TIM Diagnostics

MODEL STRUCTURE
Match/Mismatch: Matching
Population Structure: Spatial Heterogeneity
Diagnostic Run: NO. Uses OBS values as data inputs
Residual plots represent RELATIVE difference; ((TRUE−ESTIMATED)/TRUE)*100

Run Time of Estimation: 0.064 minutes

OM Error Parameters

	Parameter	**1**	**2**
1	Sigma_Rec	0.4	NA
2	Sigma_Rec_Apport	0.2	NA
3	Sigma_F	0.2	0.2
4	Rec_Index_sigma	0.5	0.5
5	Survey_Sigma	0.2	0.2
6	Catch_Sigma	0.05	0.05
7	SIM_N_Catch	100	100
8	SIM_N_Survey	100	100

Likelihood Components

Model Converged

num gradient component = 9.58150734232197e
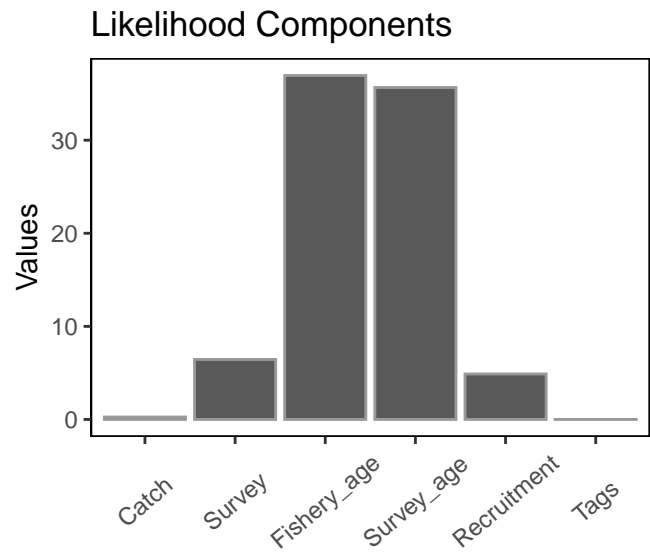
Estimated Parameter Values

	Parameter	1	2
1	q	0.00	0.00
2	R_ave	32079.00	32079.00
3	beta 1 fishery	5.22	4.87
4	beta 2 fishery	1.66	1.93
5	beta 3 fishery	NA	NA
6	beta 4 fishery	NA	NA
7	beta 1 survey	4.59	4.59
8	beta 2 survey	1.66	1.66
9	beta 3 survey	NA	NA
10	beta 4 survey	NA	NA

True Parameter Values

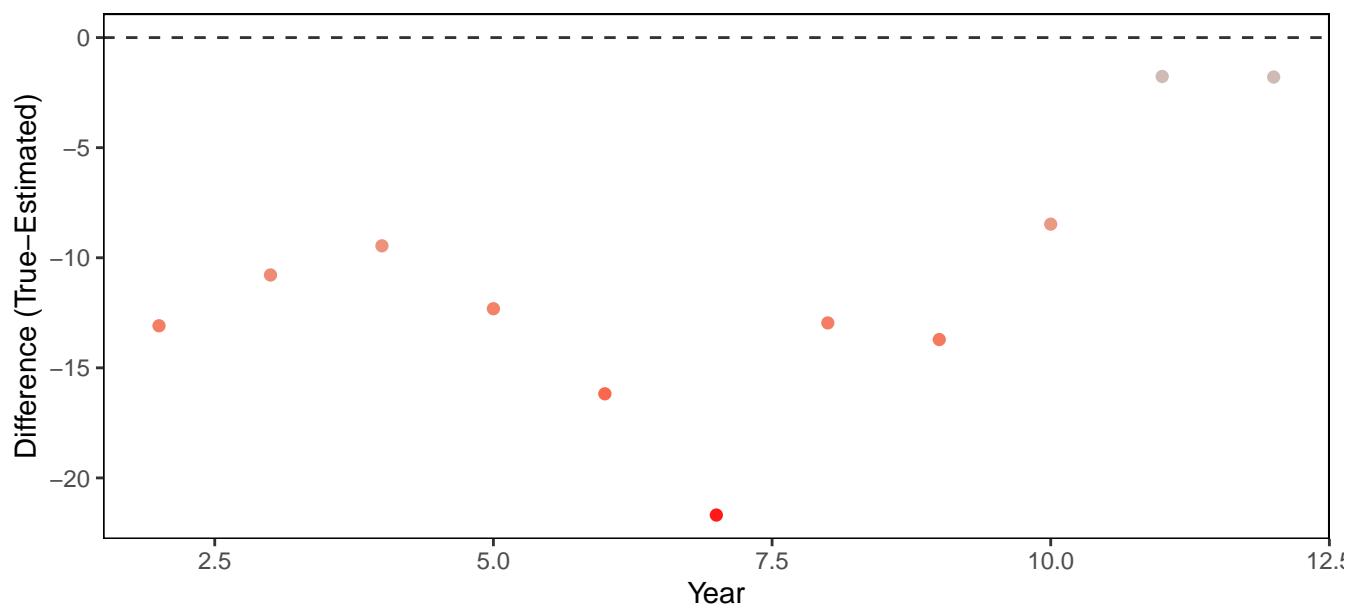|	Parameter	1	2
1	q	0.00	0.00
2	R_ave	27615.00	27615.00
3	beta 1 fishery	1.31	2.45
4	beta 2 fishery	3.76	3.16
5	beta 3 fishery	NA	NA
6	beta 4 fishery	NA	NA
7	beta 1 survey	2.51	1.81
8	beta 2 survey	2.31	2.64
9	beta 3 survey	NA	NA
10	beta 4 survey	NA	NA

