

# Chapter 1 Time Series

## All Abundance Surveys and Landings

**Discussion** Mean annual blue crab abundances from South Carolina Department of Natural Resources (SCDNR) fisheries independent population surveys and landings from fisheries dependent SCDNR landings data show high annual variability.

**Questions** SHOULD I LOG TRANSFORM Habor Trawl IF, MF, AND MM? Should I LOG Transform Creek Trawl JUVENILES, and IF, MF AND MM?

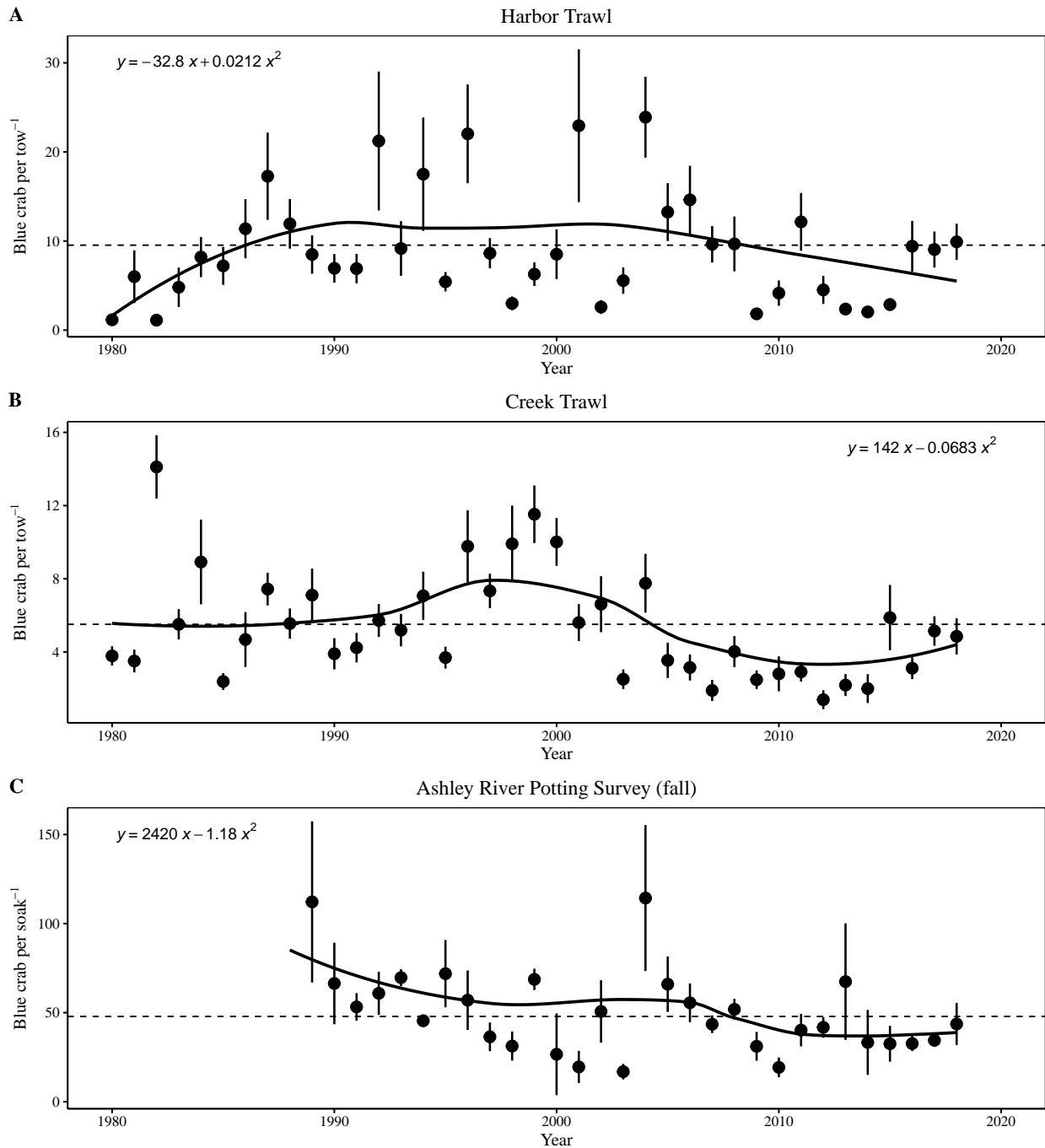


Figure 1: Mean annual blue crab (total catch) CPUE (mean  $\pm$  standard error) for all SCDNR Crustacean Section fisheries independent surveys, including Harbor Trawl (A), Creek Trawl (B), and Ashley River Potting Survey (C).

