

# How to insert r4ss Figure

*Melissa Monk*

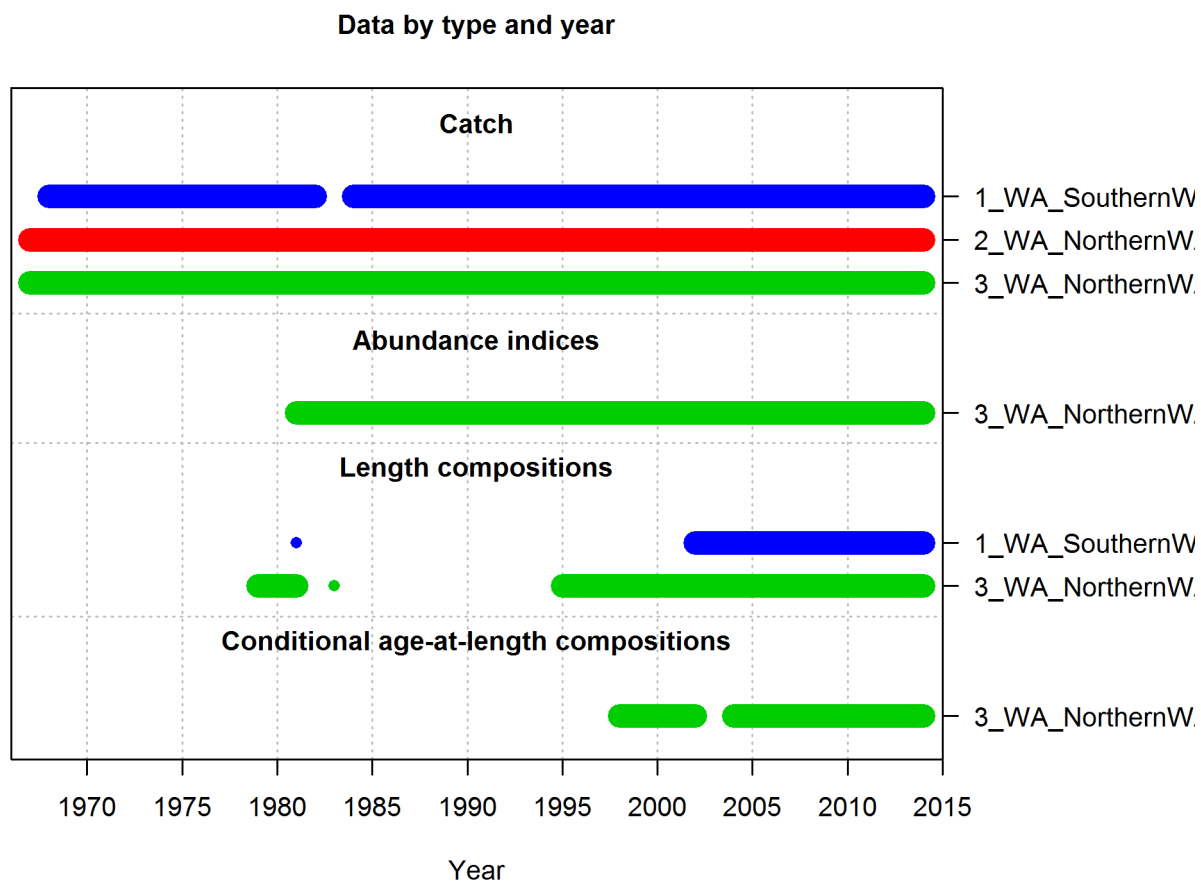


Figure 1: Summary of data sources used in the base case assessment. `fig:data_plot`

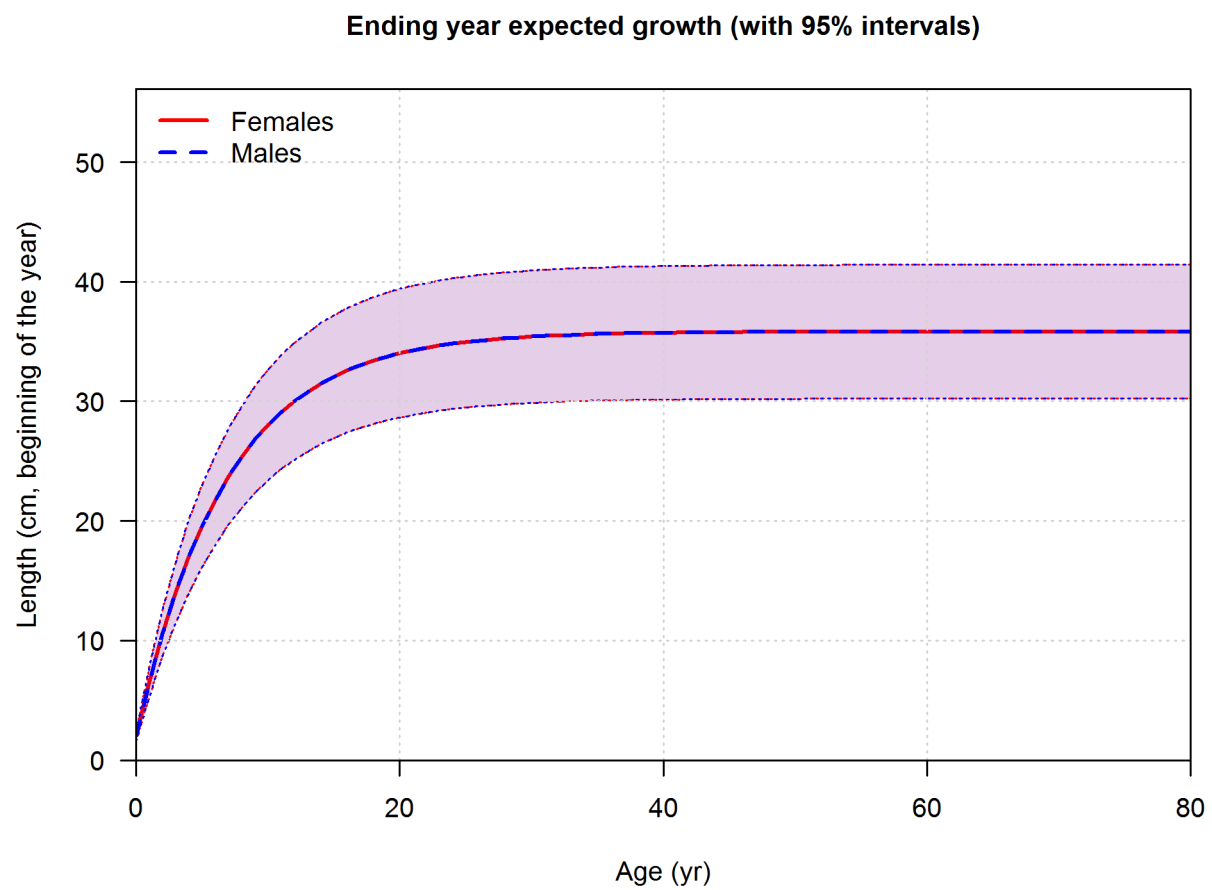


Figure 2: Length at age in the beginning of the year (or season) in the ending year of the model. Shaded area indicates 95% distribution of length at age around estimated growth curve. fig:mod1\_1\_biol\_sizeatage

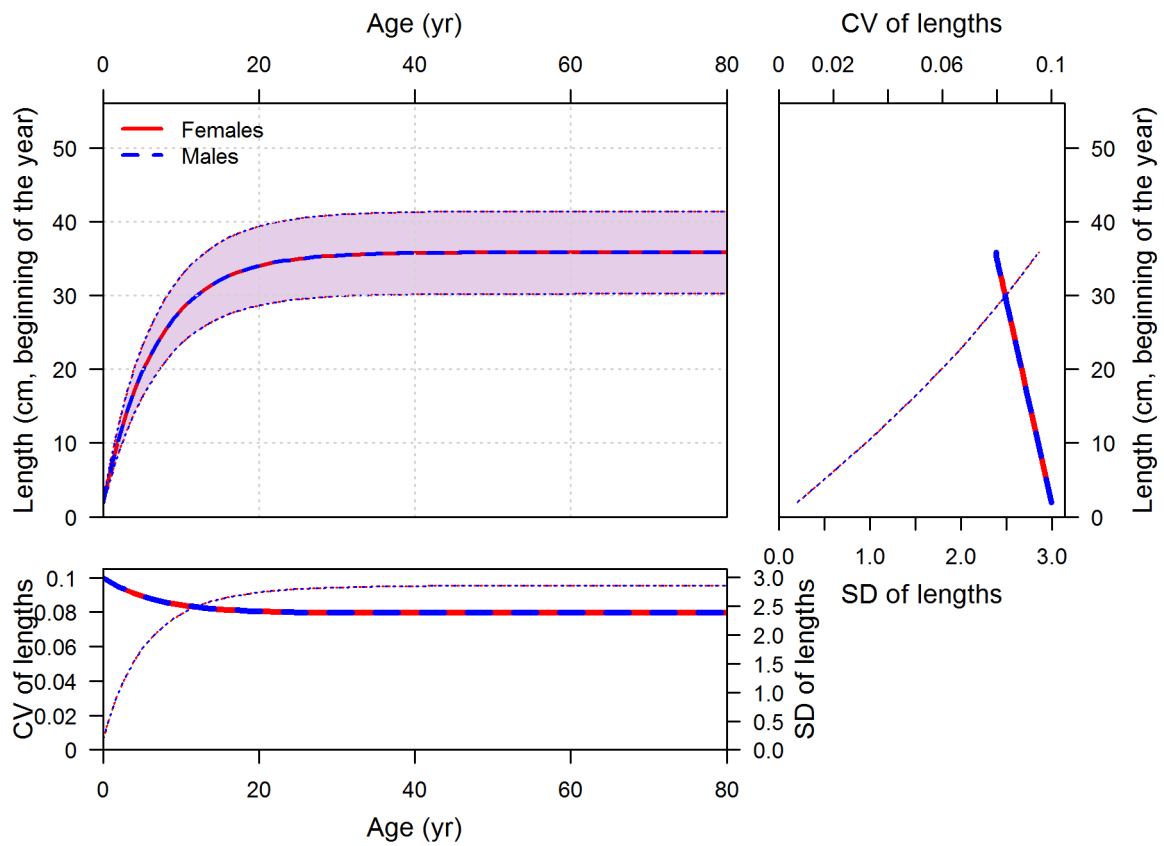


Figure 3: Length at age (top\_left panel) with CV (thick line) and SD (thin line) of length at age shown in top\_right and lower\_left panels | fig:mod1\_2\_bio2\_sizeatage\_plus\_CV\_and\_SD

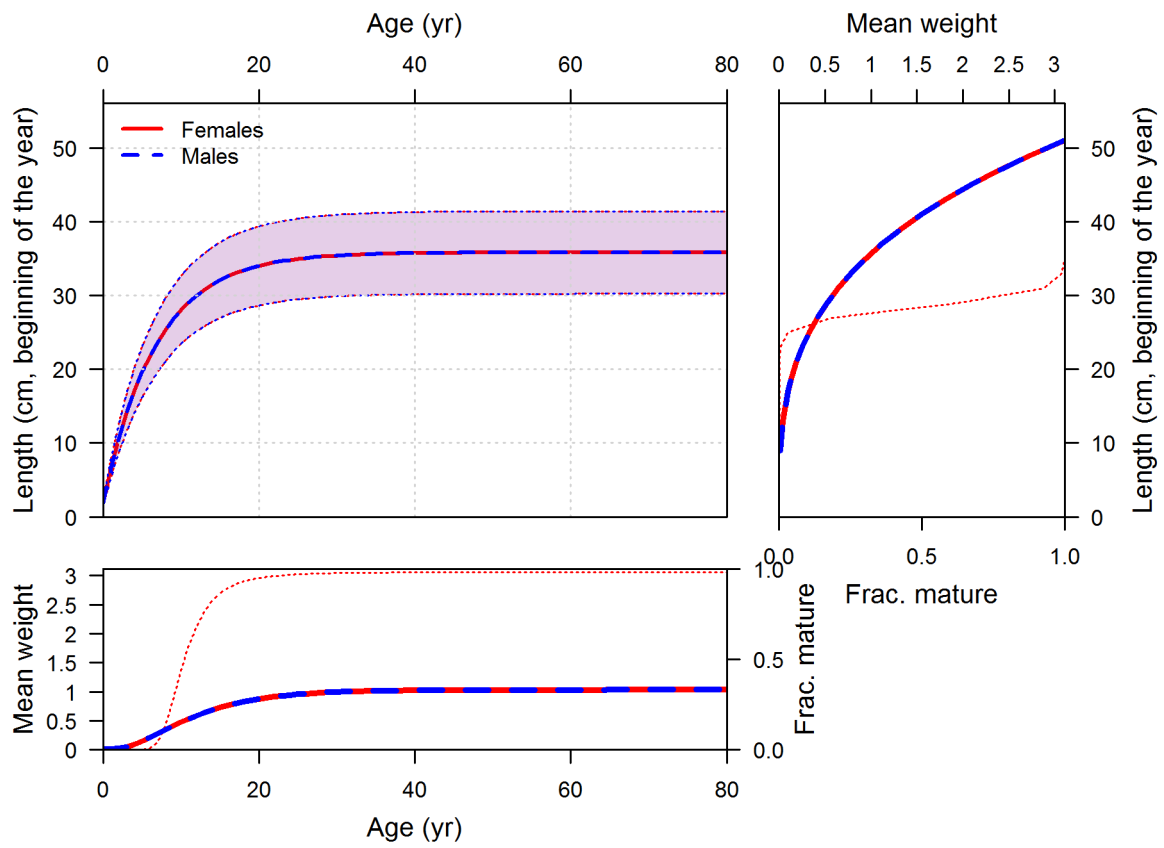


Figure 4: Length at age (top\_left panel) with weight (thick line) and maturity (thin line) shown in top\_right and lower\_left panels