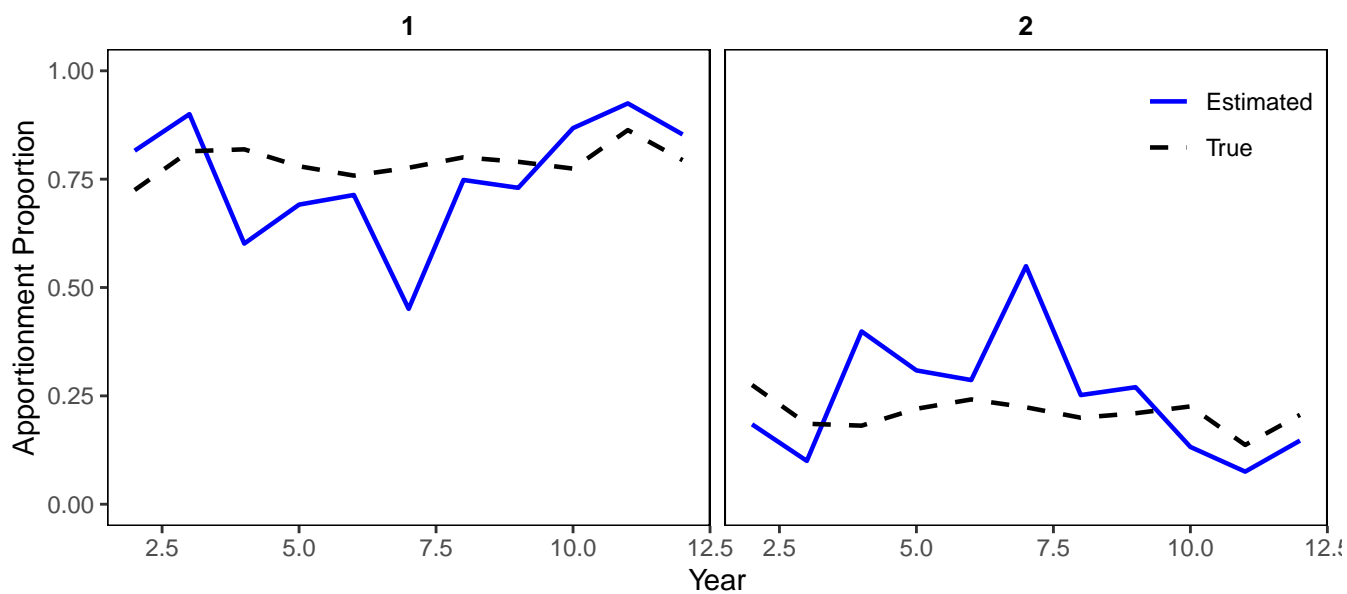## Recruitment Total
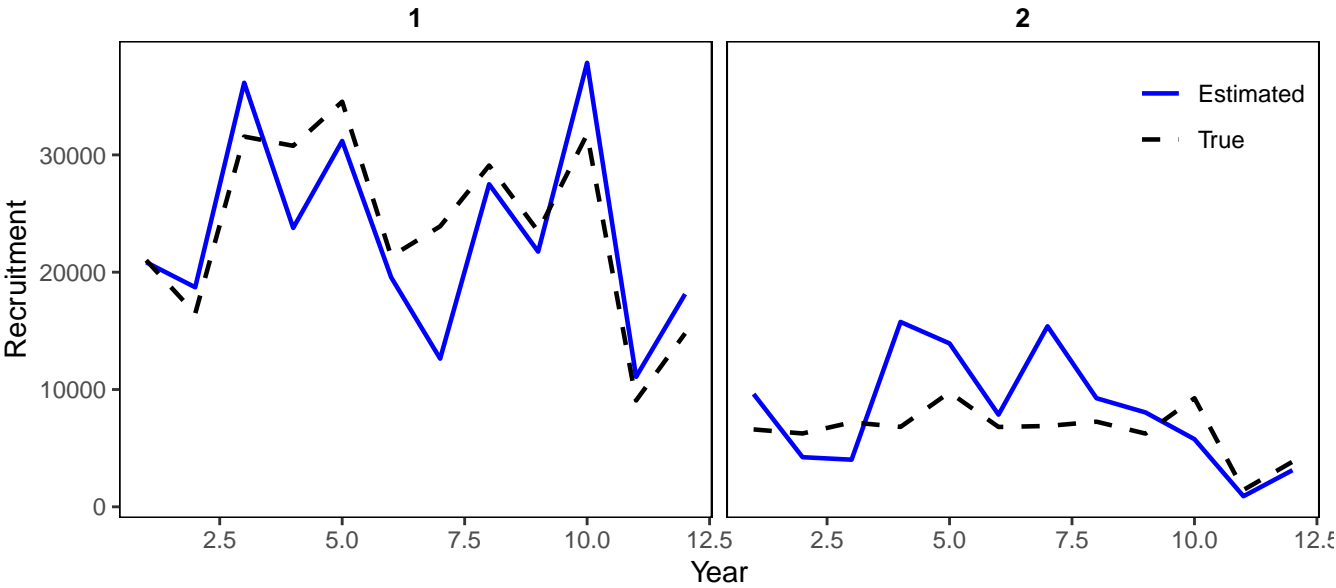
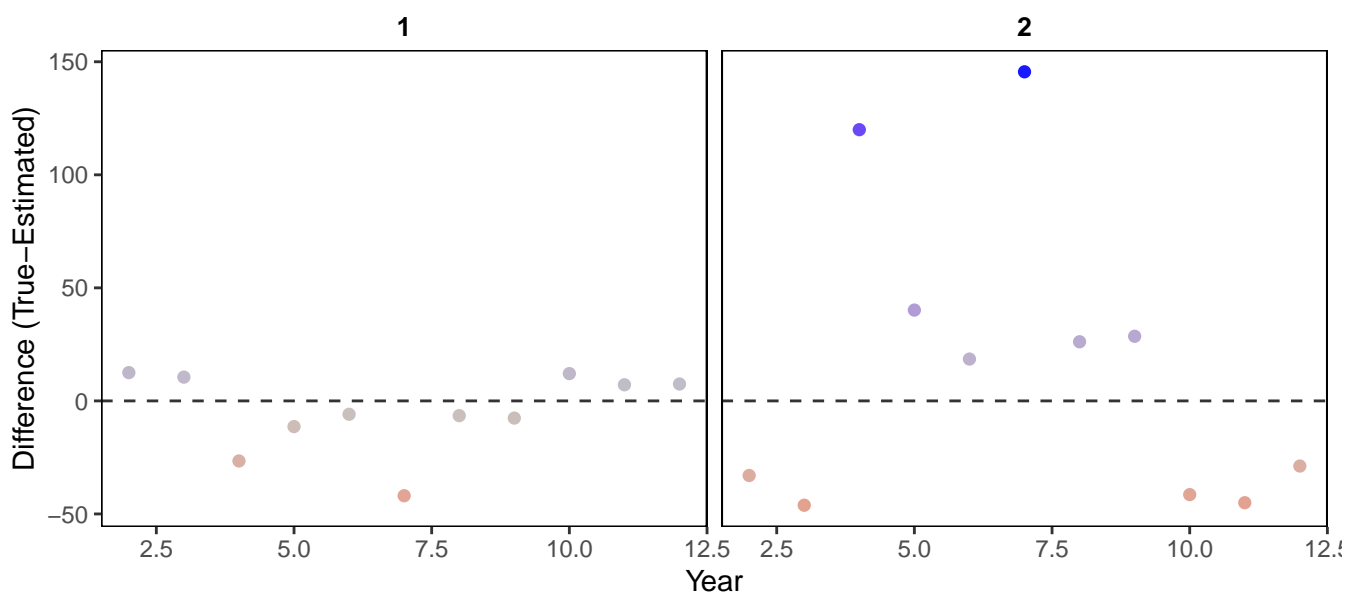