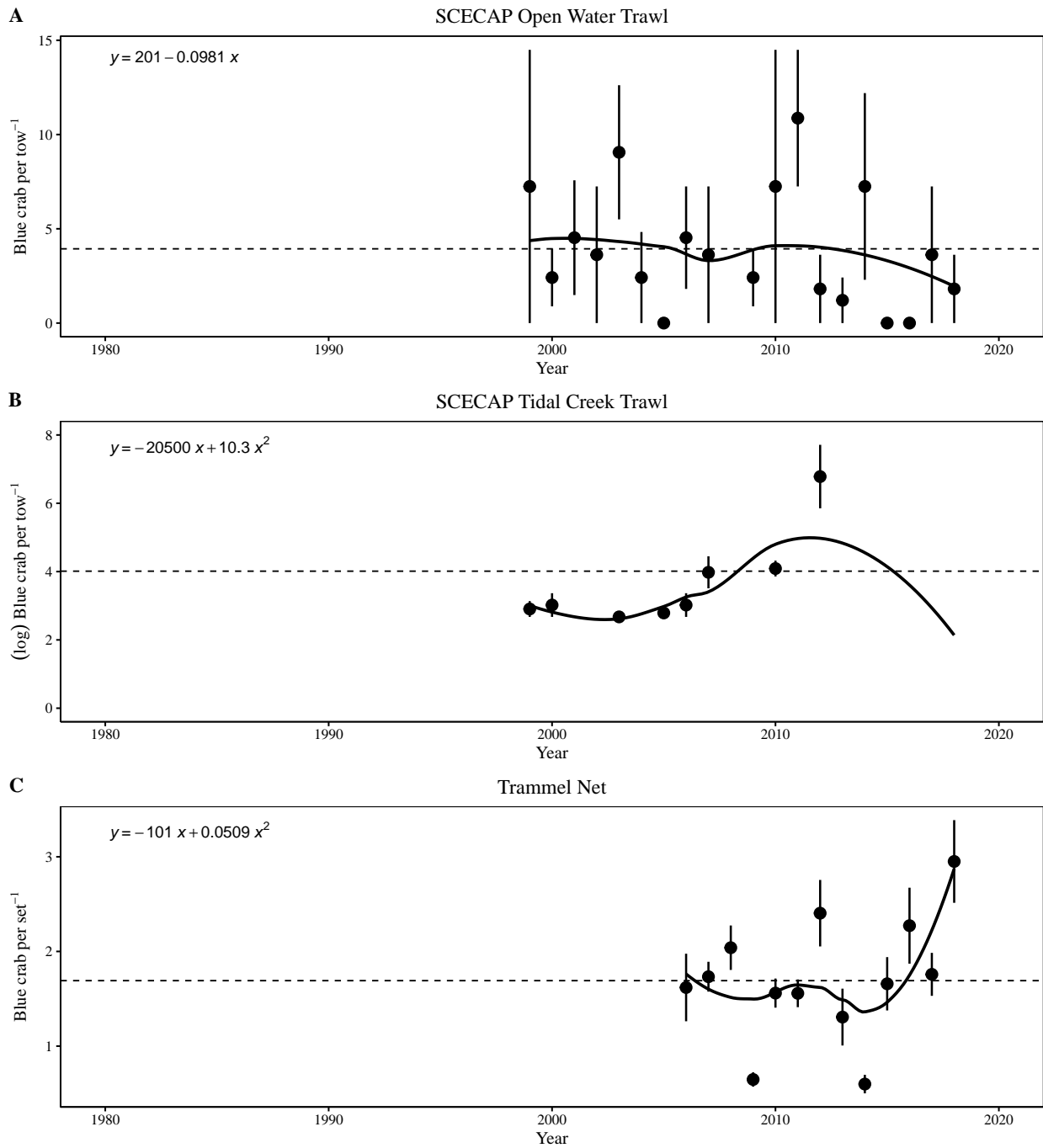


Figure 2: Mean annual blue crab (total catch) CPUE (mean  $\pm$  standard error) from SCDNR non-CRMS fisheries independent surveys, including SCECAP Open Water Trawl (A), SCECAP Tidal Creek Trawl (B), and the Inshore Fisheries Trammel Net survey

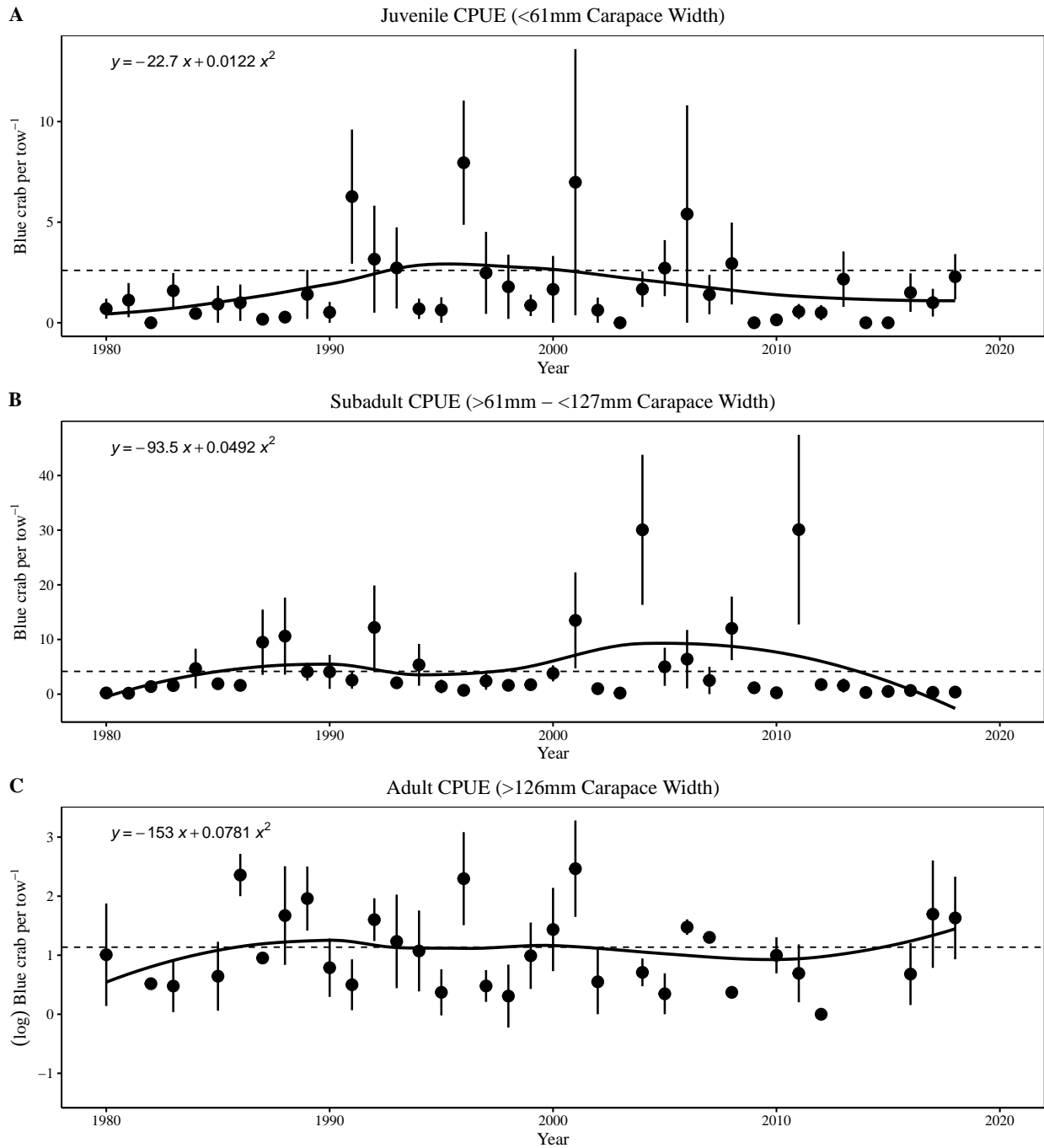


Figure 3: Harbor Trawl survey mean annual blue crab abundance (CPUE) by size (mean  $\pm$  standard error) for all sites within the Charleston Harbor watershed. Juvenile CPUEs (A), Subadult CPUEs (B) and Adult CPUEs (C) are shown. Adult mean annual CPUEs were logarithmically transformed to help aid in visual scaling.