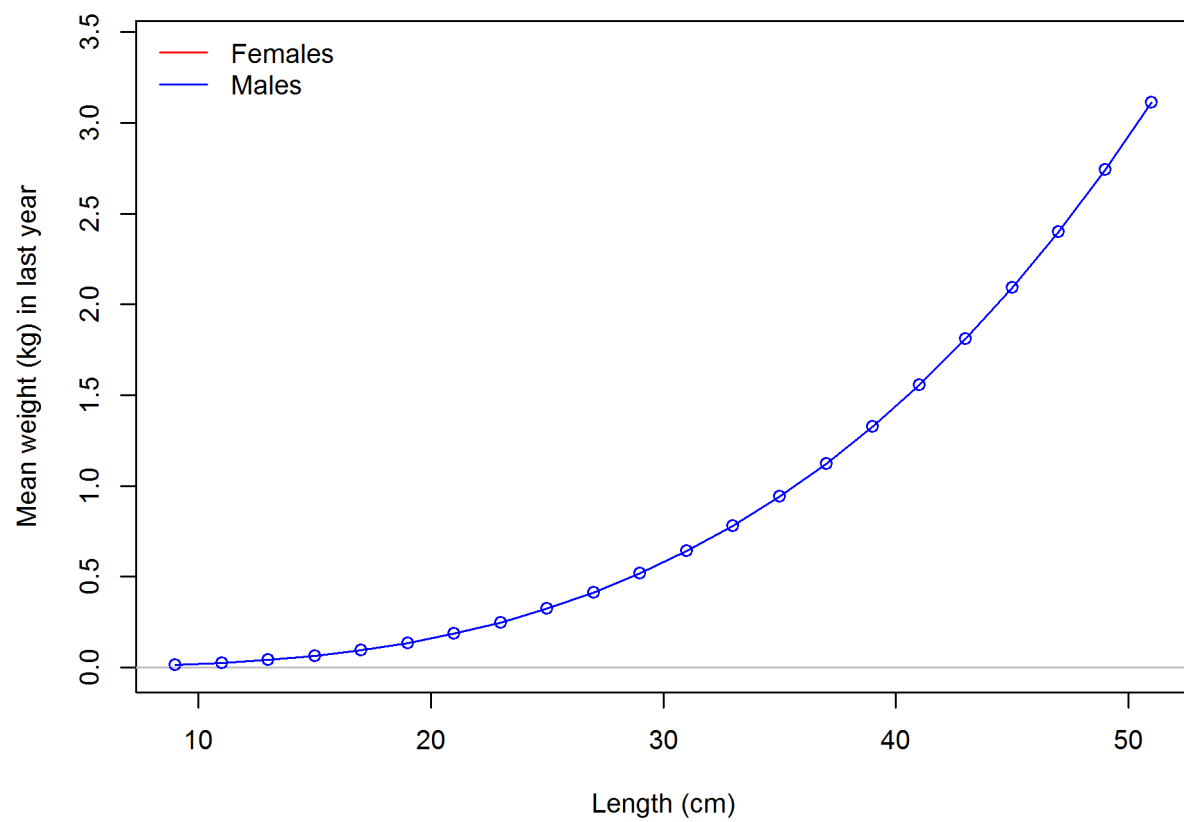


Figure 5: Weight\_length relationship for females <sup>fig:mod1\_4\_bio4\_weightatsize</sup>