## Recruitment Residuals
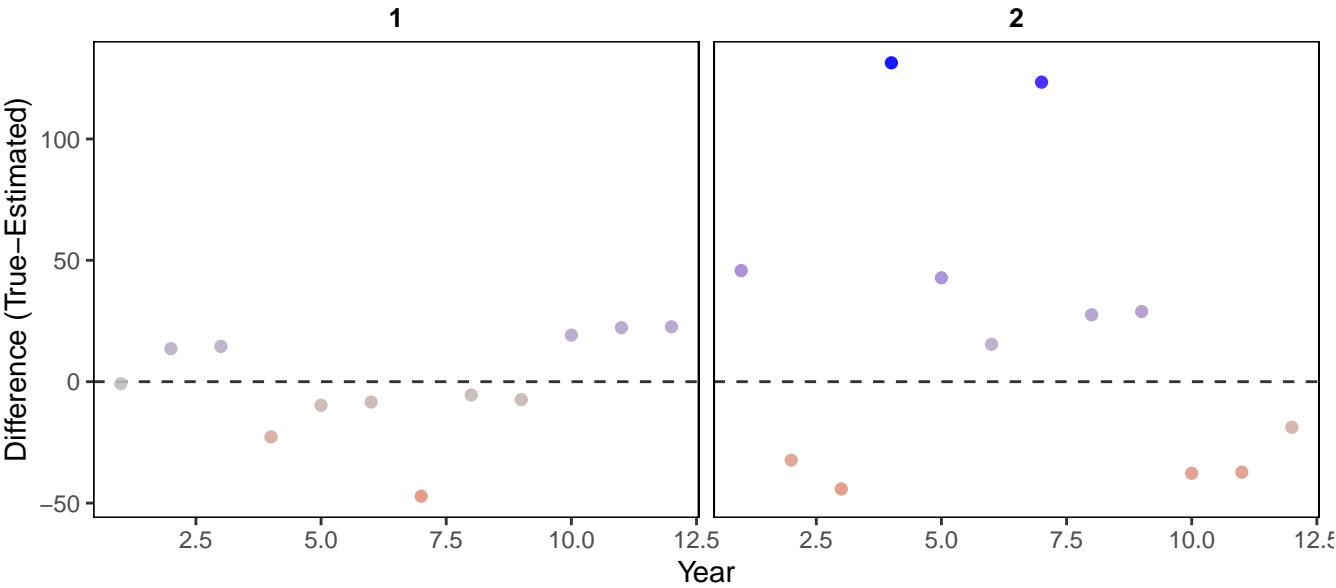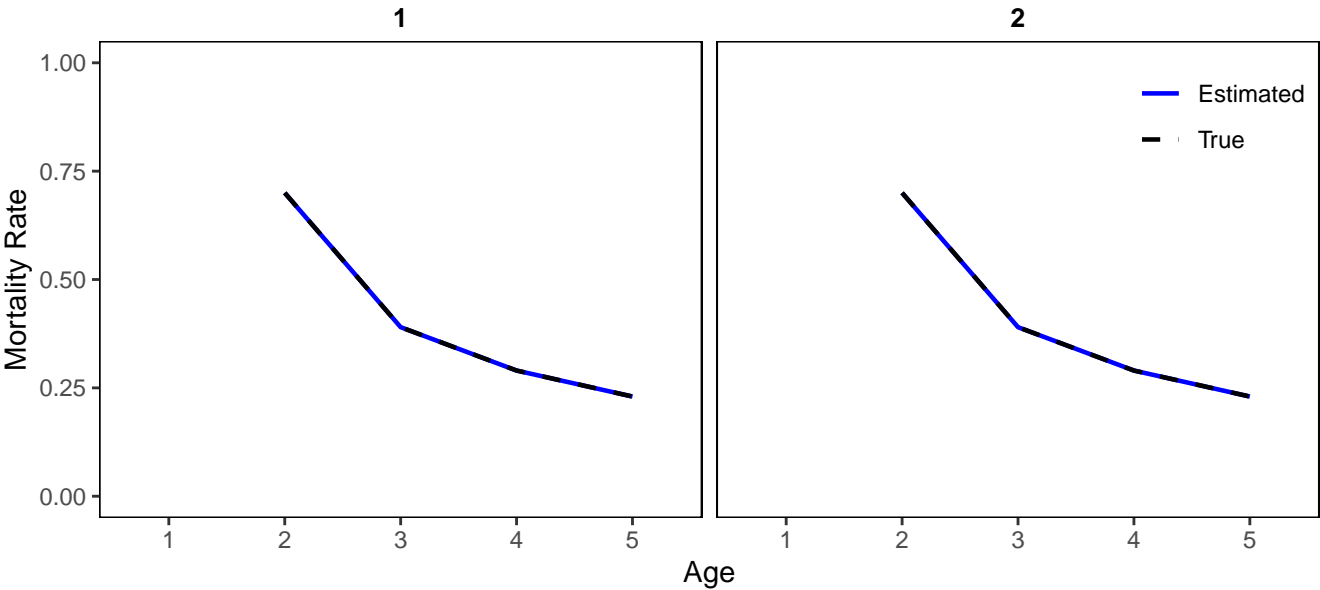