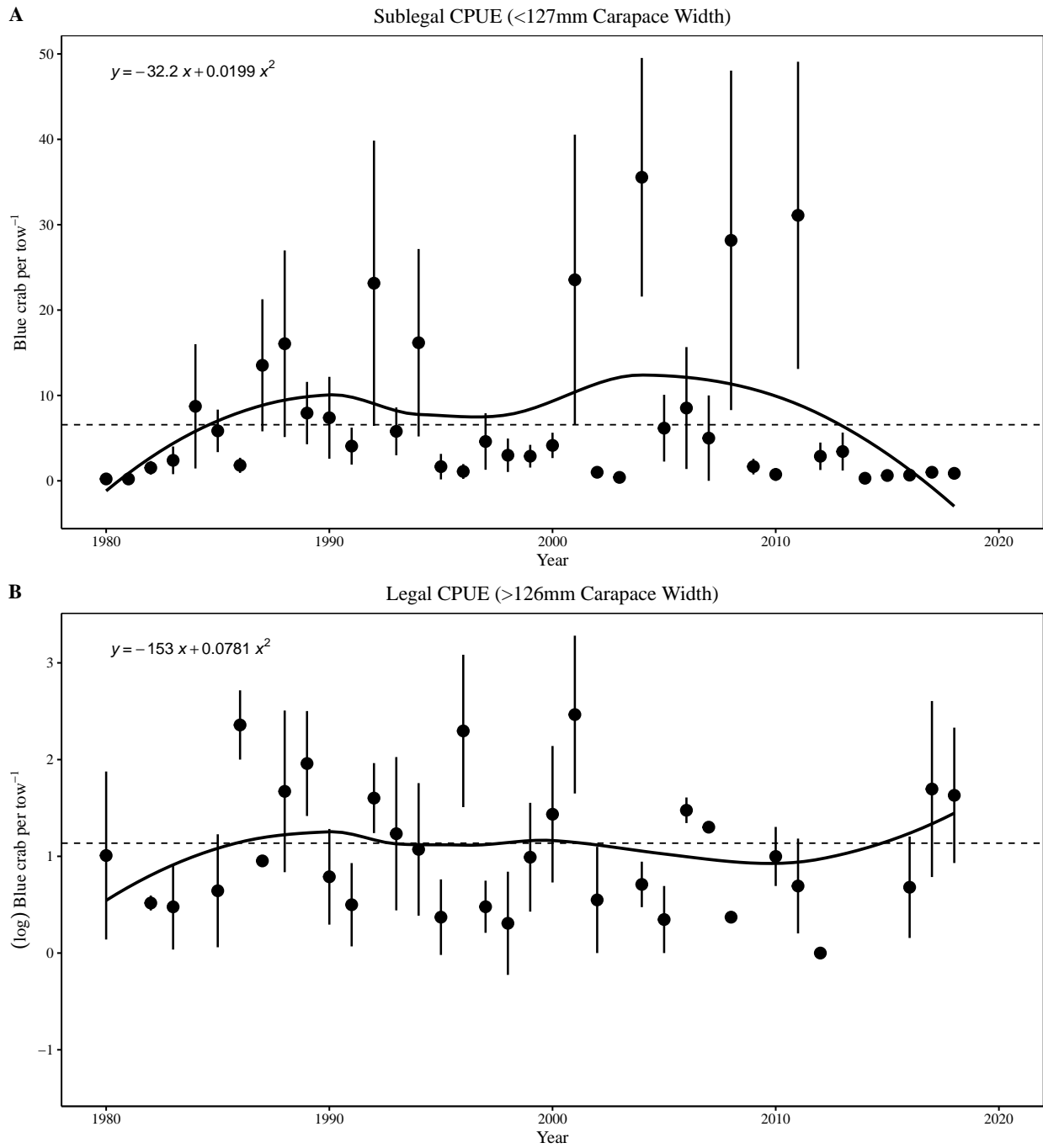


Figure 4: Harbor Trawl survey mean annual blue crab abundance (CPUE) by legal-size (mean  $\pm$  standard error) for all sites within the Charleston Harbor watershed. Sublegal (<127mm carapace width) CPUEs (A), and legal (>126mm carapace width) CPUEs (B) are shown.

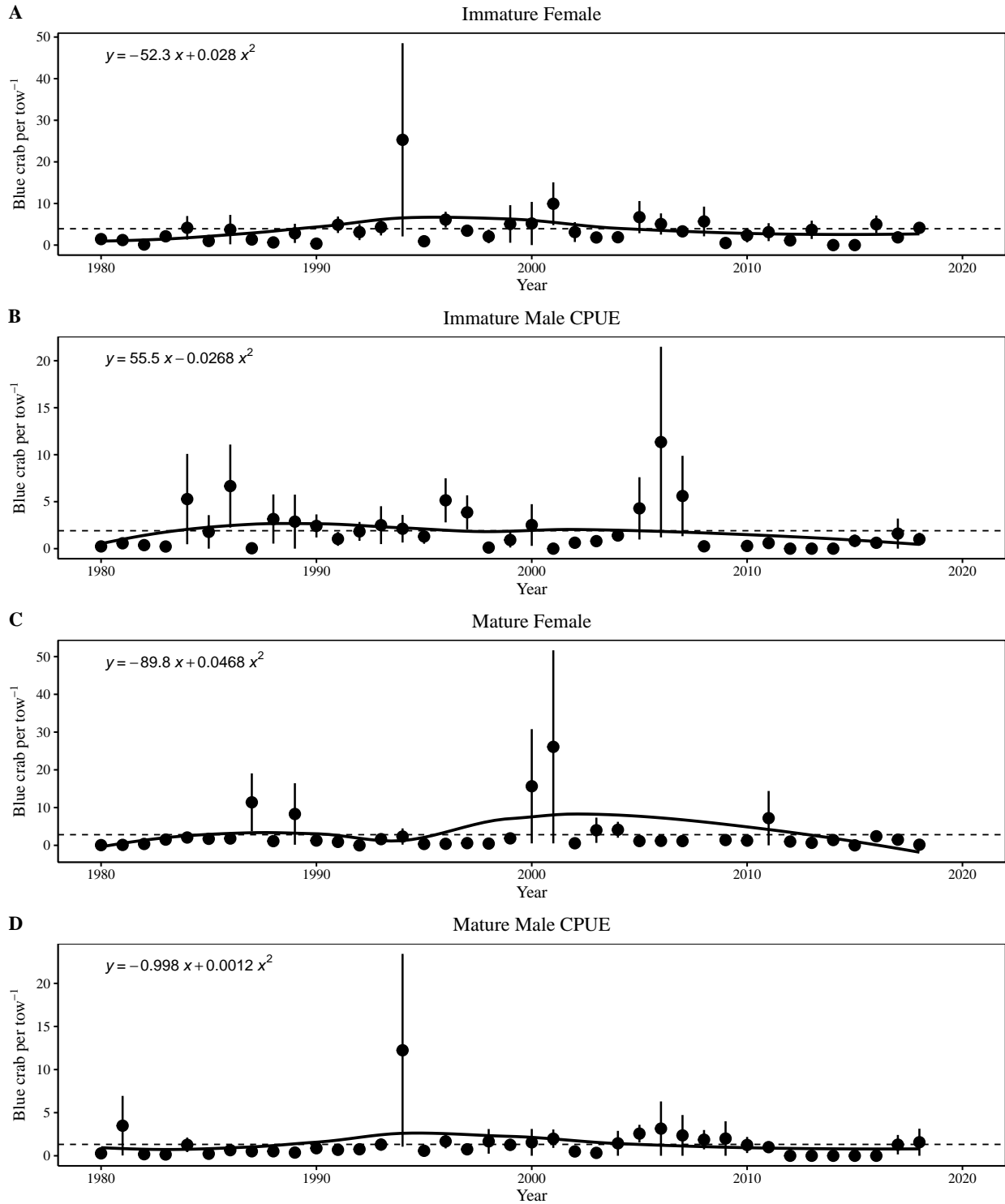


Figure 5: Harbor Trawl survey mean annual blue crab abundance (CPUE) by sex and maturity class (mean  $\pm$  standard error) for all sites within the Charleston Harbor watershed. Immature female CPUEs (A), mature Female CPUEs (B), mature male CPUEs (C) and mature male CPUEs (D) are shown.

