Table S1: Abbreviation definitions for in Fig.5, Fig. 6, Fig. 7 and Fig. S2

Abbreviation	Definition
S Coast	Pacific Coast
Columbia	Columbia River Basin
Will. Bay	Willapa Bay
North Bay	North Bay
Makah	Makah Indian Reservation
S Strait	S Strait of Juan de Fuca
Sequim	Sequim Bay
Pt Tnsend	Port Townsend Bay
Hood Canal	Hood Canal
Pgt Snd	Puget Sound
Hat Island	Hat Island
W Wdby	W Whidbey Island
Pdlla Bay	Padilla Bay
Bham Bay	Bellingham Bay
Smihmoo	Semiahmoo Bay
Orcas	Orcas Island
Lopez	Lopez Island
N Strait	N Strait of Juan de Fuca
W Van Isld	W Vancouver Island
Hakai	Hakai Protected Area
Disc Bay	Discovery Bay
Cypress	Cypress Island
Lummi Bay	Lummi Bay/ Sea Pond
Sinclair	Sinclair Island
Blakely	Blakely Island
San Juan	San Juan Island
Saanich	Saanich Inlet
Victoria	Coast along Victoria

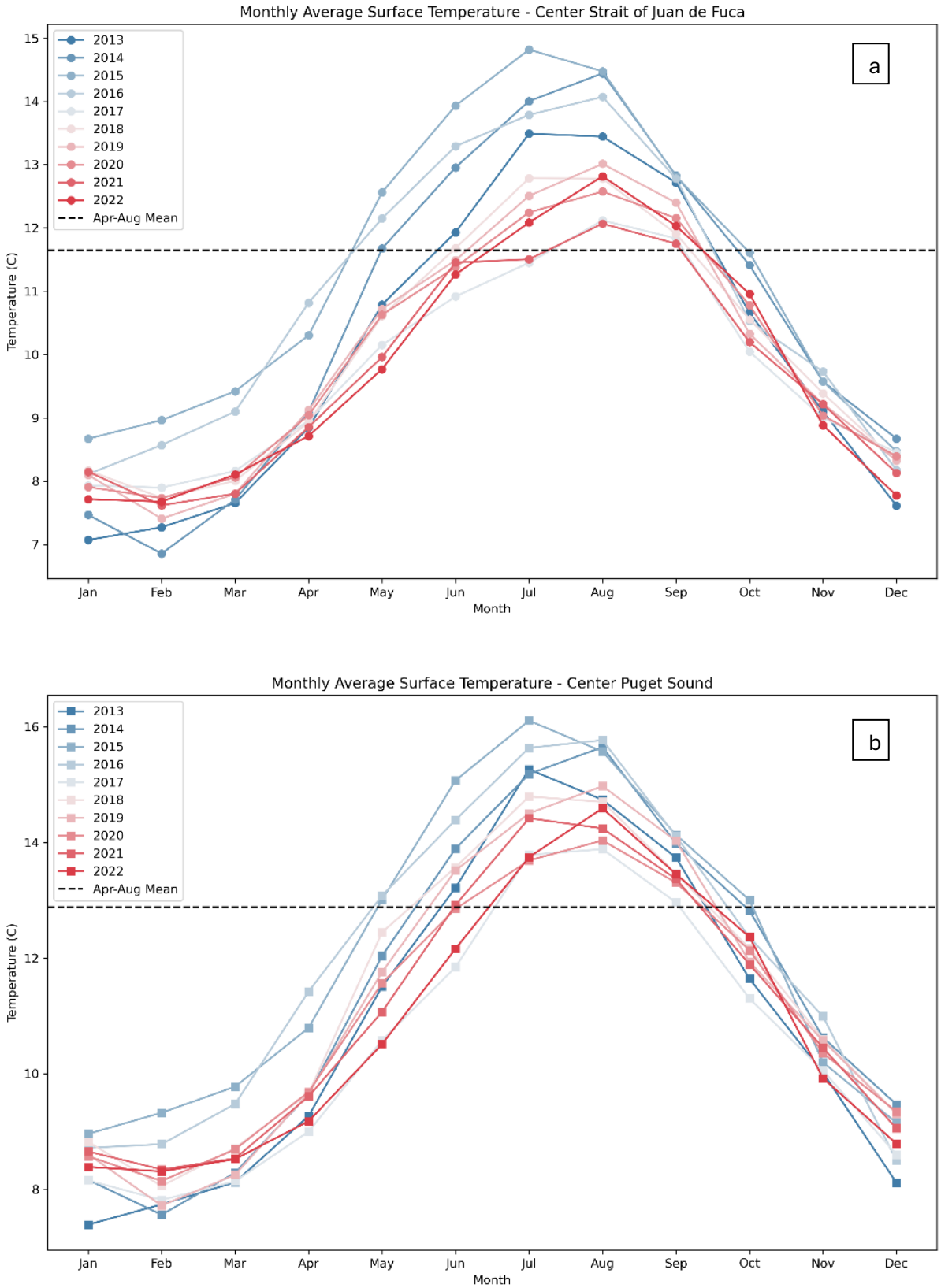

Fig. S1. Monthly mean surface temperature at two nodes in the Salish Sea model over the years studied, 2013-2022, to demonstrate that temperatures are typically above 10°C. Horizontal black line shows the total mean sea surface temperature for the months of larval dispersal, April-August. Plot a is at a location in the center of the Strait of Juan de Fuca and plot b is a location in the center of the Puget Sound.