Recruitment Deviations
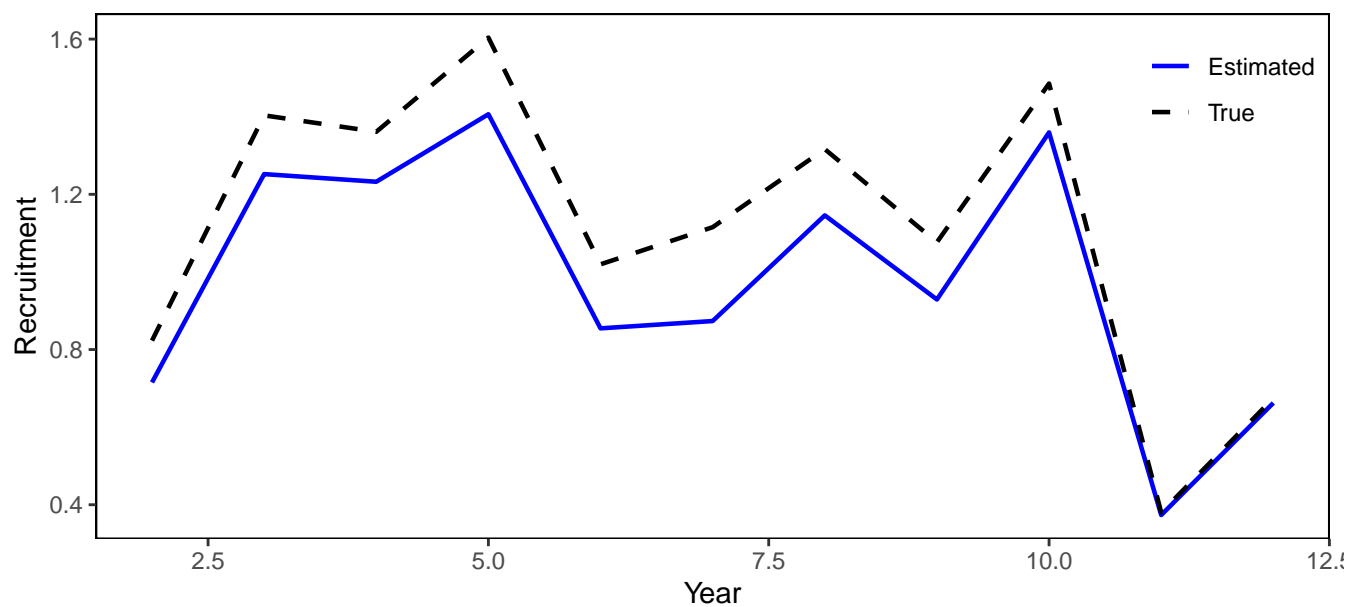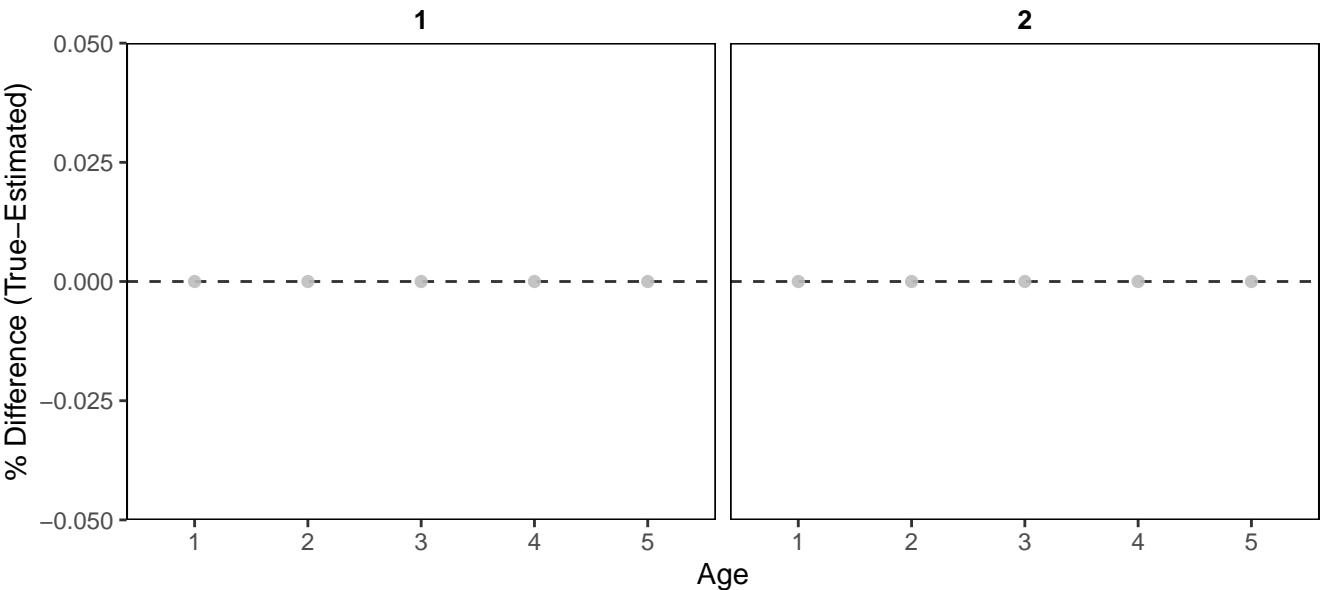
Recruitment Devs Residuals