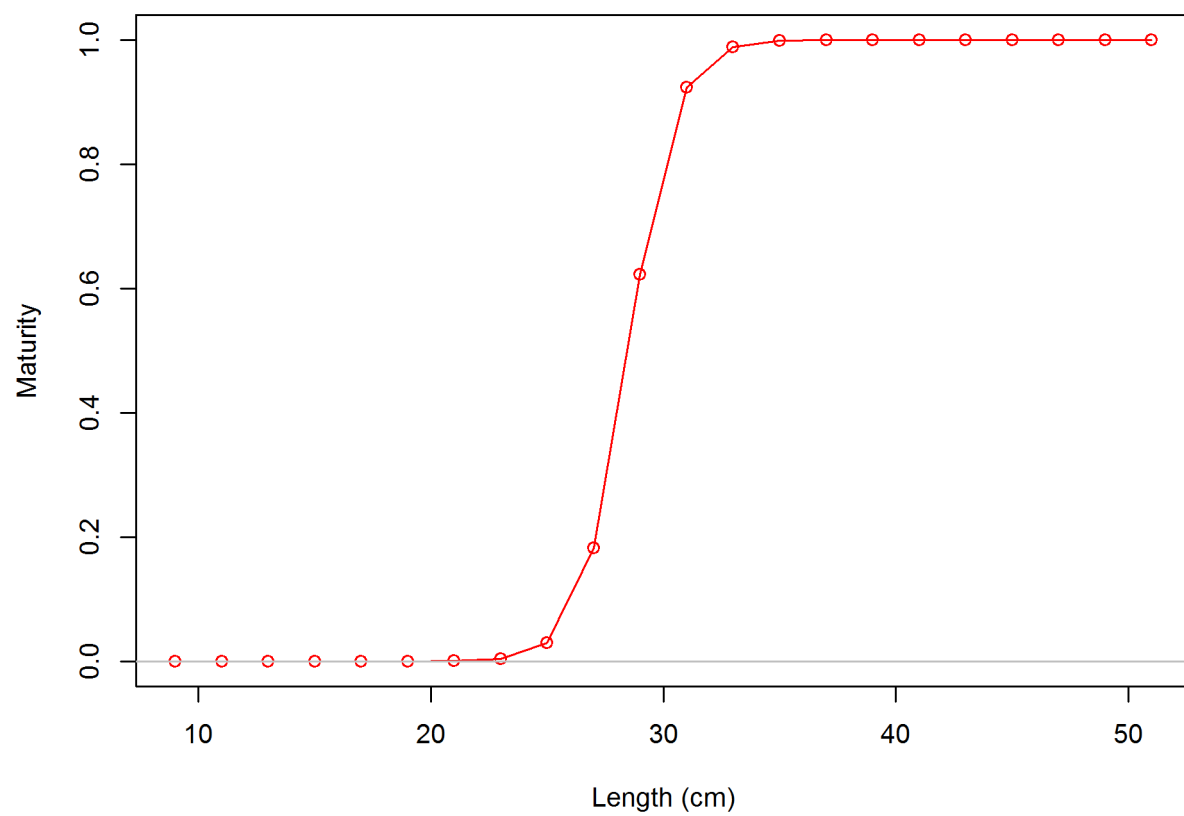


Figure 6: Maturity at length `fig:mod1_5_bio5_maturity`

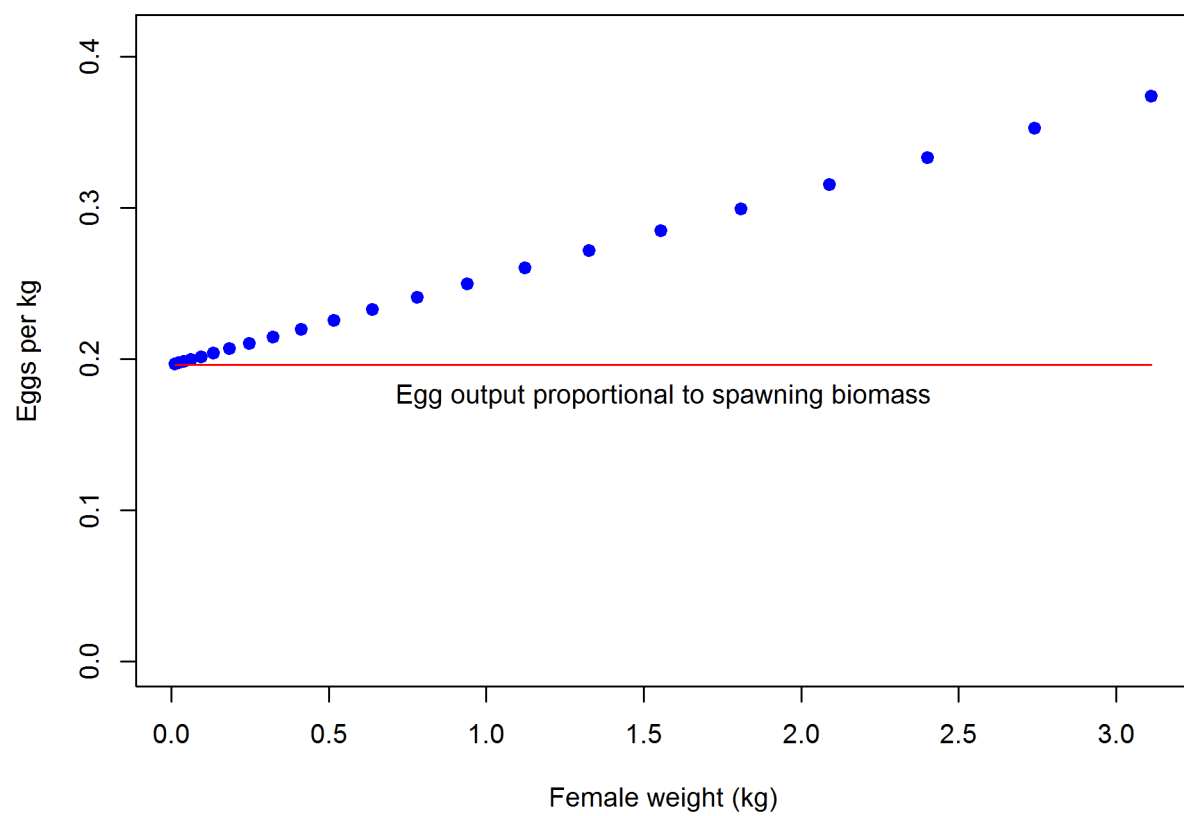


Figure 7: Fecundity <sup>fig:mod1\_6\_bio6\_fecundity</sup>

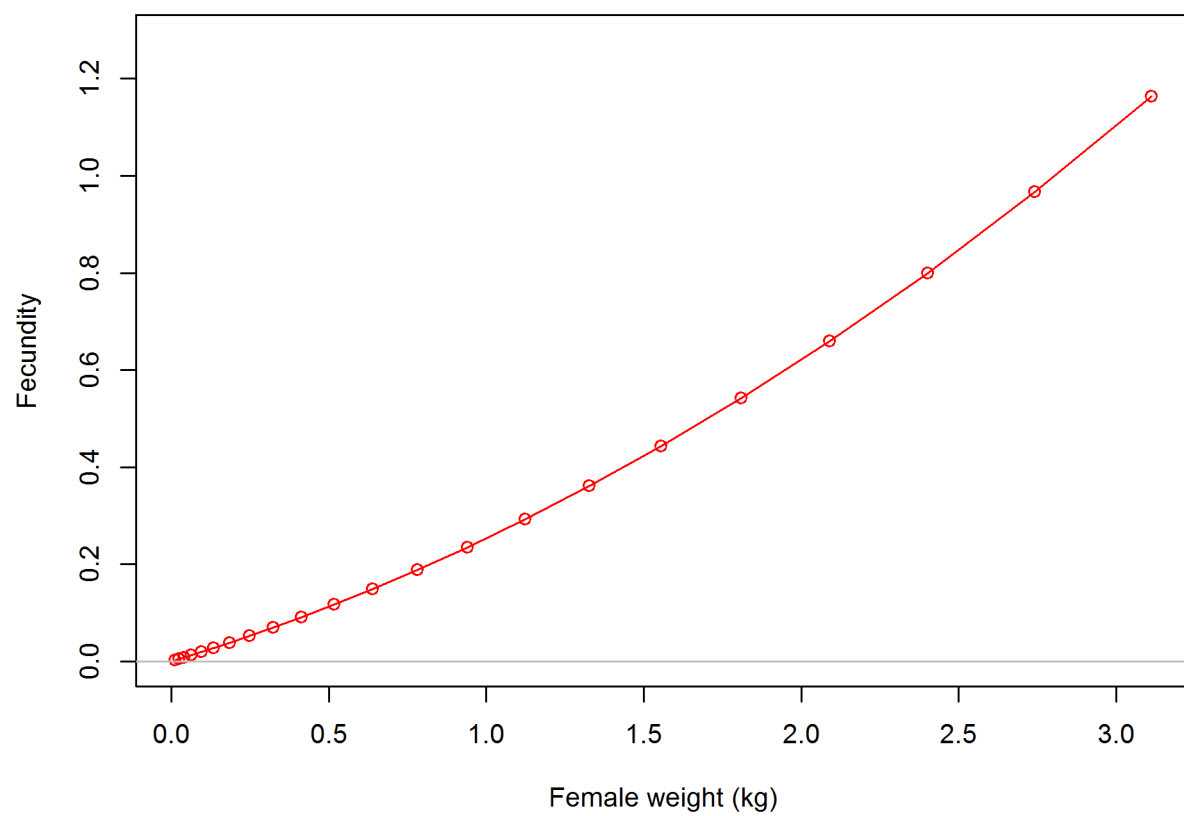


Figure 8: Fecundity as a function of weight | `fig:mod1_7_bio7_fecundity_wt`



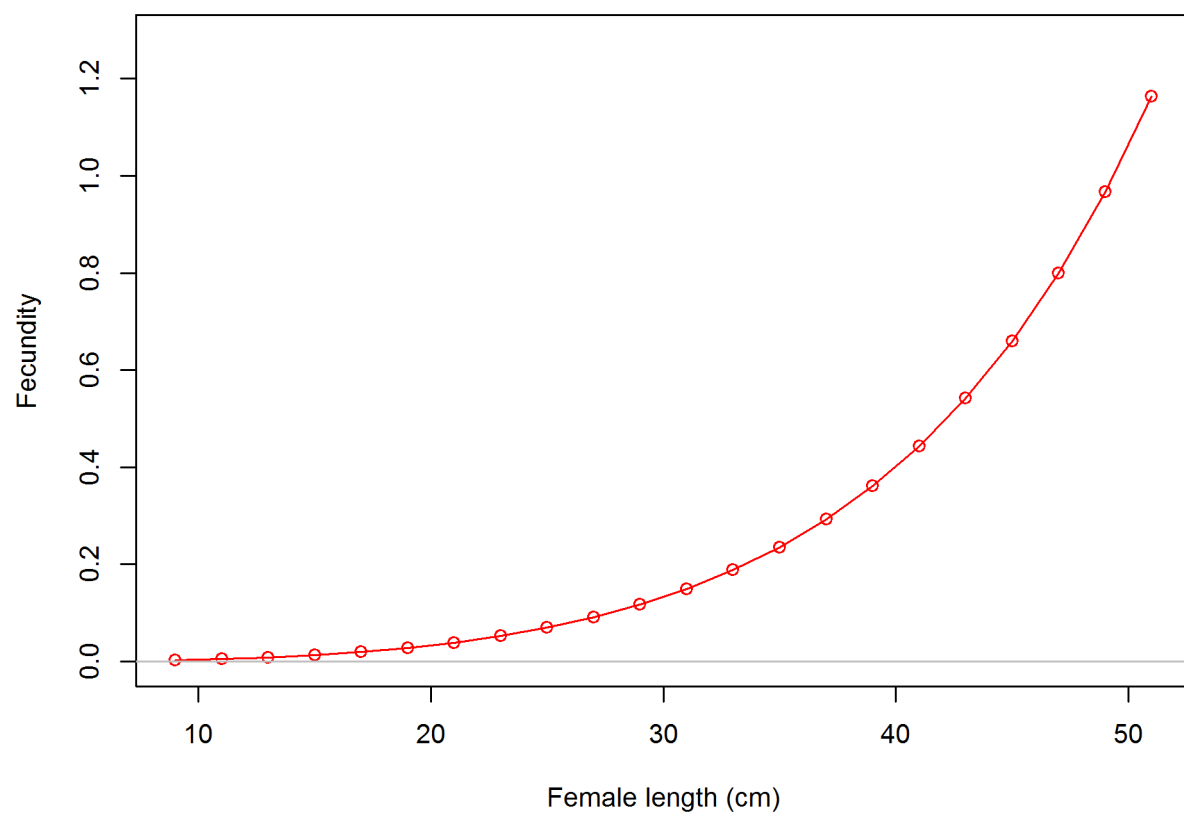


Figure 9: Fecundity as a function of length | `fig:mod1_8_bio8_fecundity_len`

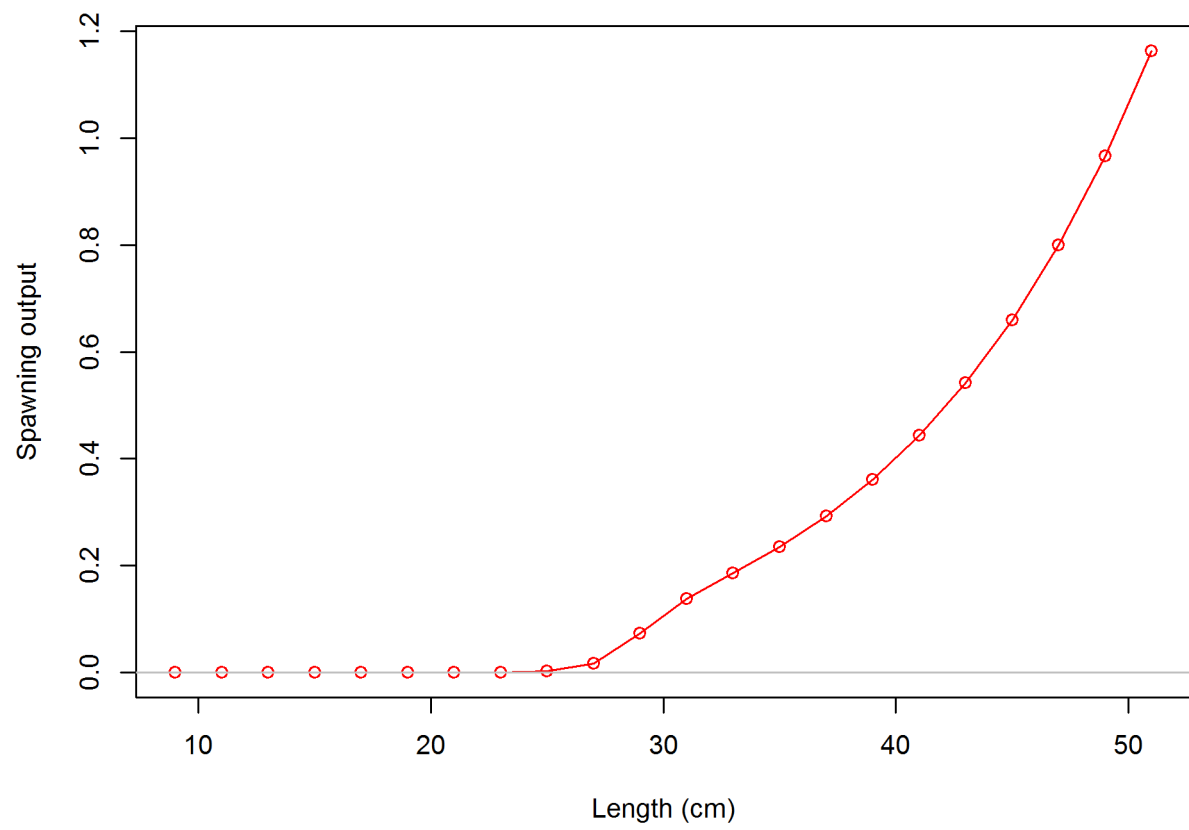


Figure 10: Spawning output at length `fig:mod1_9_bio9_spawningoutput`

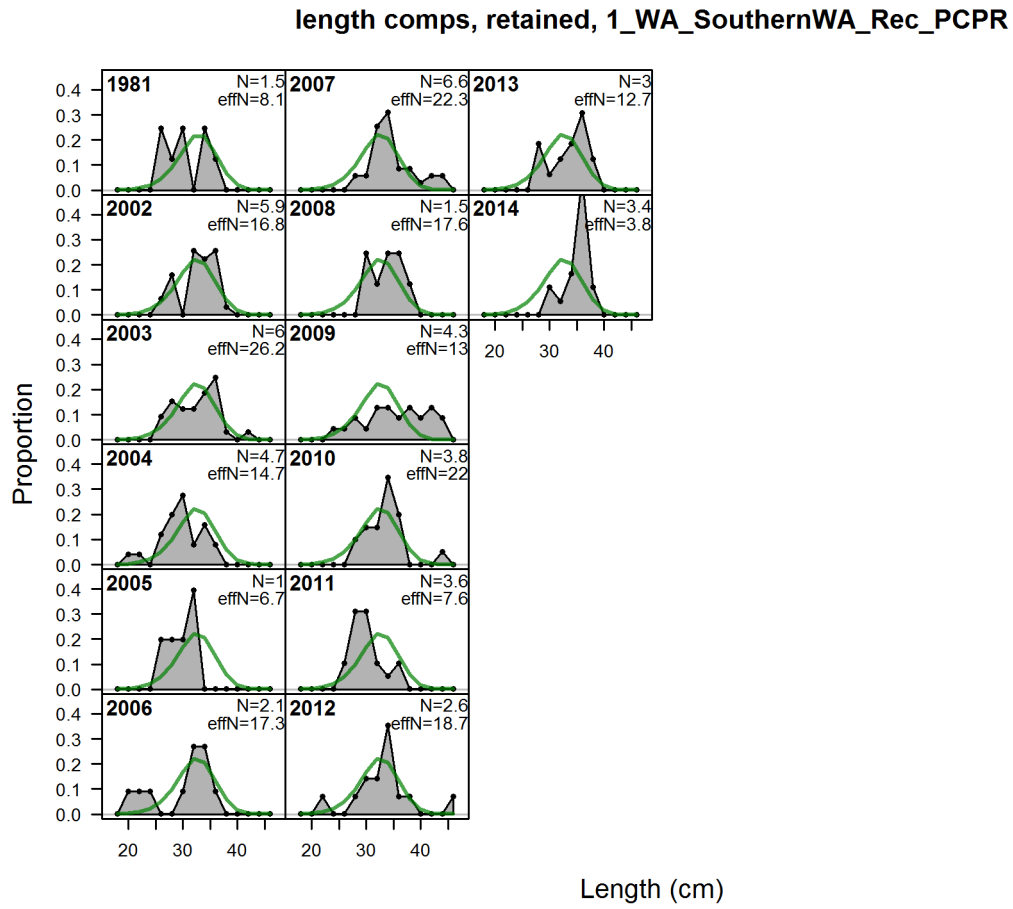


Figure 11: length comps, retained, 1\_WA\_SouthernWA\_Rec\_PCPR <sup>fig:mod1\_1\_comp\_lenfit\_flt1mkt2</sup>



Figure 12: Pearson residuals, retained, 1\_WA\_SouthernWA\_Rec\_PCPR (max=4.76)  
 Closed bubbles are positive residuals (observed > expected) and open bubbles are negative residuals (observed < expected).  
 fig:mod1\_2\_comp\_lenfit\_residsflt1mkt2

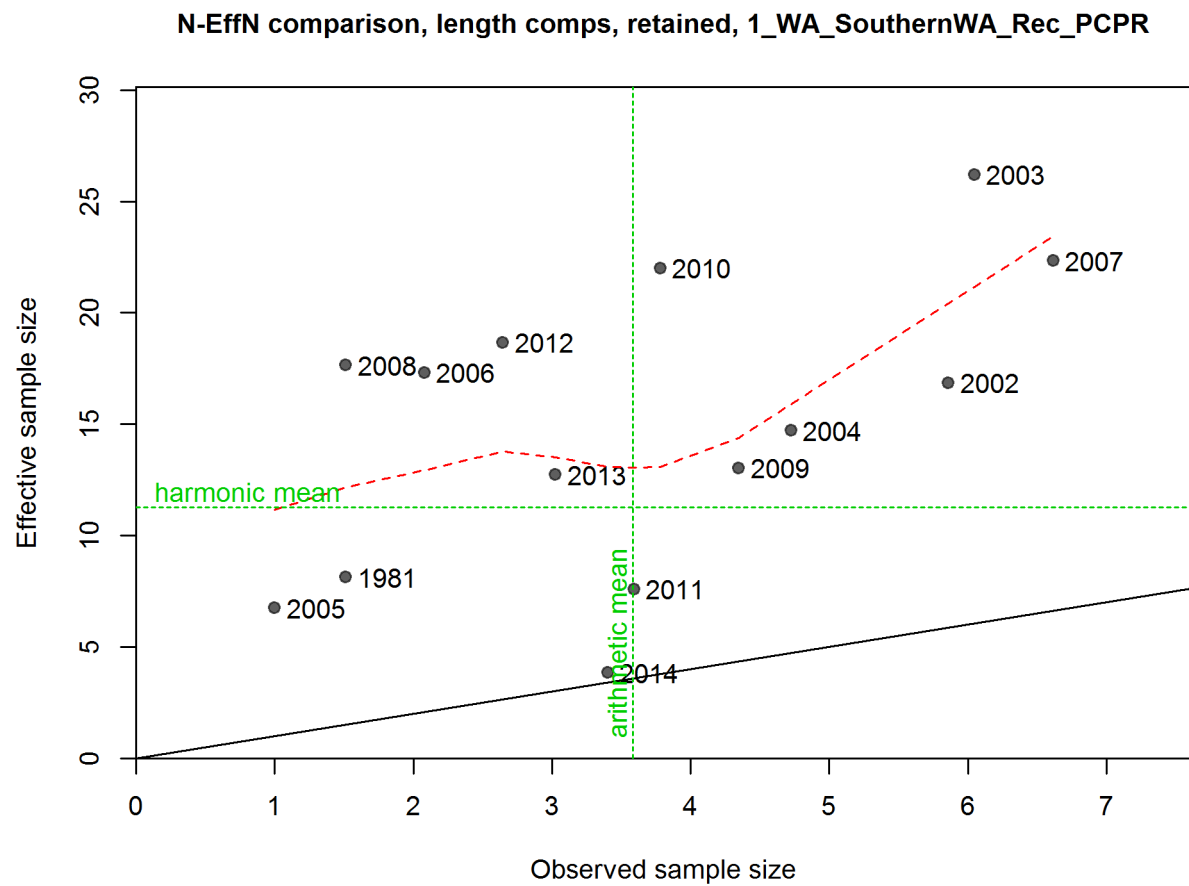


Figure 13: N\_EffN comparison, length comps, retained, 1\_WA\_SouthernWA\_Rec\_PCPR fig:mod1\_3\_comp\_lenfit.

