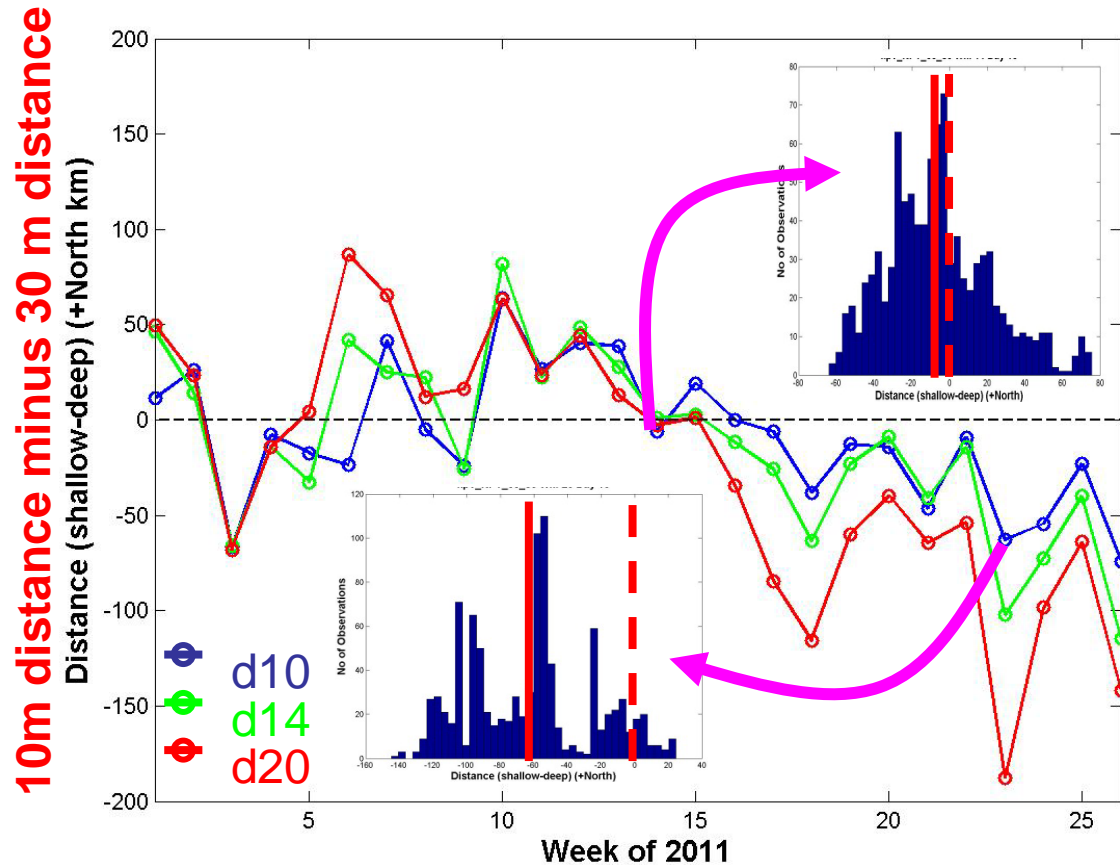




Oregon Shelf Larval Transport Influenced by Depth, Wind Forcing and Larval Duration

Particle tracking using real-time ROMS forecast velocity fields (for the first half of 2011) show alongshore transport distances are strongly influenced by the depth of the particle (5 vs. 15 and 10 vs. 30 on the inner- and mid-shelf, respectively), the wind conditions, and the duration (10, 14, 20 days) of the larval stage. Results from mid-shelf releases at 10m and 30m are shown.



During mixed upwelling & downwelling winds (week 14) the mean difference in alongshore transport was near zero, but 10 m particles moved both further north and further south than 30 m particles. During strong upwelling (week 23), the 10 m larvae were transported much more strongly to the south than the 30 m larvae (mean diff was 60 km [~ 6 km/day stronger S flow at 10 m]), although some larvae at 10 m were advected more than 120 km further south during the 10 day period. Larval depth and wind-forcing strongly determine alongshore transport.

(Courtesy of H. Batchelder)

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