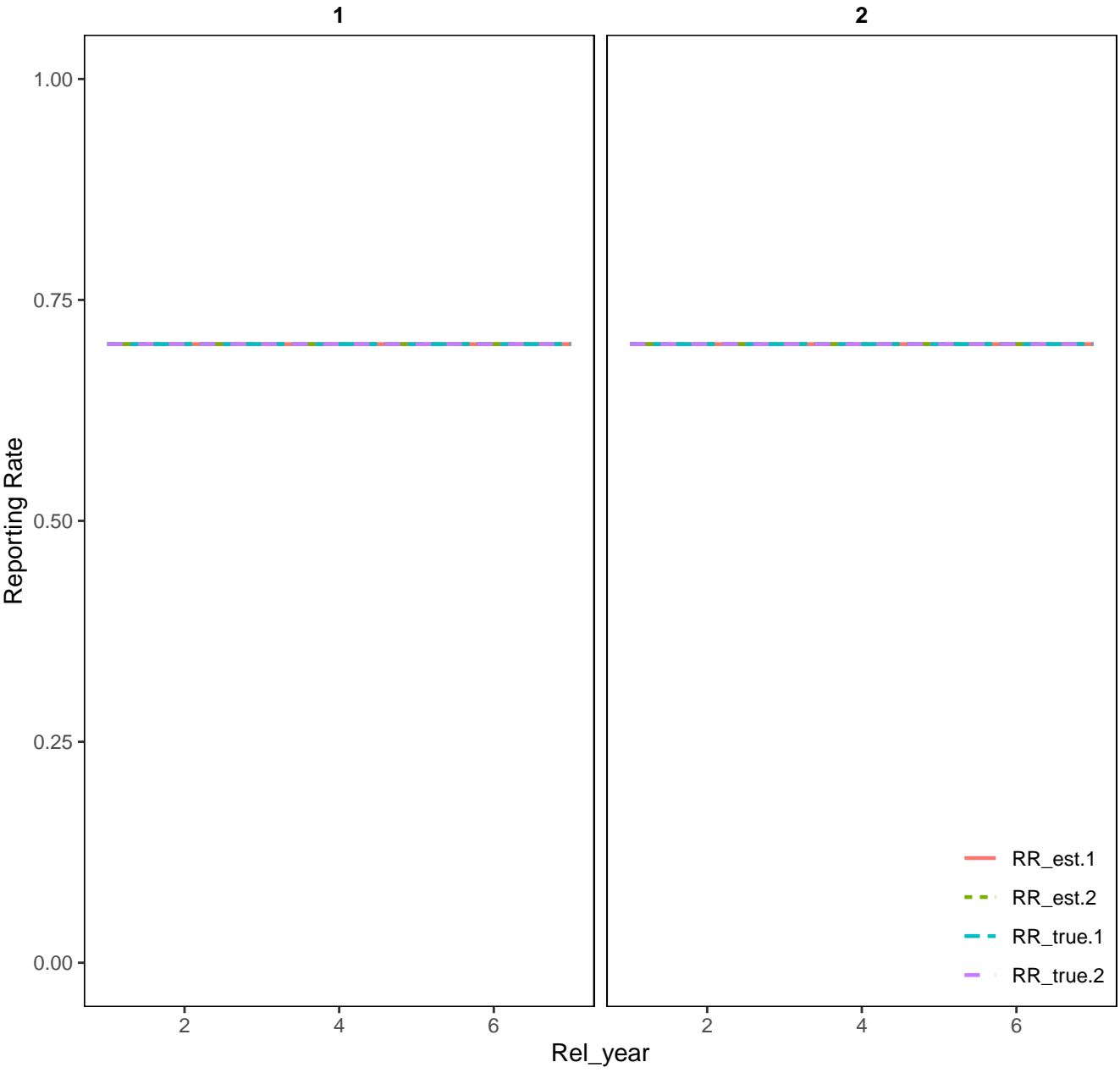**Recruitment Apportionment**

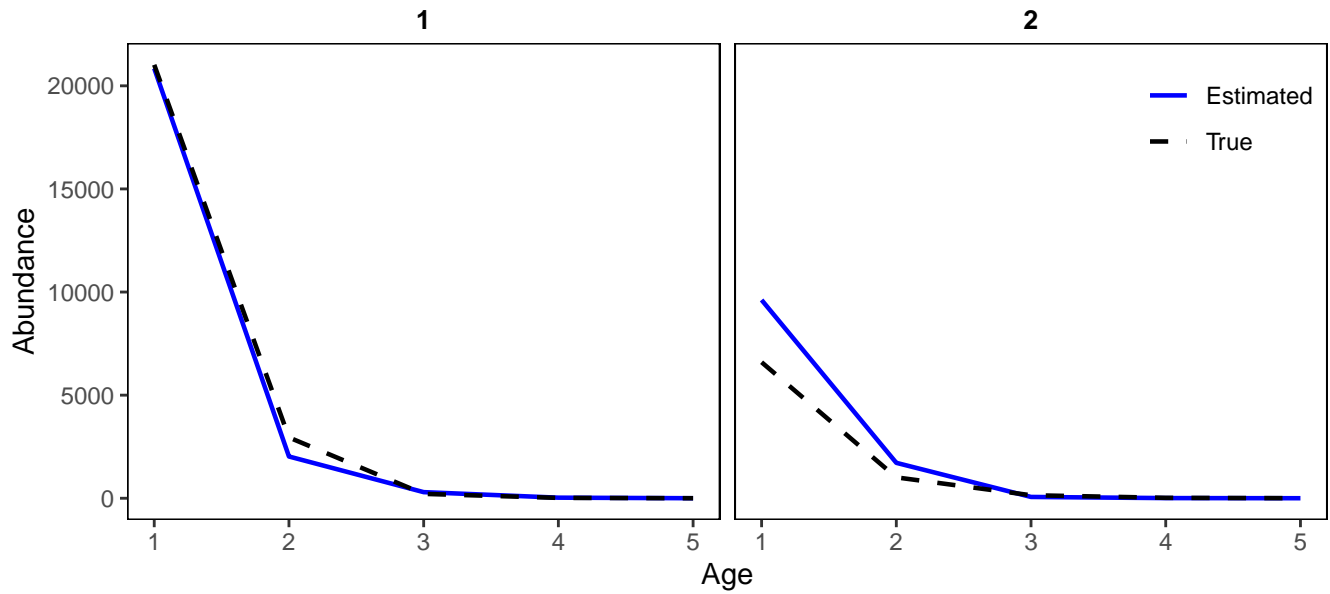**Recruitment Apportionment Residuals**