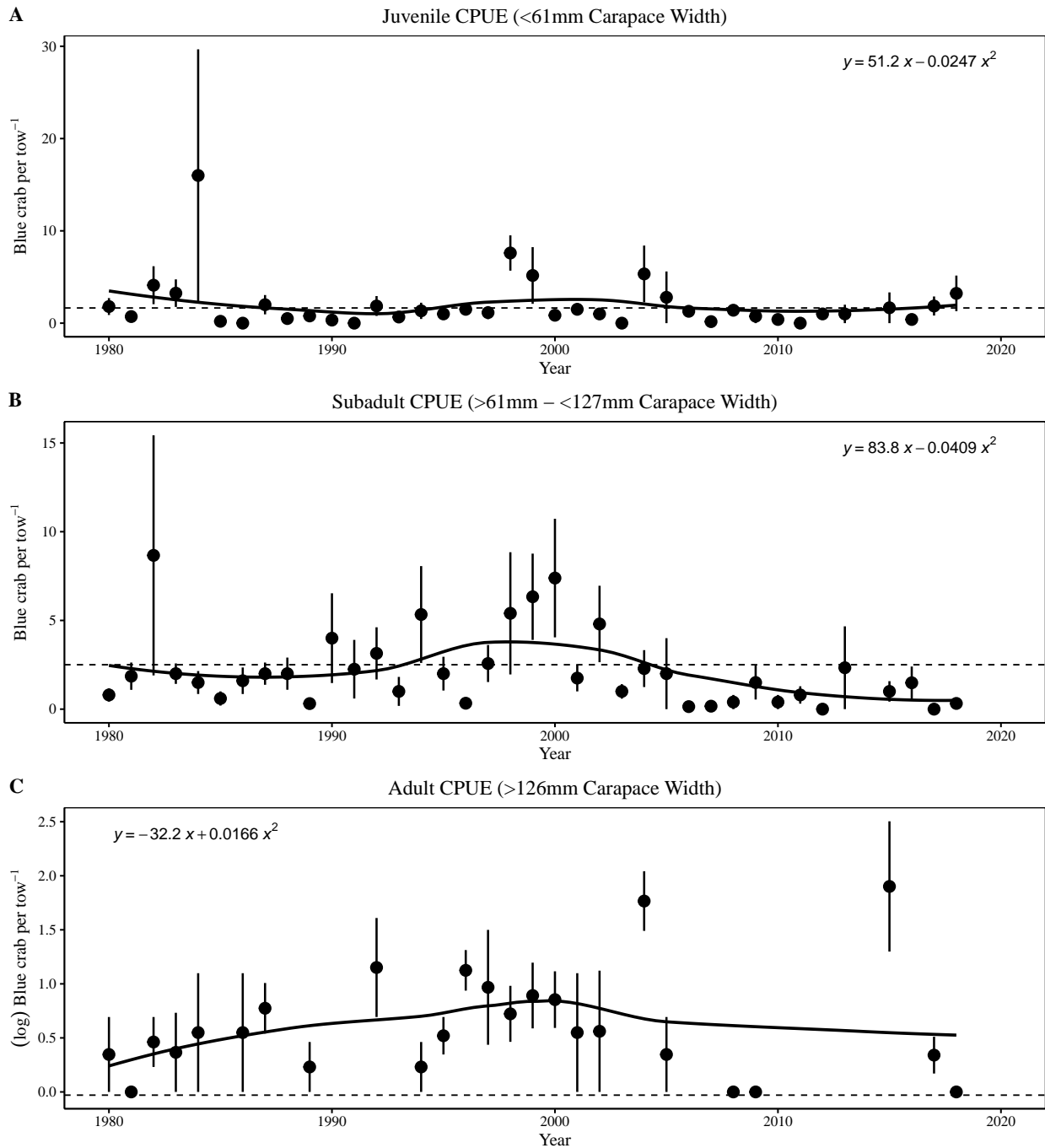


Figure 6: Creek Trawl survey mean annual blue crab abundance (CPUE) by size (mean  $\pm$  standard error) for all sites within the Charleston Harbor watershed. Juvenile CPUEs (A), Subadult CPUEs (B) and Adult CPUEs (C) are shown.