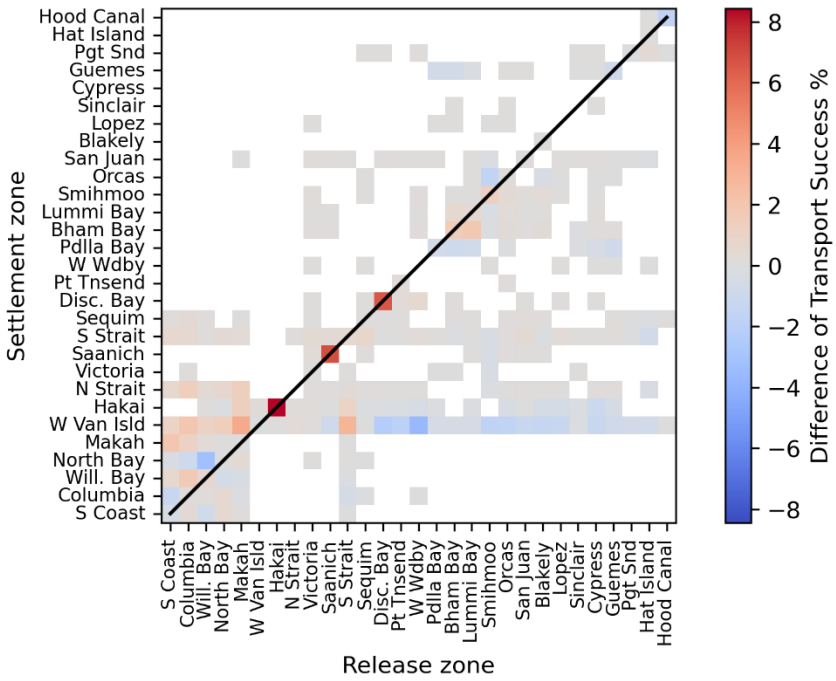

Fig. S2. Difference of 2017 average connectivity matrices without and with diurnal vertical migration. Positive values mean without DVM had a larger transport success and negative values mean with DVM had larger transport success. The larval transport success from one release zone to one settlement zone is calculated over the five spawning events on the first of April, May, June, July, and August 2020. When implemented, the diurnal vertical migration is set to -15m during the day and -3m at night. Zone names are shortened using the same convention as Fig. 5 and defined in Appendix Table 1. Total transport success in 2017 without DVM was 5.53% whereas total transport success with DVM was 4.67%. The largest difference is observed in the local retention in the Hakai zone.

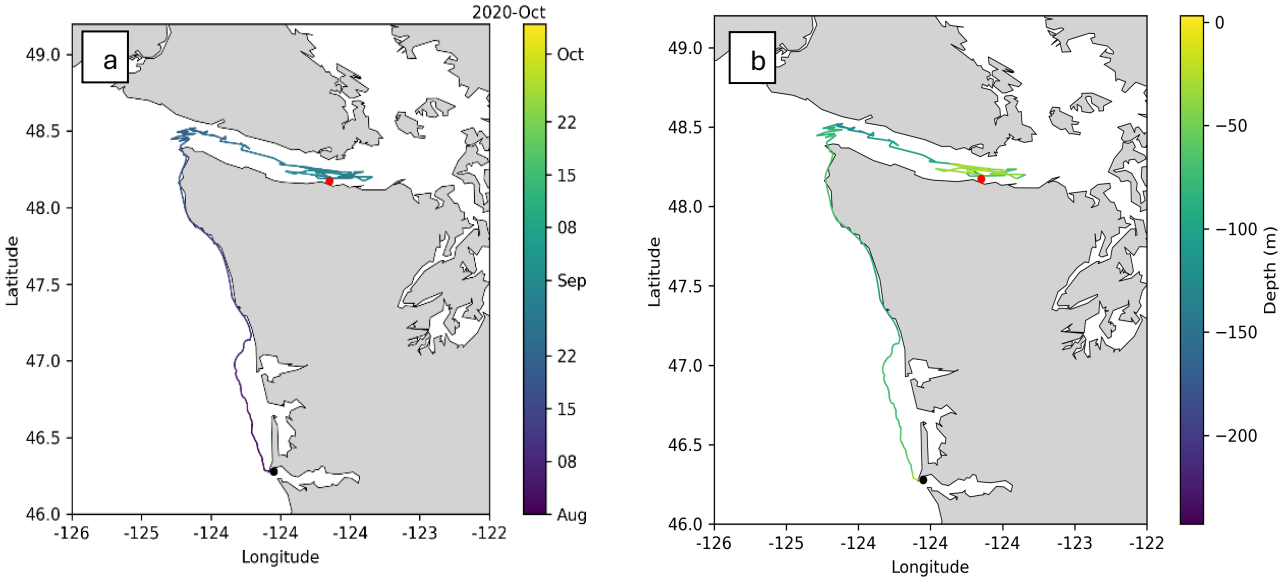

Fig. S3. Trajectory of a selected larva released on August 1, 2020. Plot (a) shows the trajectory over time, and plot (b) shows the depth of the larva along its trajectory. These plots show that larvae which mix to depths greater than 100 m are able to enter the Strait of Juan de Fuca by following the typical circulation patterns of the region. They are then able to settle on the coast if they successfully mix up to the surface again. This is further discussed in Section 4 of the main article.