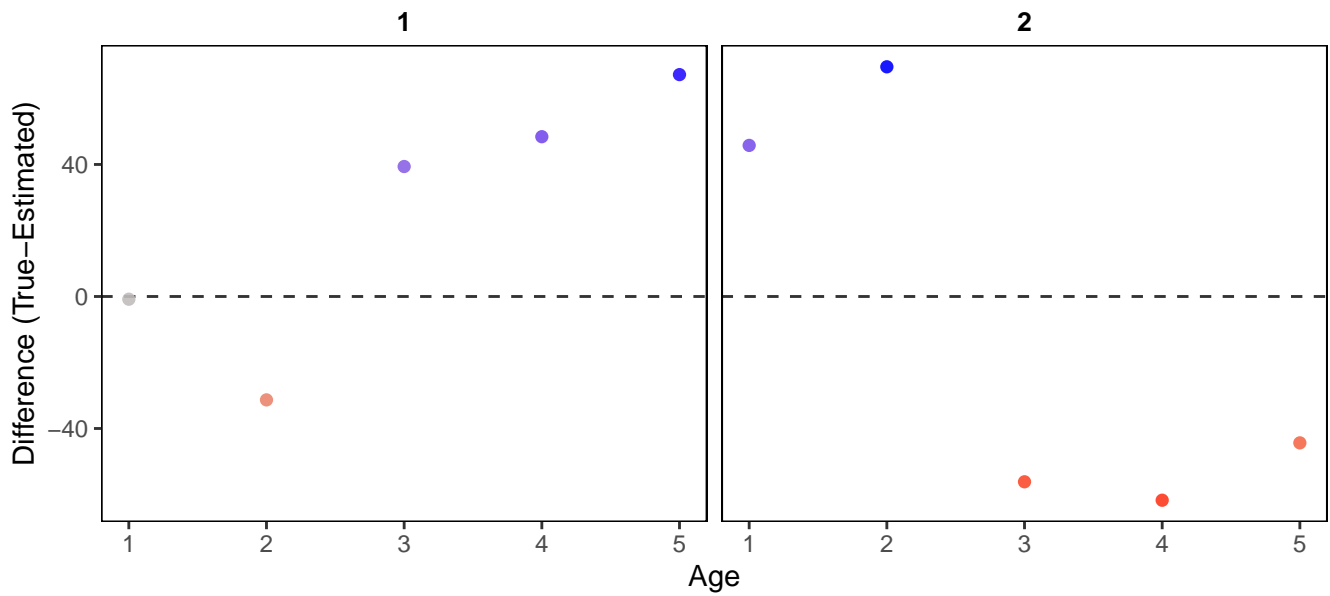## Mortality Rate

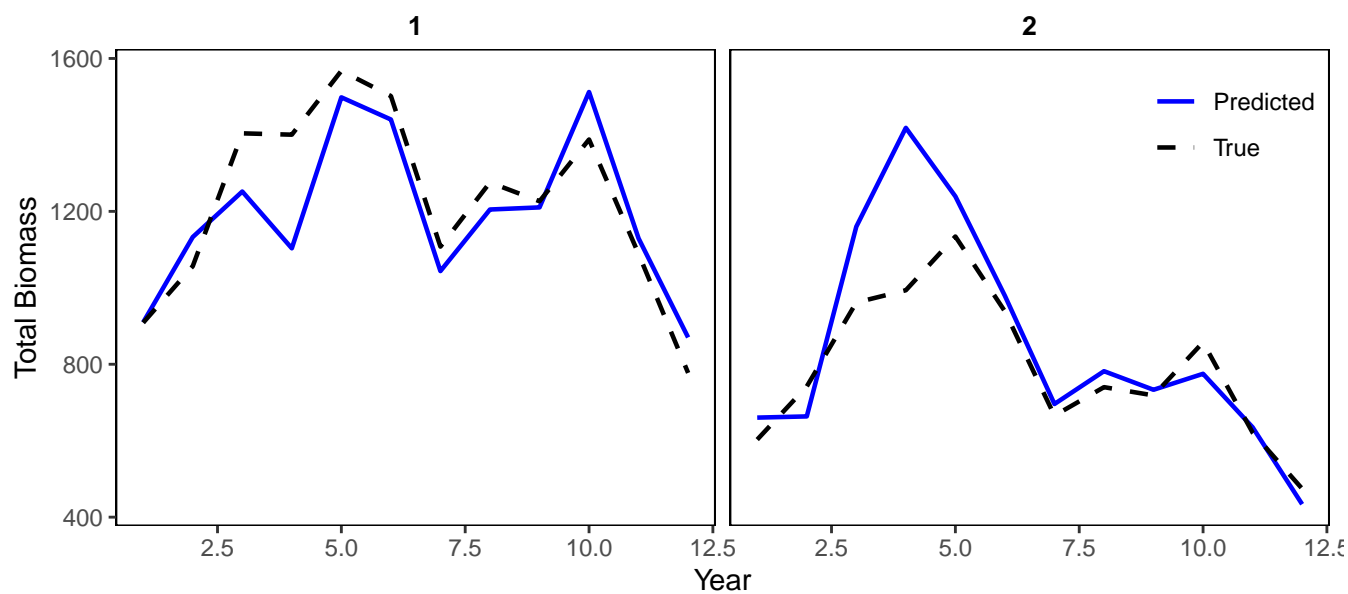## Mortality Rate Residuals