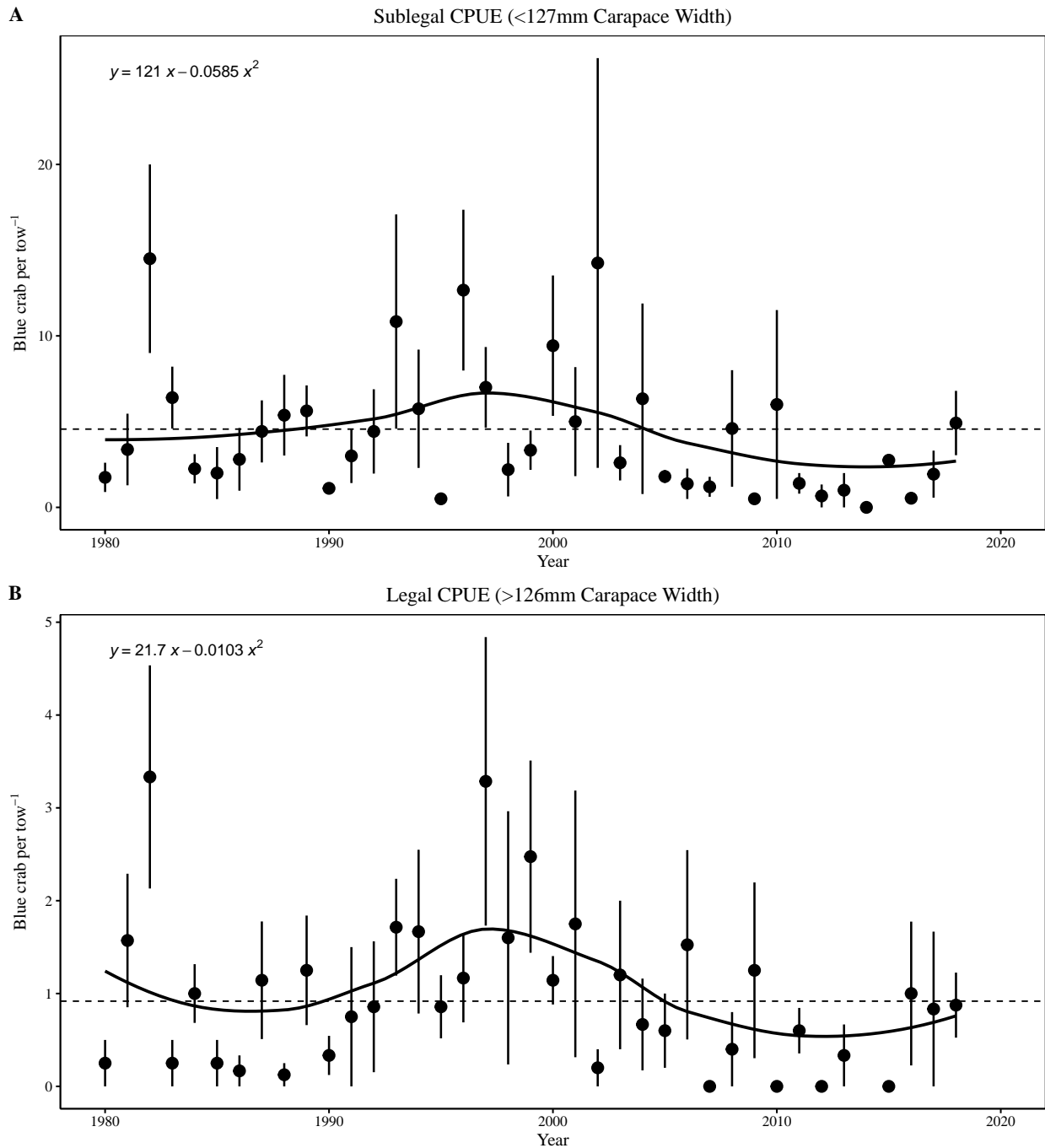


Figure 7: Creek Trawl survey mean annual blue crab abundance (CPUE) by legal-size (mean  $\pm$  standard error) for all sites within the Charleston Harbor watershed. Sublegal (<127mm carapace width) CPUEs (A), and legal (>126mm carapace width) CPUEs (B) are shown.



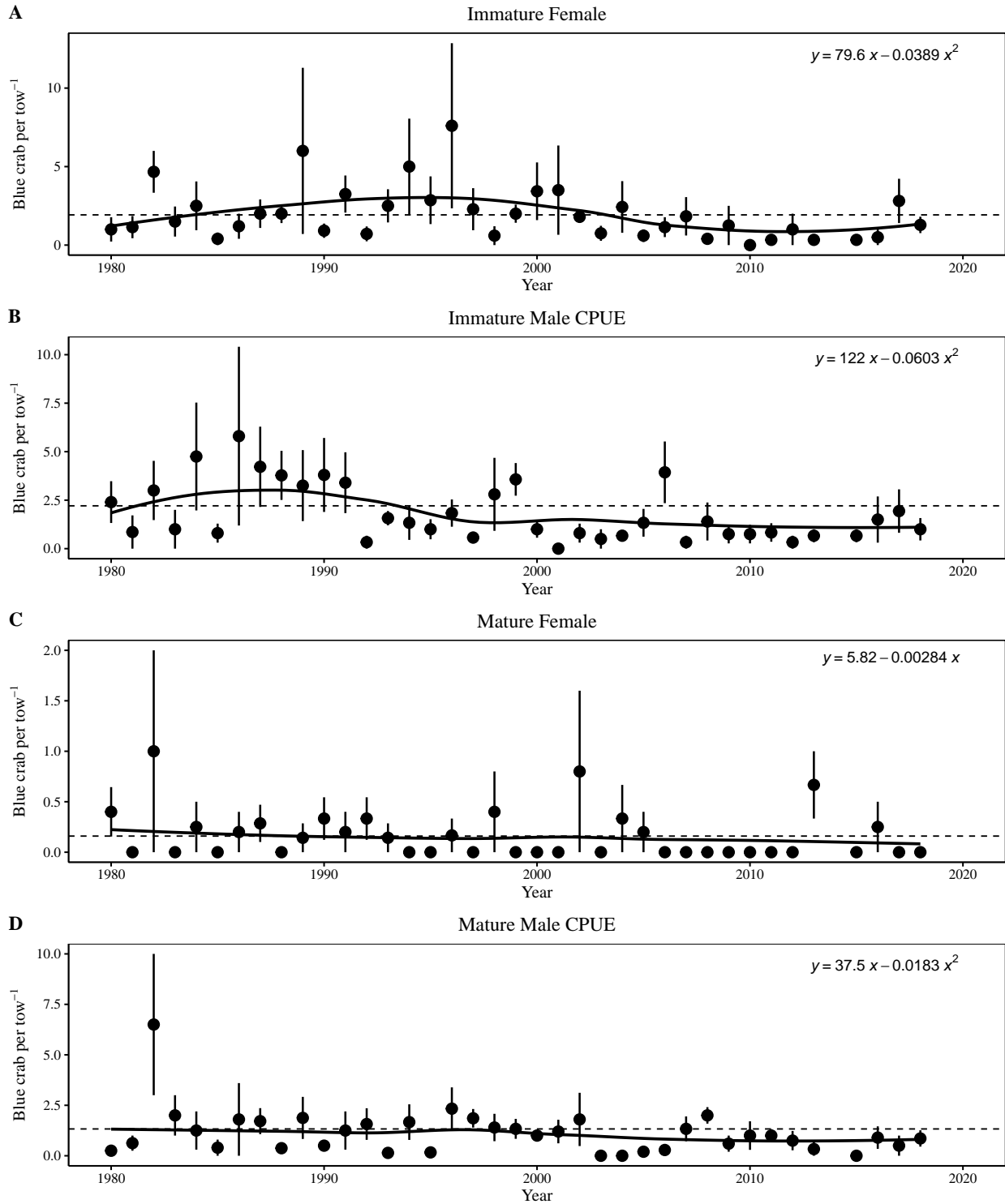


Figure 8: Creek Trawl survey mean annual blue crab abundance (CPUE) by sex and maturity class (mean  $\pm$  standard error) for all sites within the Charleston Harbor watershed. Immature female CPUEs (A), mature Female CPUEs (B), mature male CPUEs (C) and mature male CPUEs (D) are shown.

