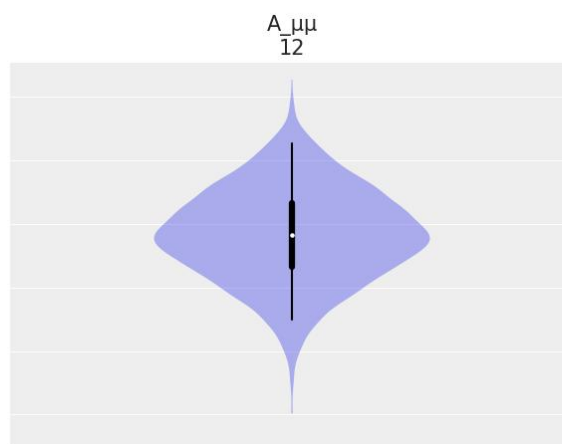
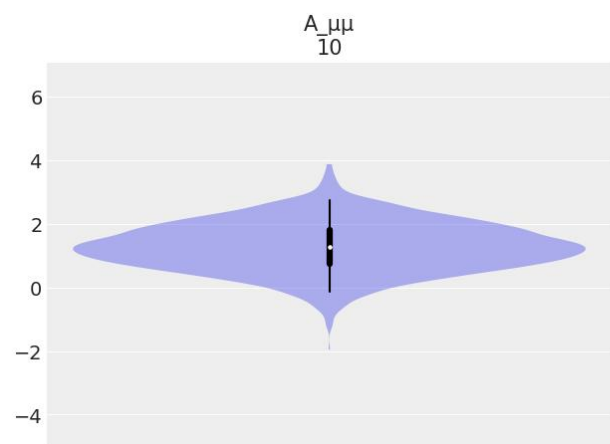
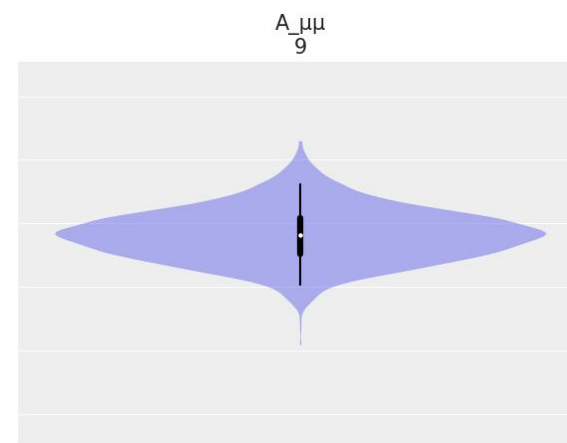
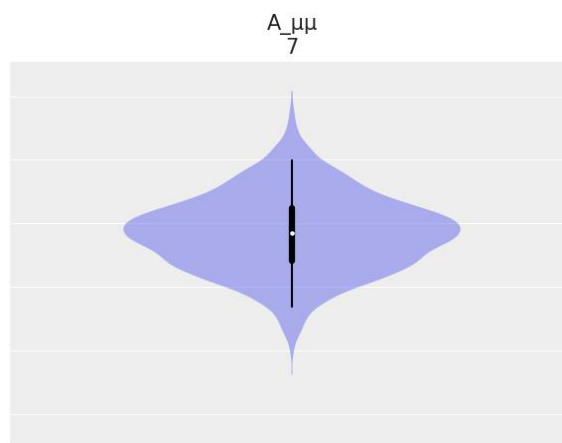
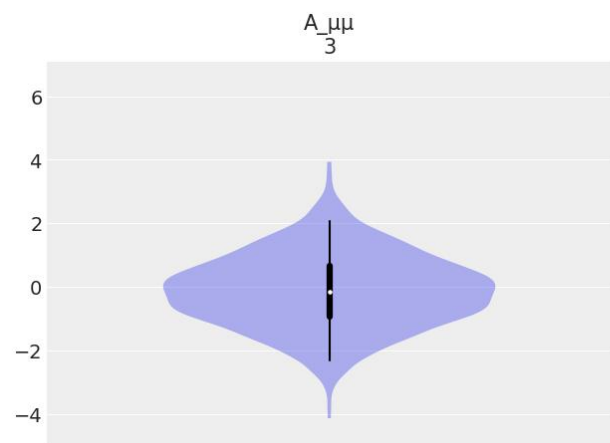


Learning Rate



4. Posterior plots of $\mu_{A_{\mu\mu}}$ across fish for Rotation stage





5. Posterior plots of

$$\sigma_{LR} = \frac{1}{N_f} \sum_1^{N_f} (LR - \overline{LR})^2$$