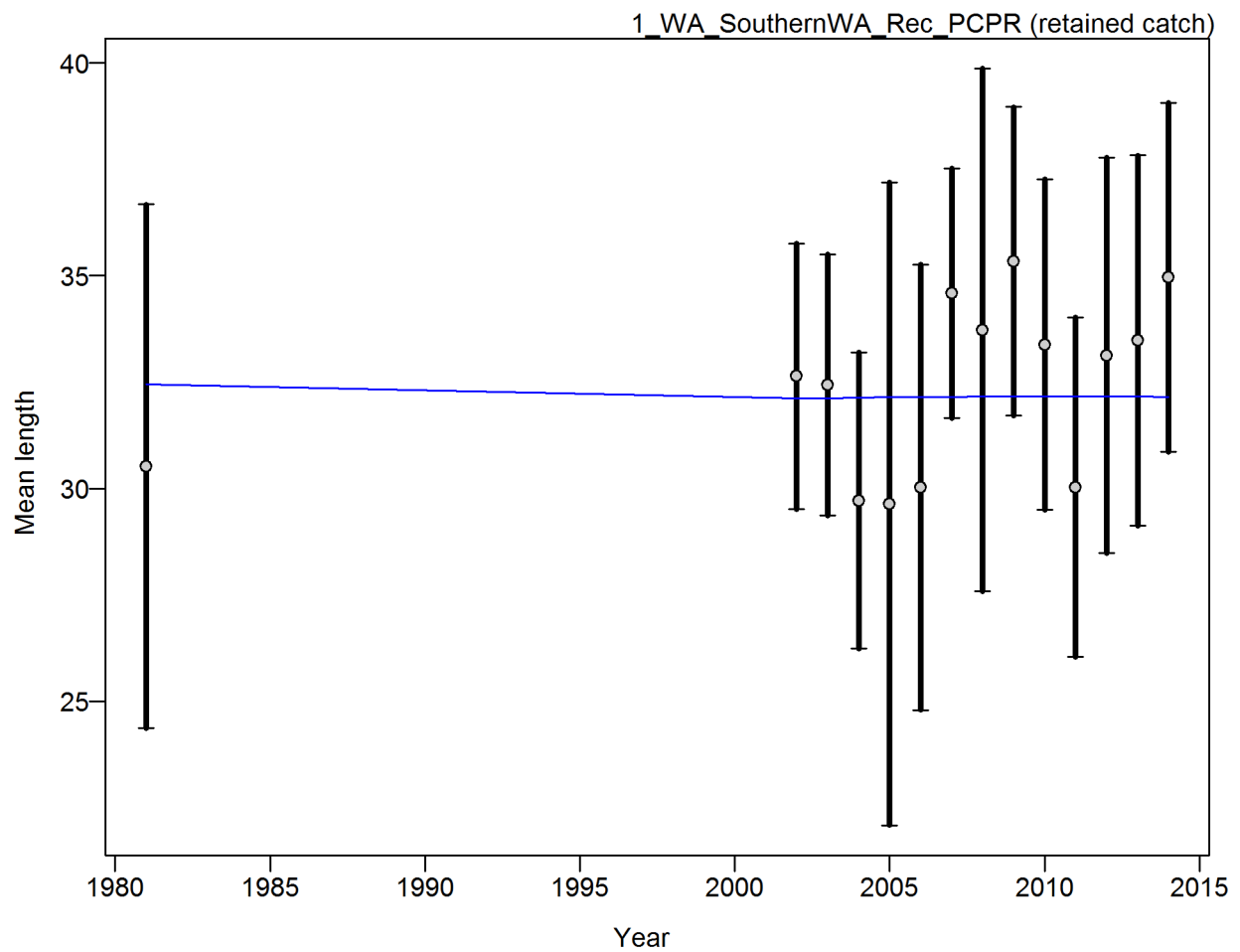


Figure 14: Francis data weighting method TA1.8 1\_WA\_SouthernWA\_Rec\_PCPR Suggested sample size adjustment (with 95% interval) for len data from 1\_WA\_SouthernWA\_Rec\_PCPR: 0.9991 (0.6951\_2.1587)  
 fig:mod1\_4\_comp\_lenfit\_data\_weighting\_TA1.8\_1\_WA\_SouthernWA\_Rec\_PCPR

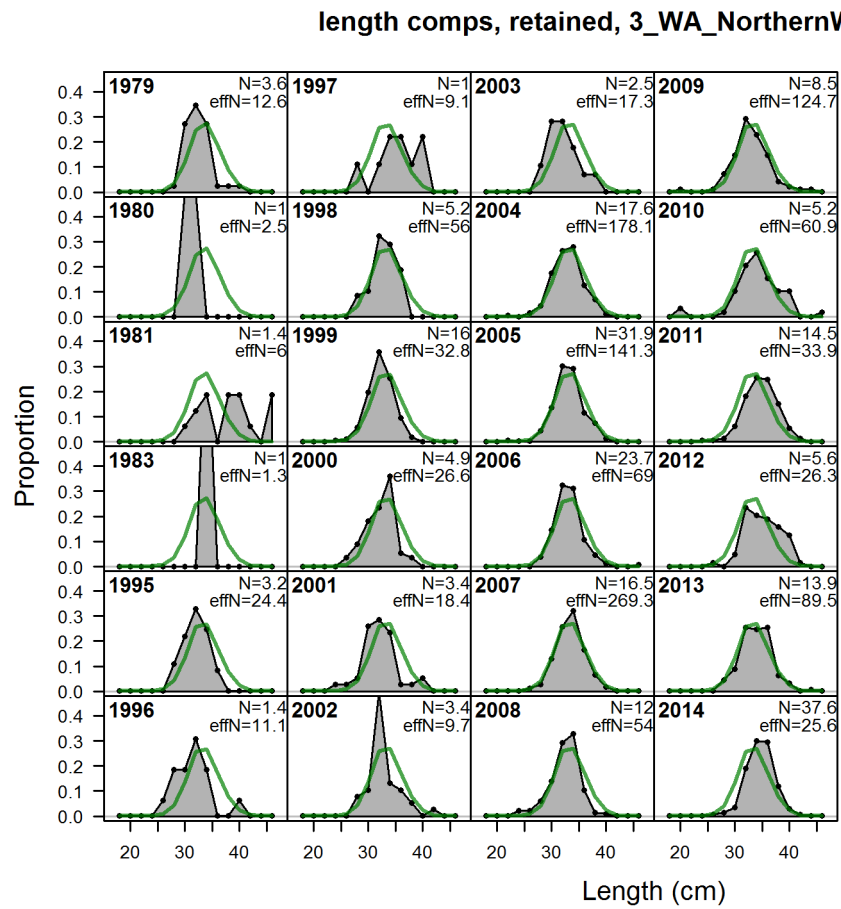


Figure 15: length comps, retained, 3\_WA\_NorthernWA\_Rec\_PR <sup>fig:mod1\_5\_comp\_lenfit\_flt3mkt2</sup>

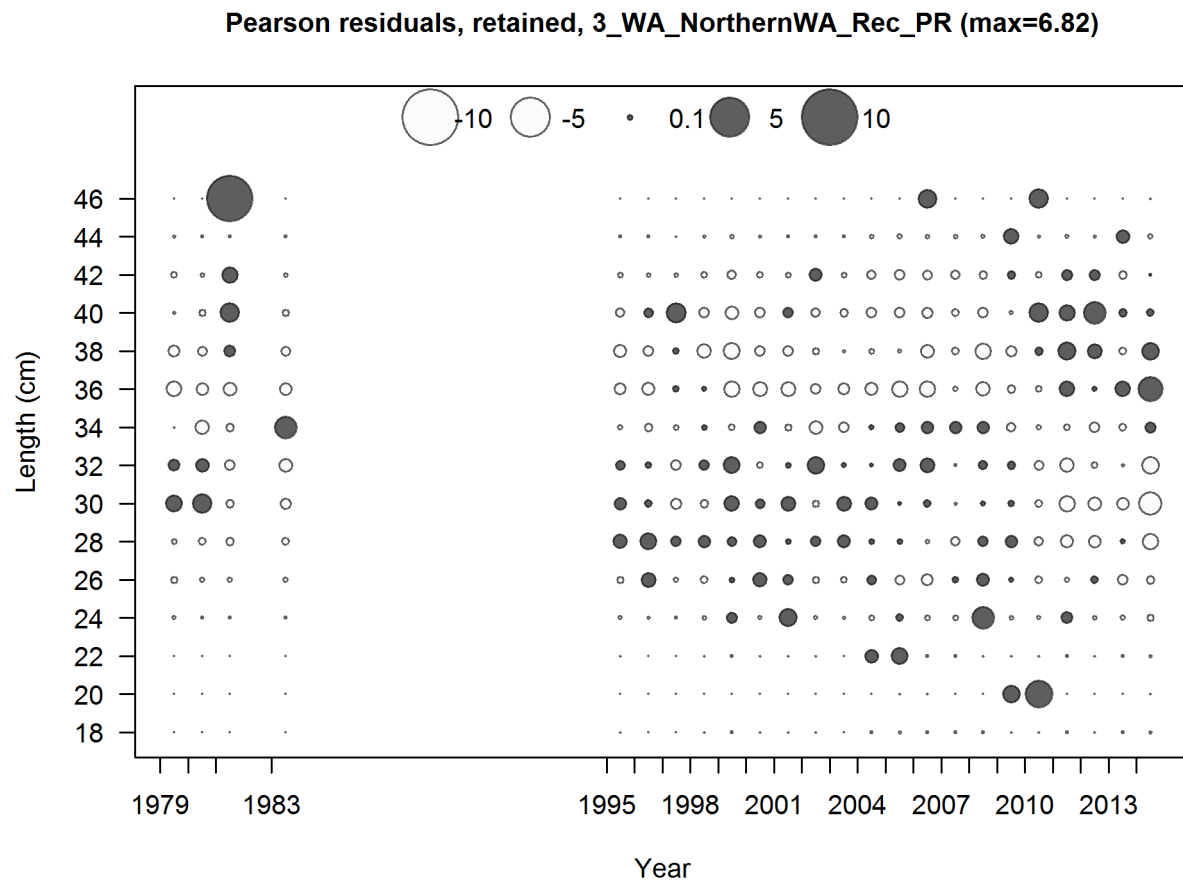


Figure 16: Pearson residuals, retained, 3\_WA\_NorthernWA\_Rec\_PR (max=6.82)  
 Closed bubbles are positive residuals (observed > expected) and open bubbles are negative residuals (observed < expected).  
 fig:mod1\_6\_comp\_lenfit\_residsflt3mkt2