Reporting Rate

Initial Abundance

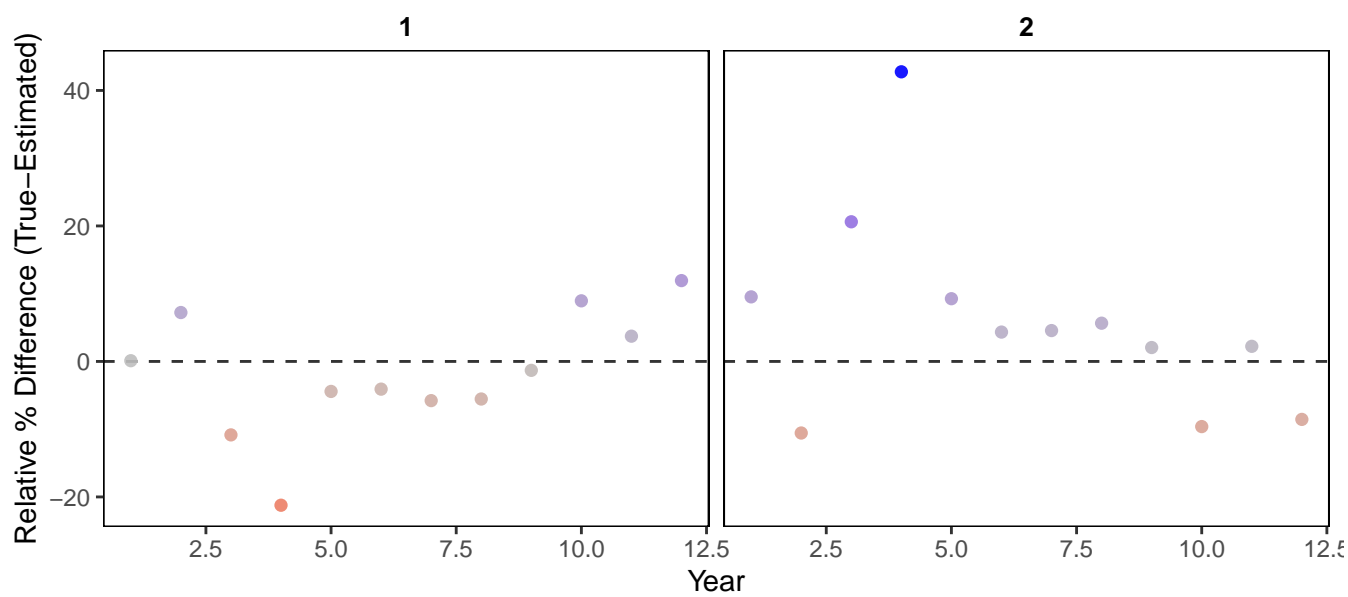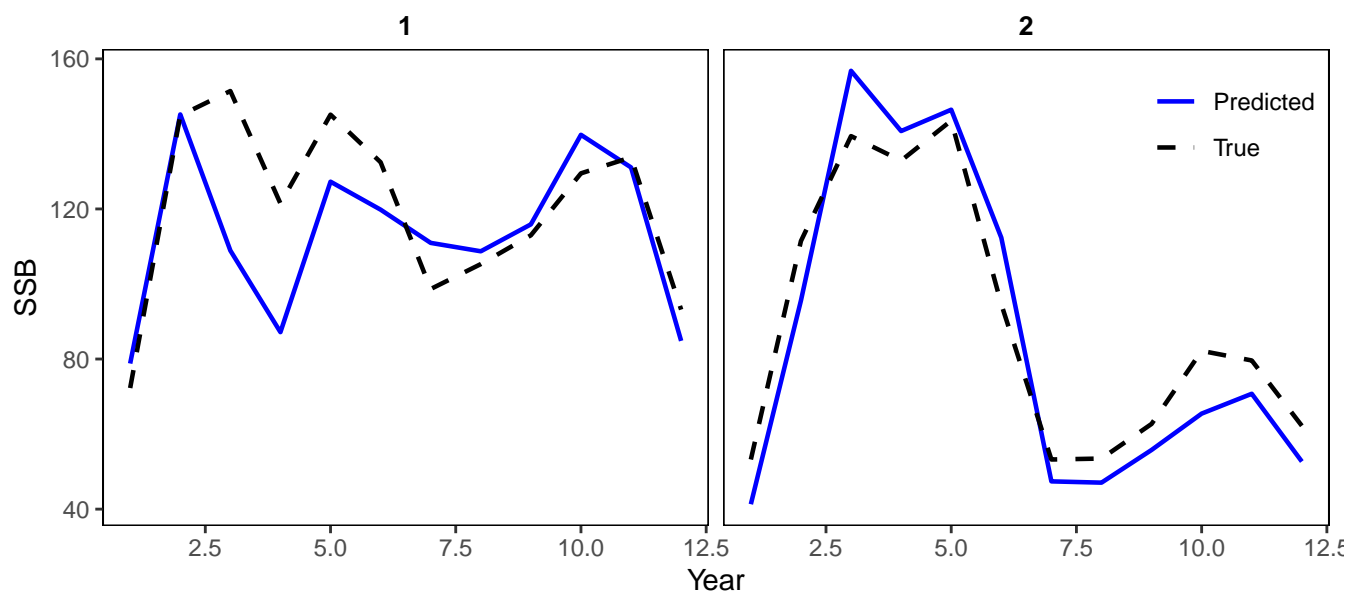