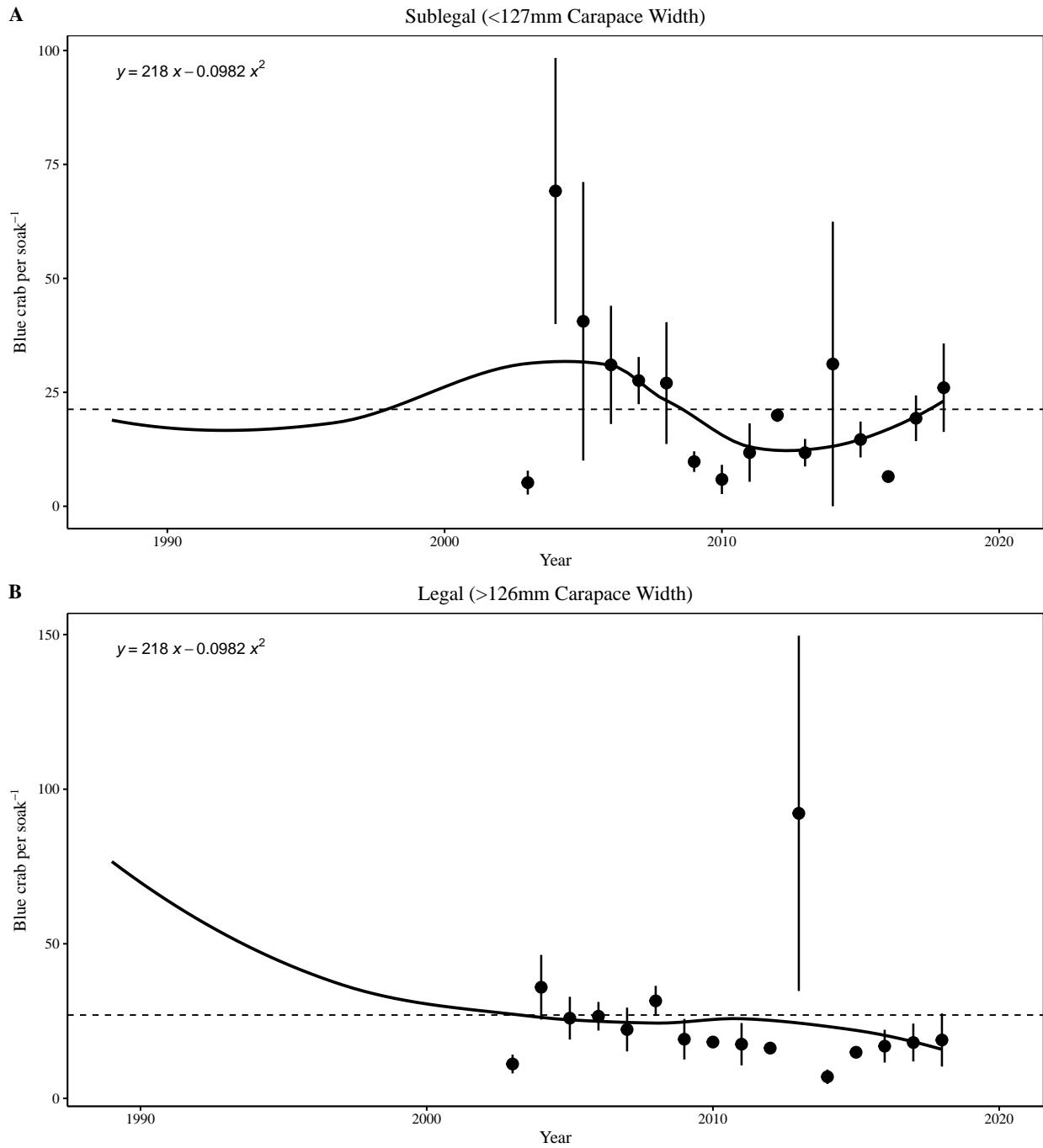


Figure 9: Ashley Potting Survey mean annual blue crab abundance (CPUE) by legal-size (mean  $\pm$  standard error) for all sites within the Charleston Harbor watershed. Sublegal (<127mm carapace width) CPUEs (A), and legal (>126mm carapace width) CPUEs (B) are shown.

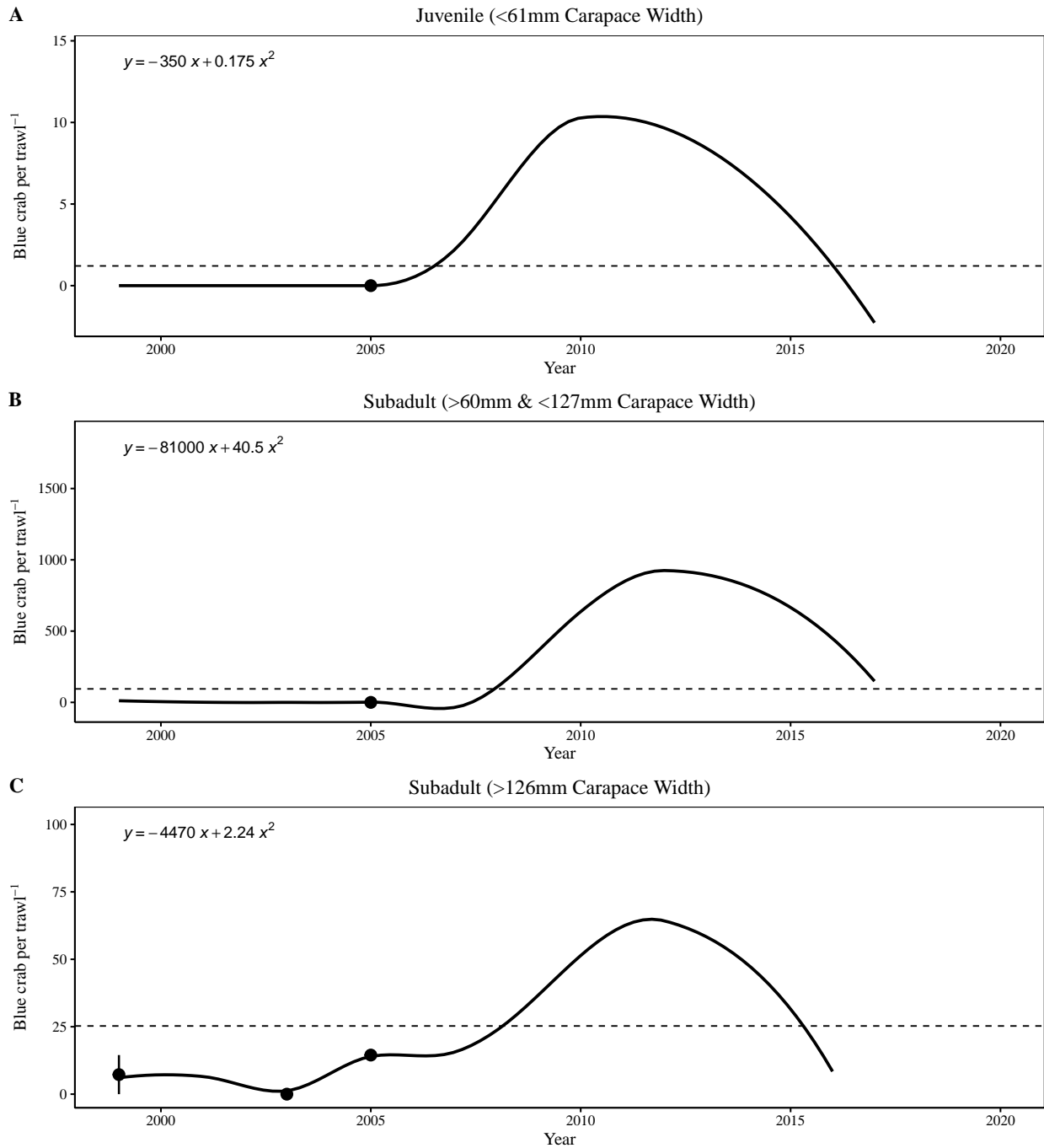


Figure 10: SCECAP Tidal Creek Trawl survey mean annual blue crab abundance (CPUE) by size (mean  $\pm$  standard error) for all sites within the Charleston Harbor watershed. Juvenile CPUEs (A), Subadult CPUEs (B) and Adult CPUEs (C) are shown. Tidal Creeks within the Charleston Harbor watershed were not sampled in 2009, 2011, 2013 or 2014.