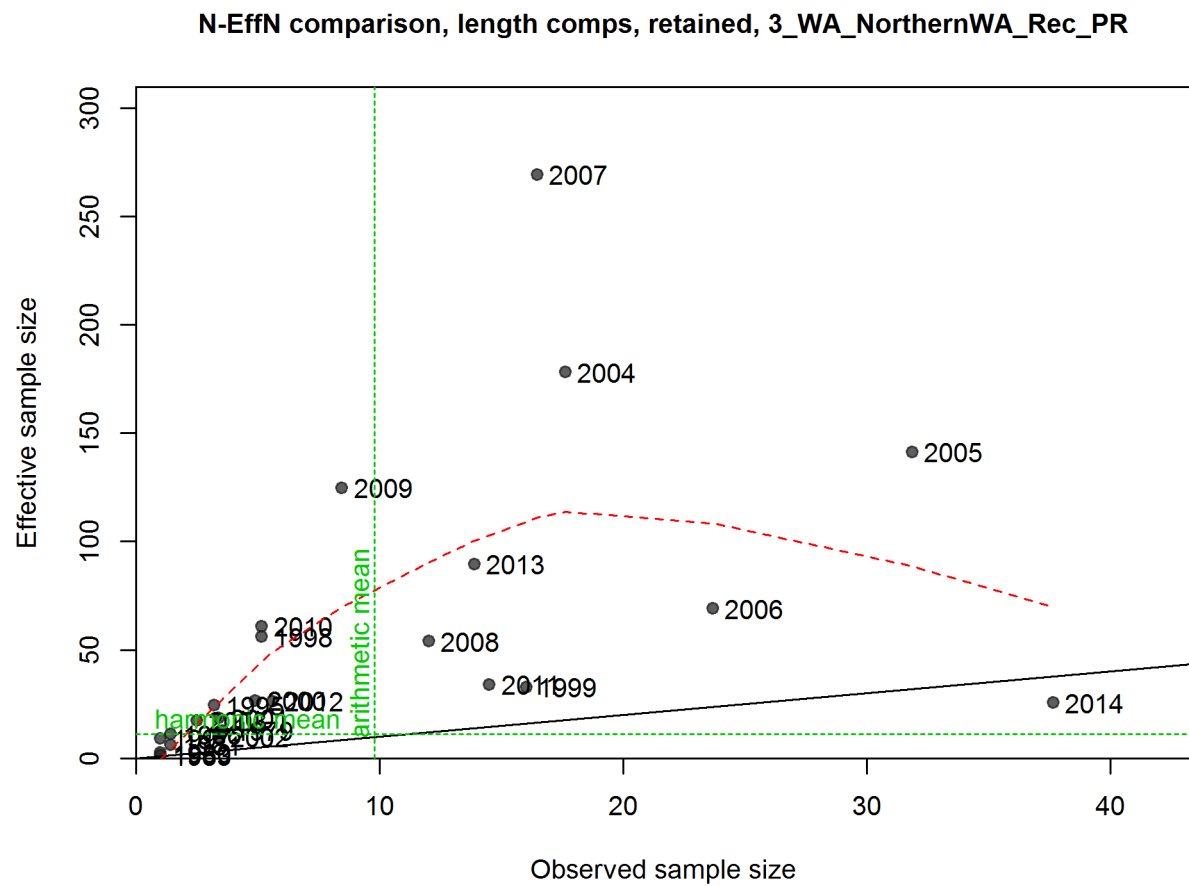


Figure 17: N\_EffN comparison, length comps, retained, 3\_WA\_NorthernWA\_Rec\_PR fig:mod1\_7\_comp\_lenfit\_s

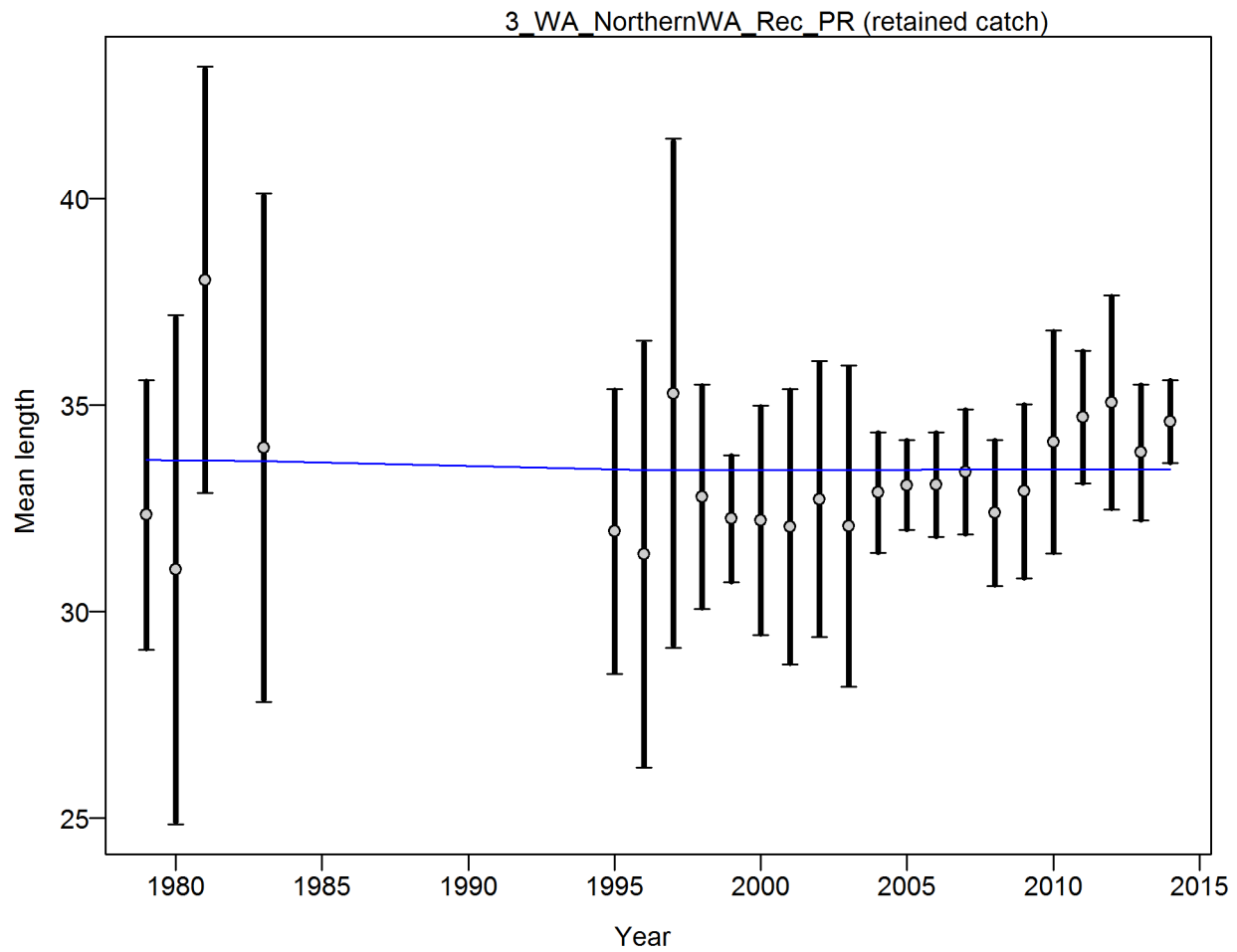


Figure 18: Francis data weighting method TA1.8 3\_WA\_NorthernWA\_Rec\_PR Suggested sample size adjustment (with 95% interval) for len data from 3\_WA\_NorthernWA\_Rec\_PR: 0.9797 (0.6452\_2.3201) fig:mod1\_8\_comp\_

### length comps, retained, aggregated across time by fleet

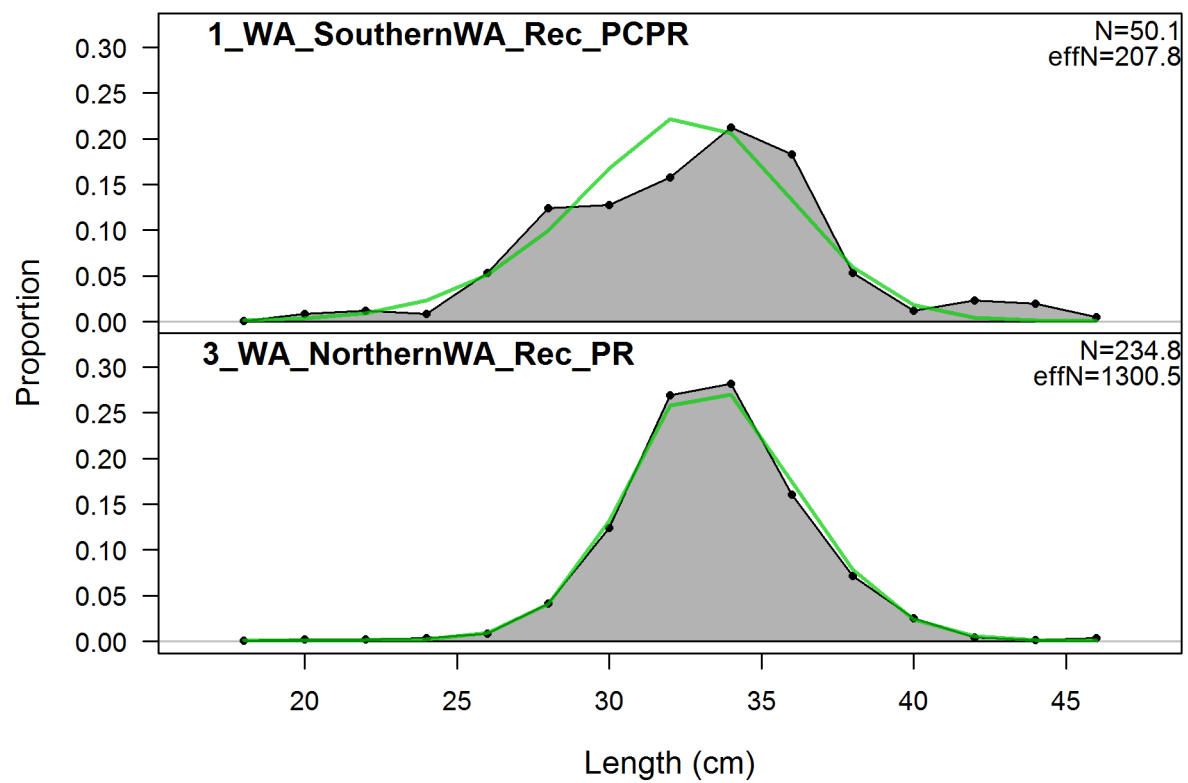


Figure 19: length comps, retained, aggregated across time by fleet fig:mod1\_9\_comp\_lenfit\_mkt2\_aggreg

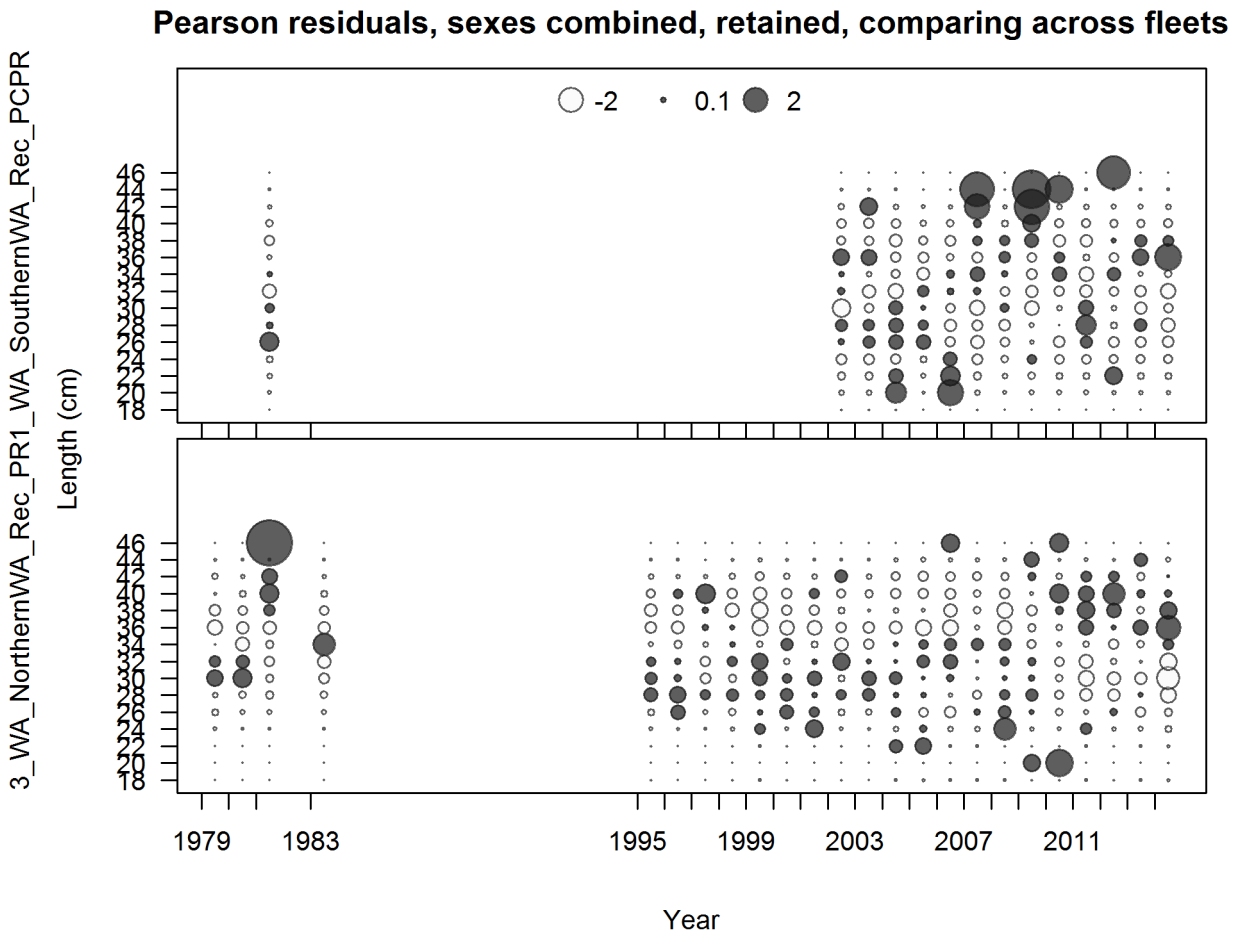


Figure 20: Note: this plot doesn't seem to be working right for some models. Pearson residuals, sexes combined, retained, comparing across fleets  
 Closed bubbles are positive residuals (observed > expected) and open bubbles are negative residuals (observed < expected).  
 fig:mod1\_10\_comp\_lenfit\_sex1mkt2\_multi-fleet\_comparison

