



**Supplemental video 1.** Example swimming episode of a 13 mm, stage 47 tadpole shown at 200 frames per second. The associated kinematic parameters are shown on the left in Fig. 3.



**Supplemental video 2.** Example swimming episode of a 38 mm, stage 53 tadpole shown at 200 frames per second. The associated kinematic parameters are shown on the right in Fig. 3.