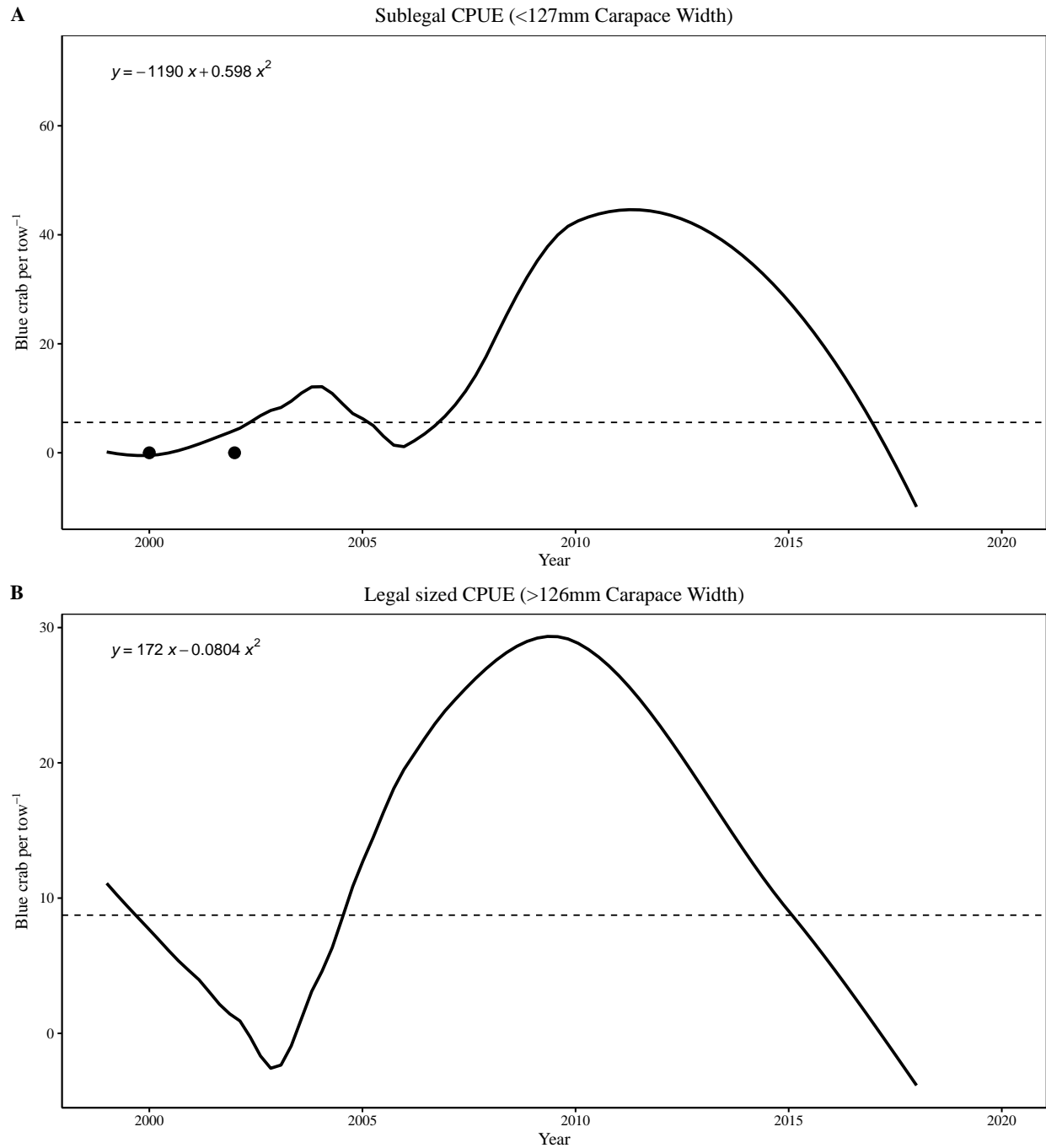


Figure 11: SCECAP Tidal Creek Trwal survey mean annual blue crab abundance (CPUE) by legal-size (mean  $\pm$  standard error) for all sites within the Charleston Harbor watershed. Sublegal (<127mm carapace width) CPUEs (A), and legal (>126mm carapace width) CPUEs (B) are shown. Tidal Creeks within the Charleston Harbor watershed were not sampled in 2009, 2011, 2013 or 2014.