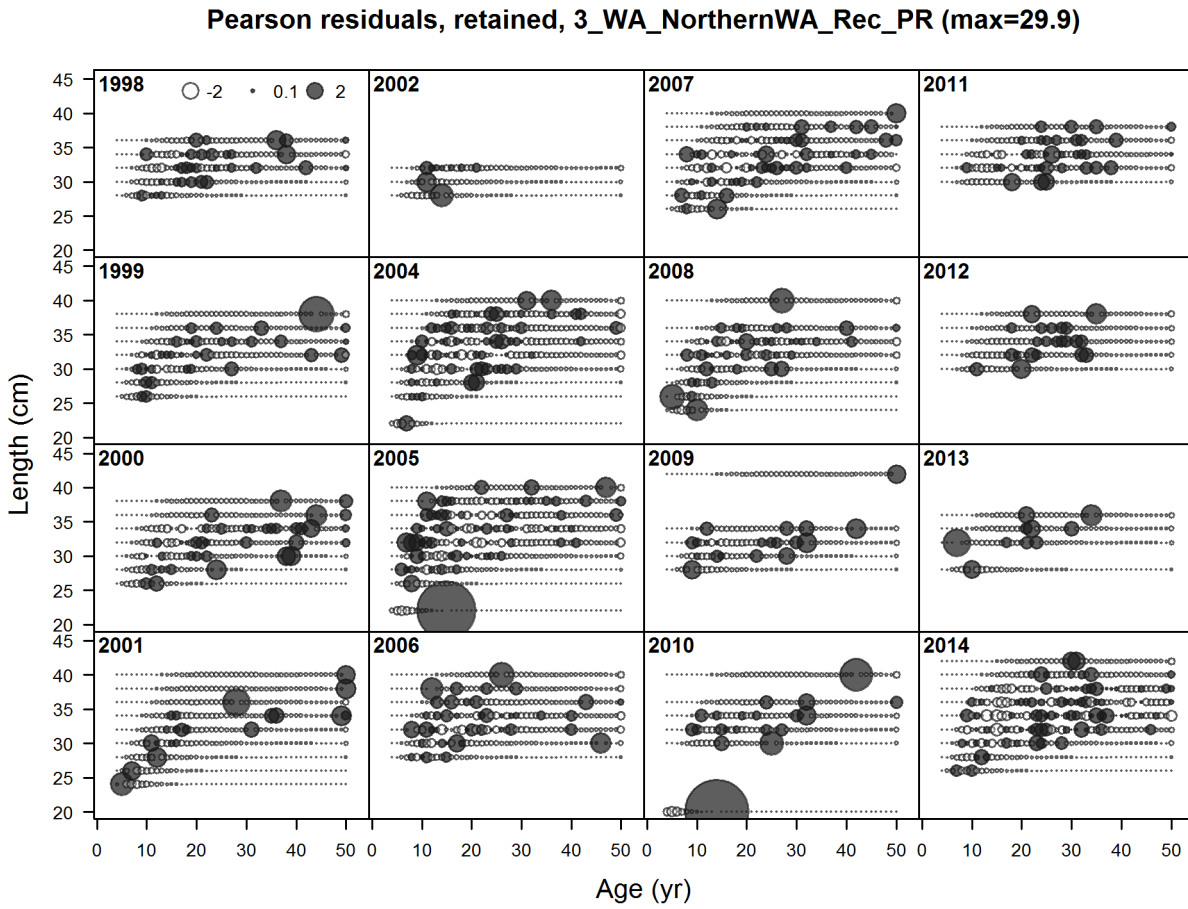


Figure 21: Pearson residuals, retained, 3\_WA\_NorthernWA\_Rec\_PR (max=29.9) fig:mod1\_1\_comp\_condAALfit

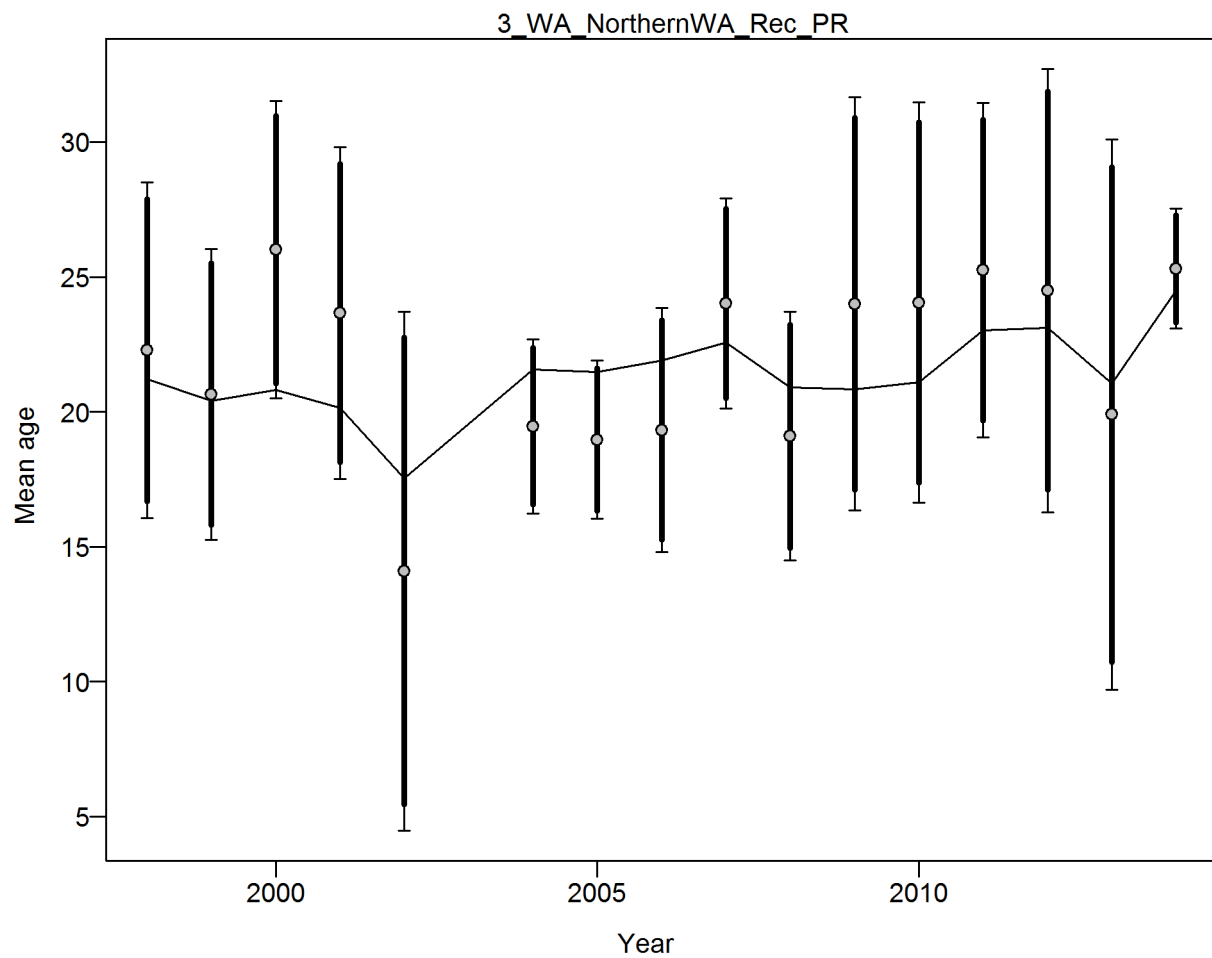


Figure 22: Francis data weighting method TA1.8 for conditional age data 3\_WA\_NorthernWA\_Rec\_PR  
 For more info, see Francis, R.I.C.C. (2011). Data weighting in statistical fisheries stock assessment models.  
 Can. J. Fish. Aquat. Sci. 68: 1124\_1138. [fig:mod1\_2\_comp\_condAALfit\_data\_weighting\_TA1.8\_condAge3\_WA\_NorthernWA\_Rec\_

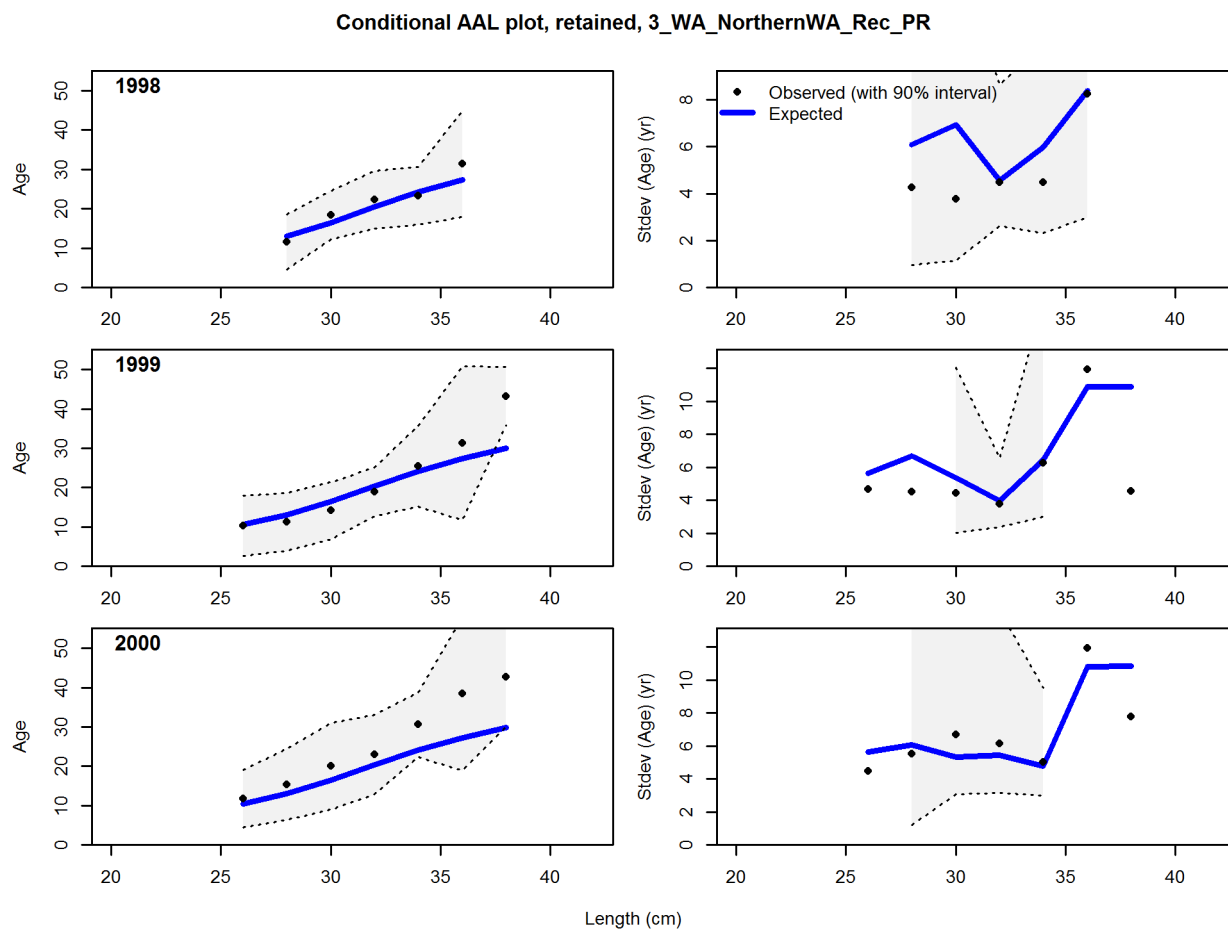


Figure 23: Conditional AAL plot, retained, 3\_WA\_NorthernWA\_Rec\_PR (plot 1 of 6) These plots show mean age and std. dev. in conditional AAL. Left plots are mean AAL by size\_class (obs. and pred.) with 90% CIs based on adding 1.64 SE of mean to the data. Right plots in each pair are SE of mean AAL (obs. and pred.) with 90% CIs based on the chi\_square distribution.

Conditional AAL plot, retained, 3\_WA\_NorthernWA\_Rec\_PR

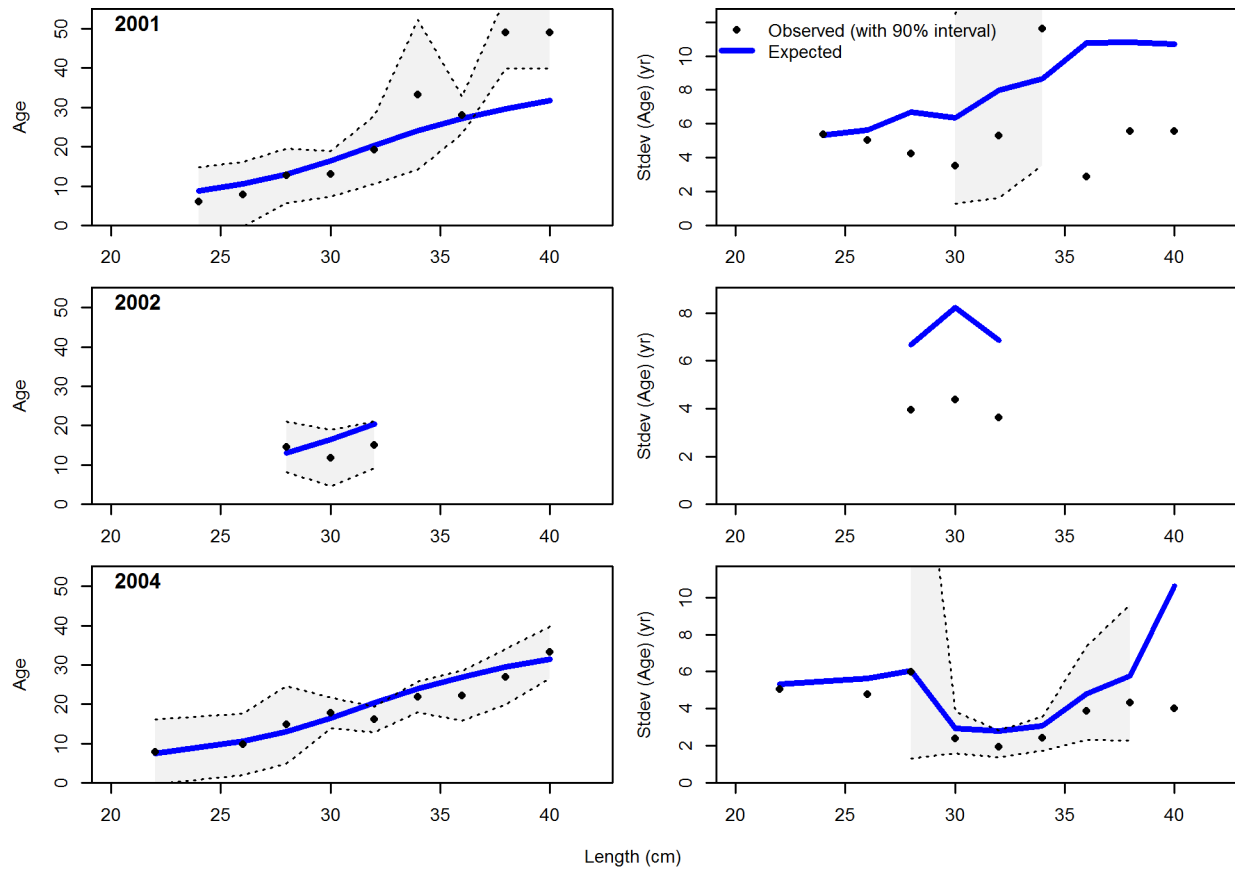
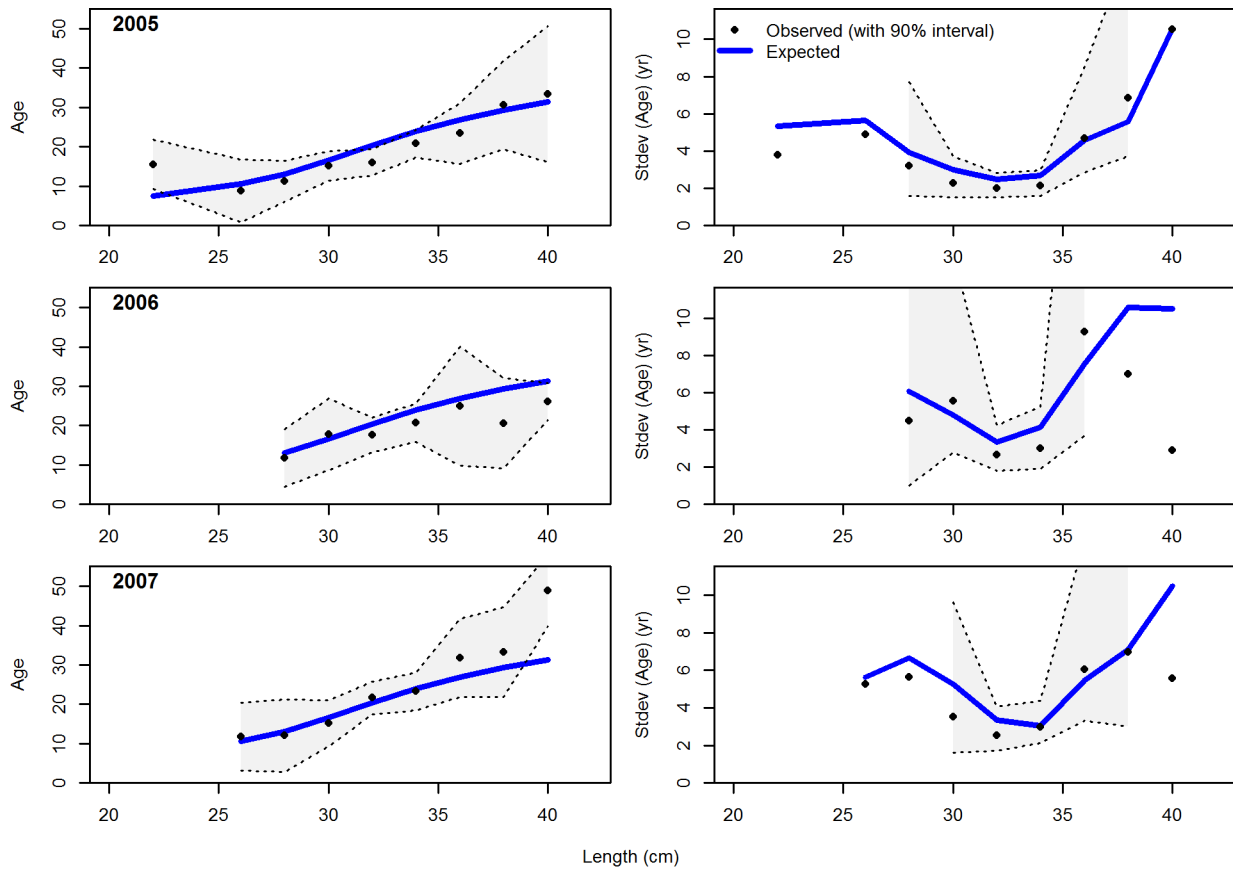


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Conditional AAL plot, retained, 3\_WA\_NorthernWA\_Rec\_PR



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Conditional AAL plot, retained, 3\_WA\_NorthernWA\_Rec\_PR

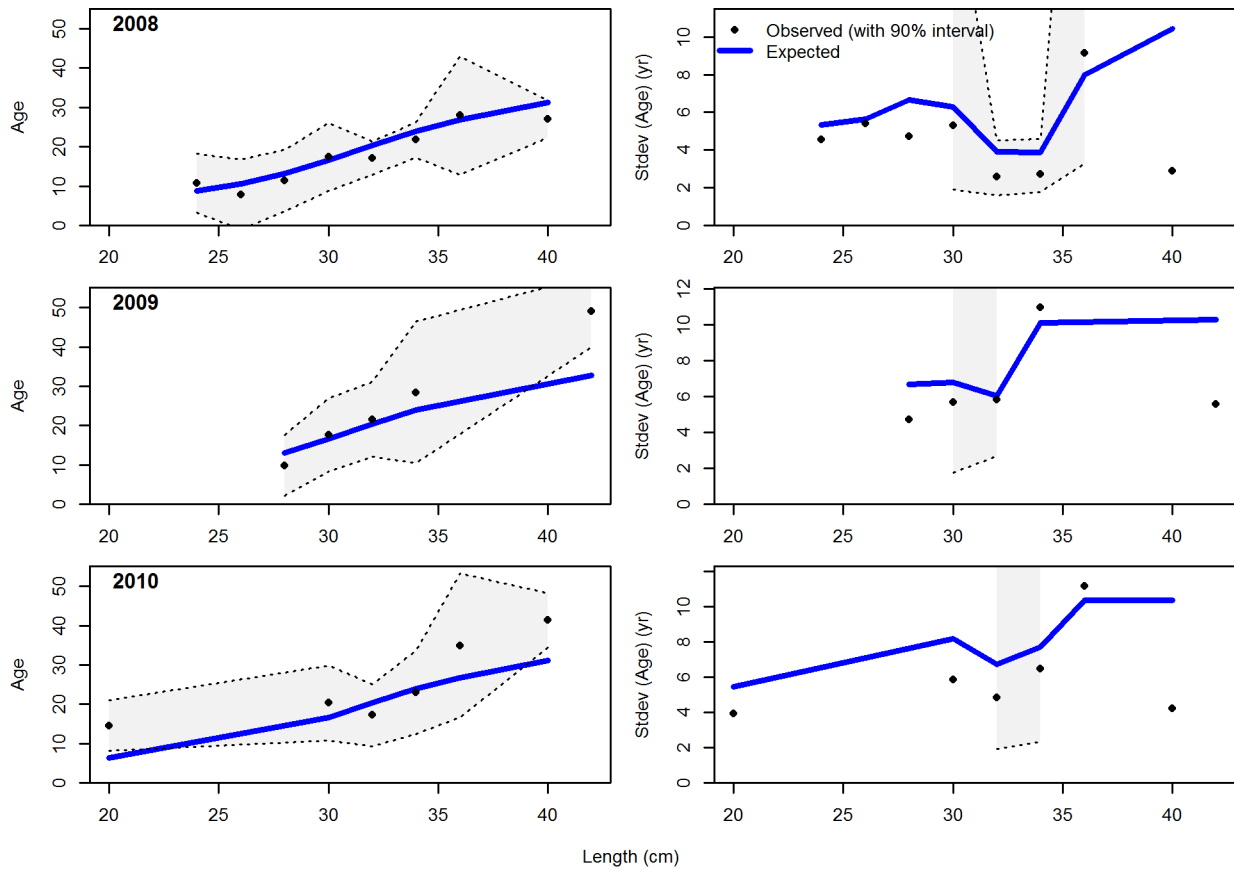
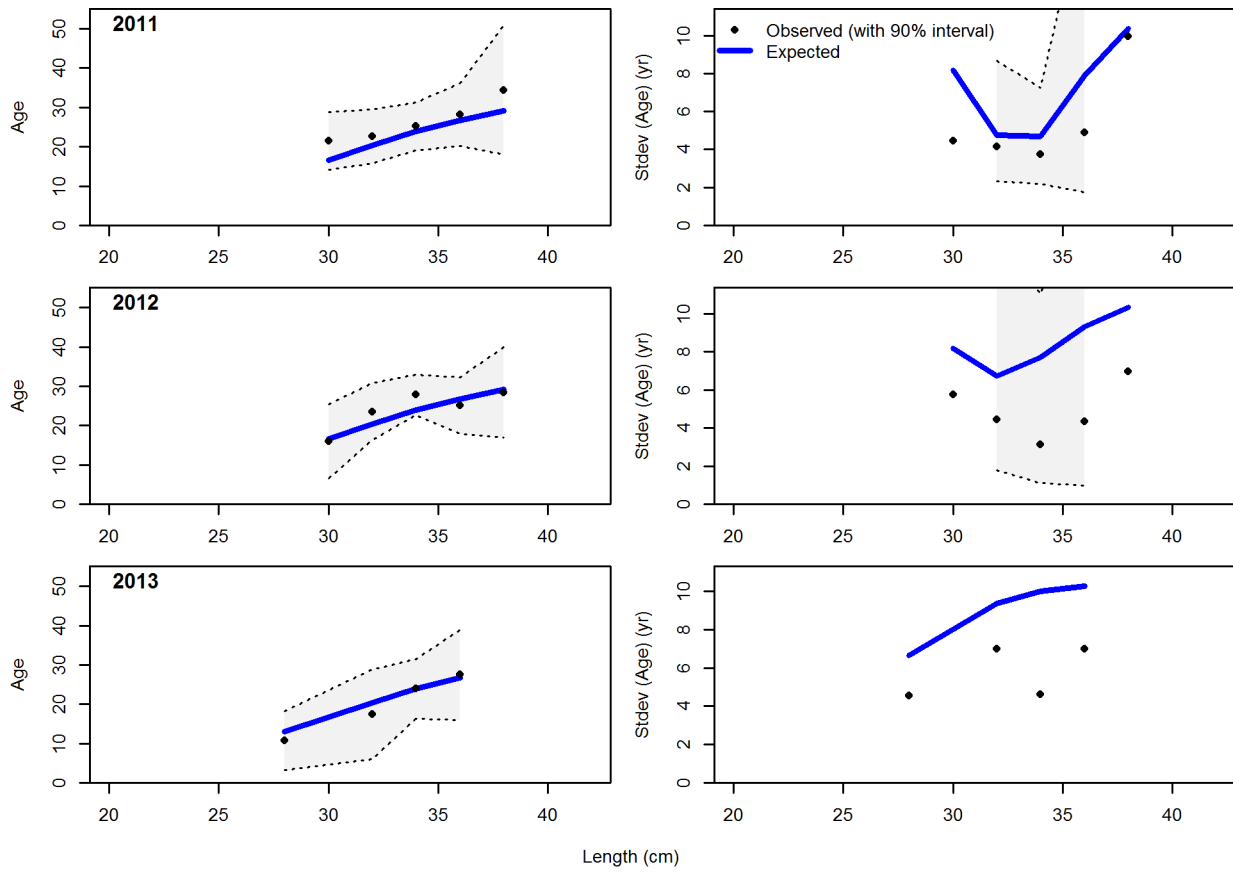