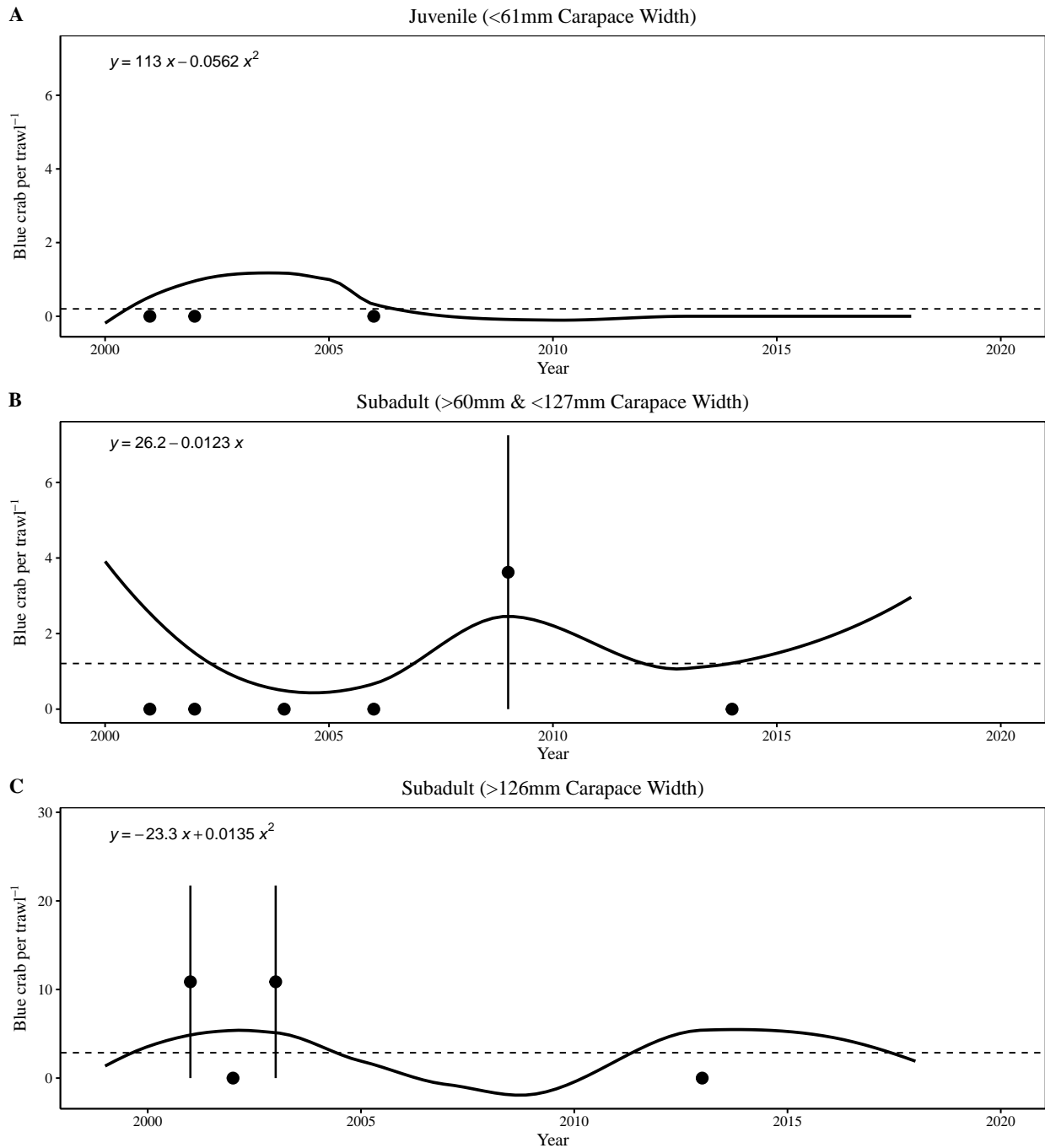


Figure 12: SCECAP Open Water Trawl survey mean annual blue crab abundance (CPUE) by size (mean  $\pm$  standard error) for all sites within the Charleston Harbor watershed. Juvenile CPUEs (A), Subadult CPUEs (B) and Adult CPUEs (C) are shown. No Open Water SCECAP sampling occurred in 2008.

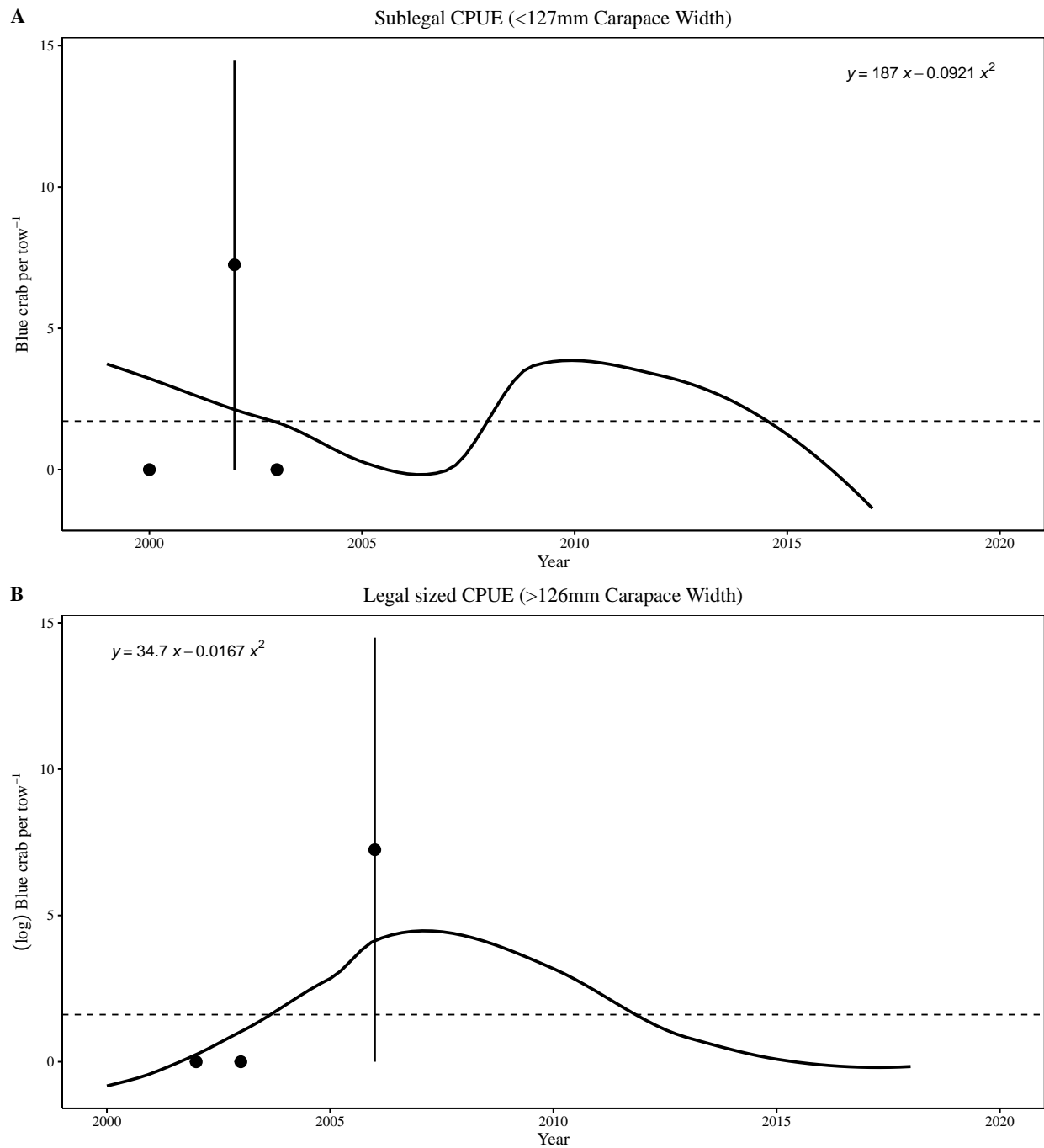


Figure 13: Ashley Potting Survey mean annual blue crab abundance (CPUE) by legal-size (mean  $\pm$  standard error) for all sites within the Charleston Harbor watershed. Sublegal (<127mm carapace width) CPUEs (A), and legal (>126mm carapace width) CPUEs (B) are shown. No Open Water SCECAP sampling occurred in 2008.