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Conditional AAL plot, retained, 3\_WA\_NorthernWA\_Rec\_PR

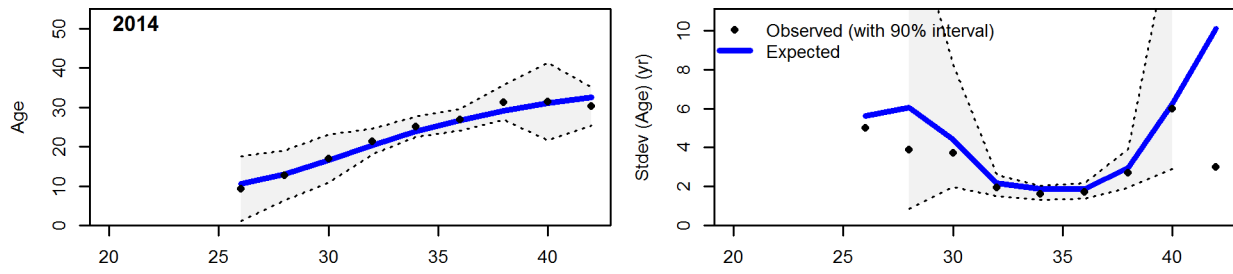


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Conditional AAL plot, retained, 3\_WA\_NorthernWA\_Rec\_PR



Length (cm)

11

12

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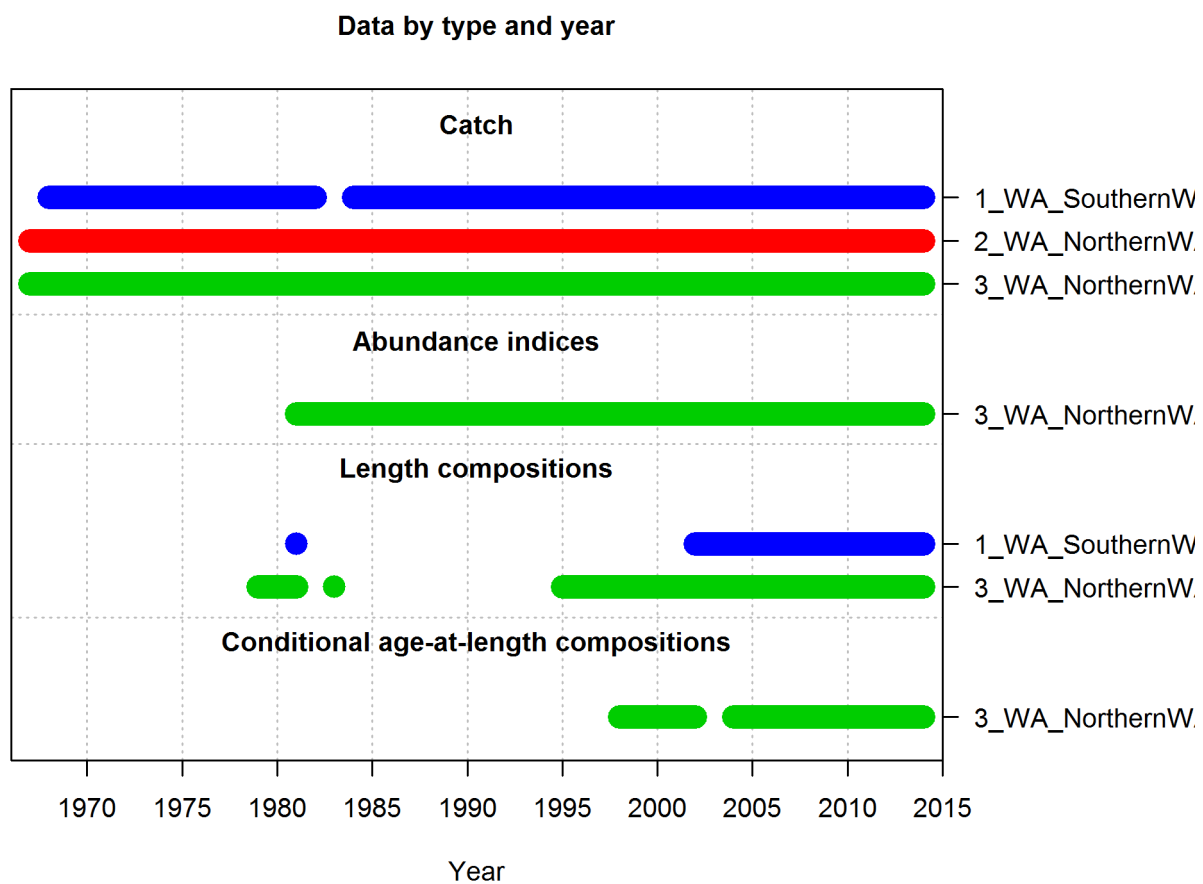
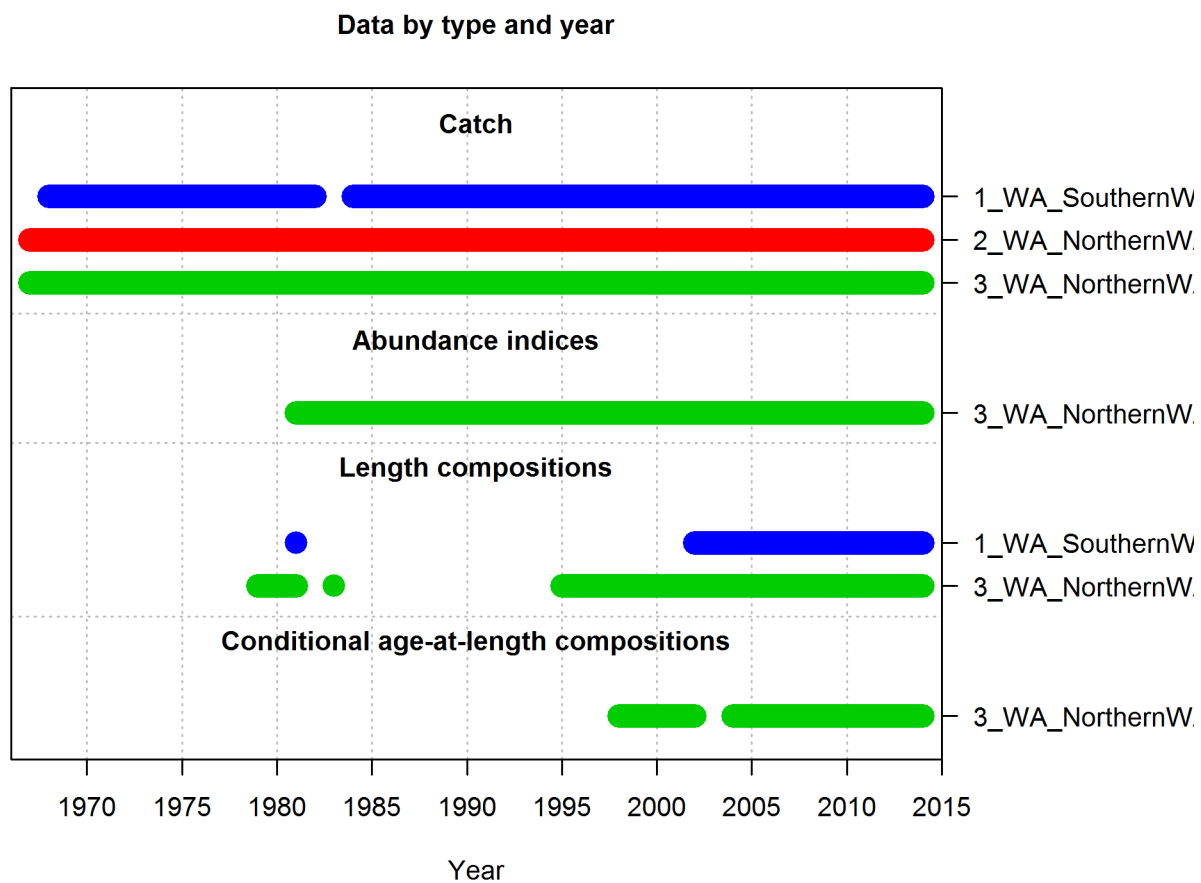


Figure 24: 1-Summary of data sources used in the base case assessment. fig:data\_plot



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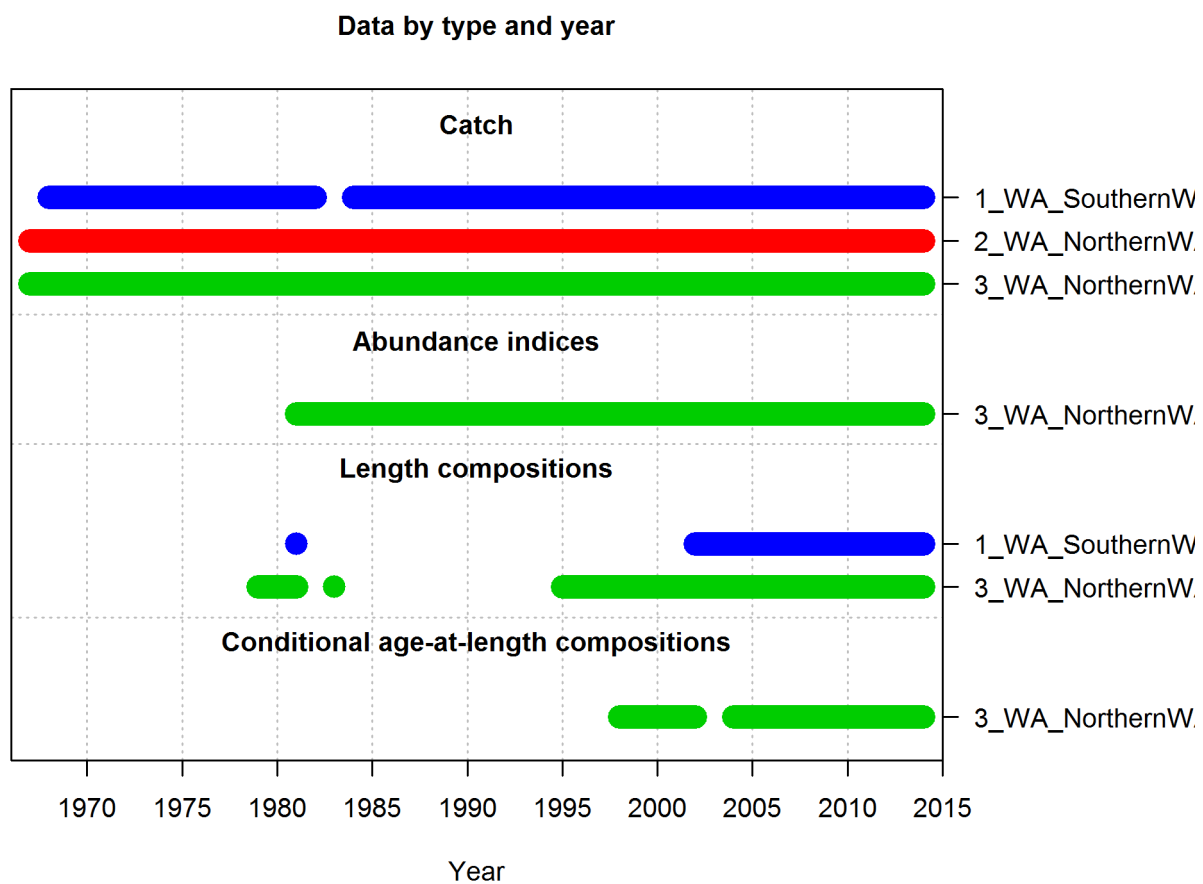


Figure 25: 3-Summary of data sources used in the base case assessment. fig:data\_plot