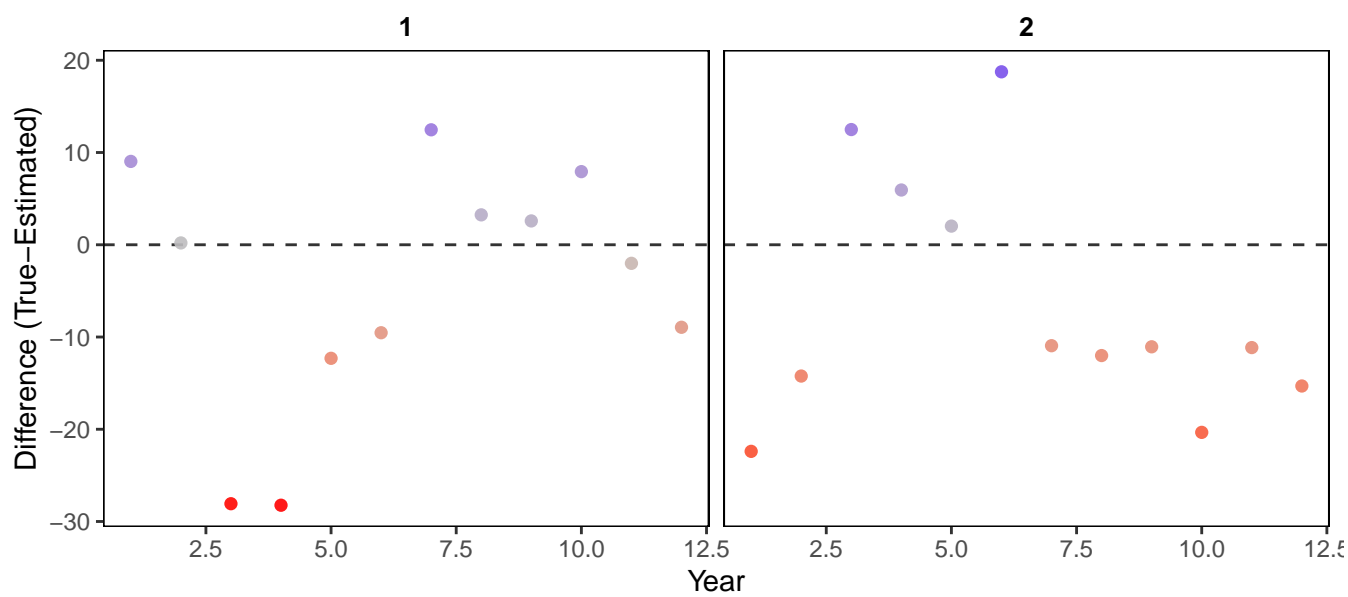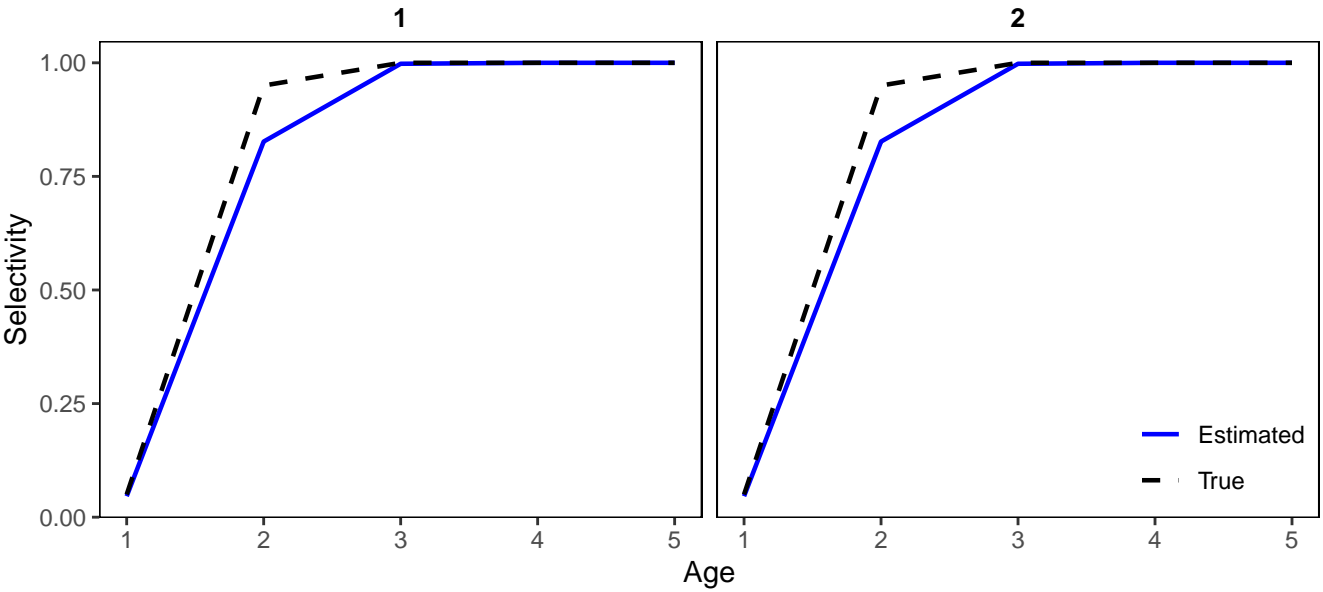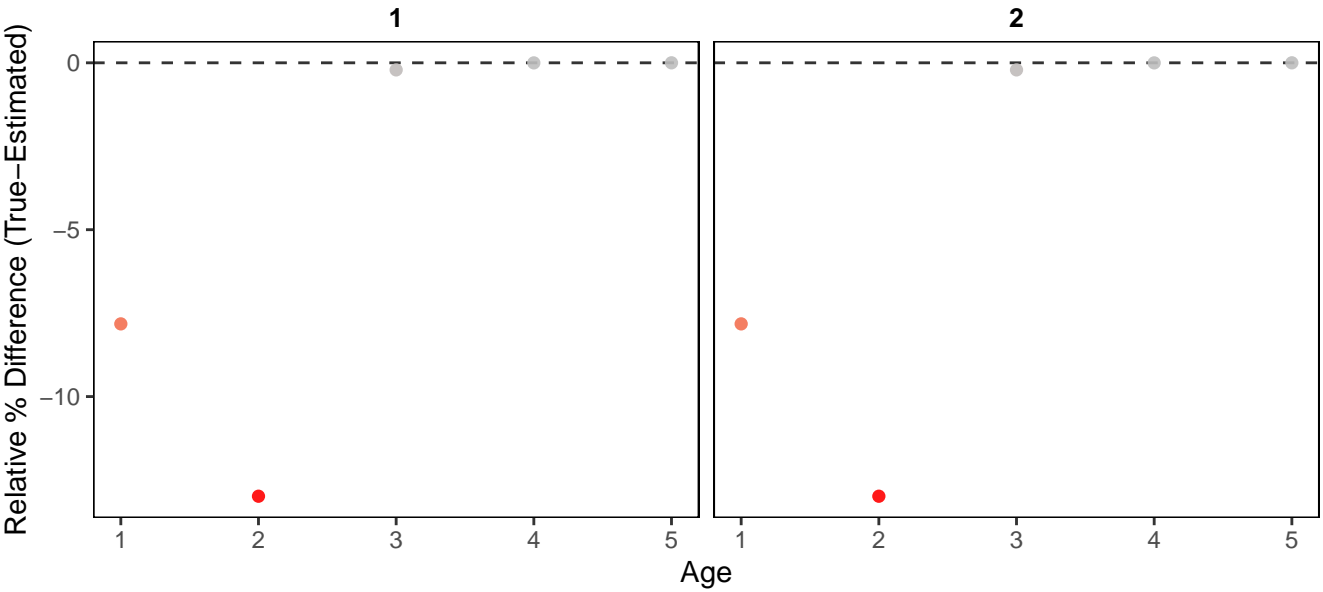## Initial Abundance Residuals

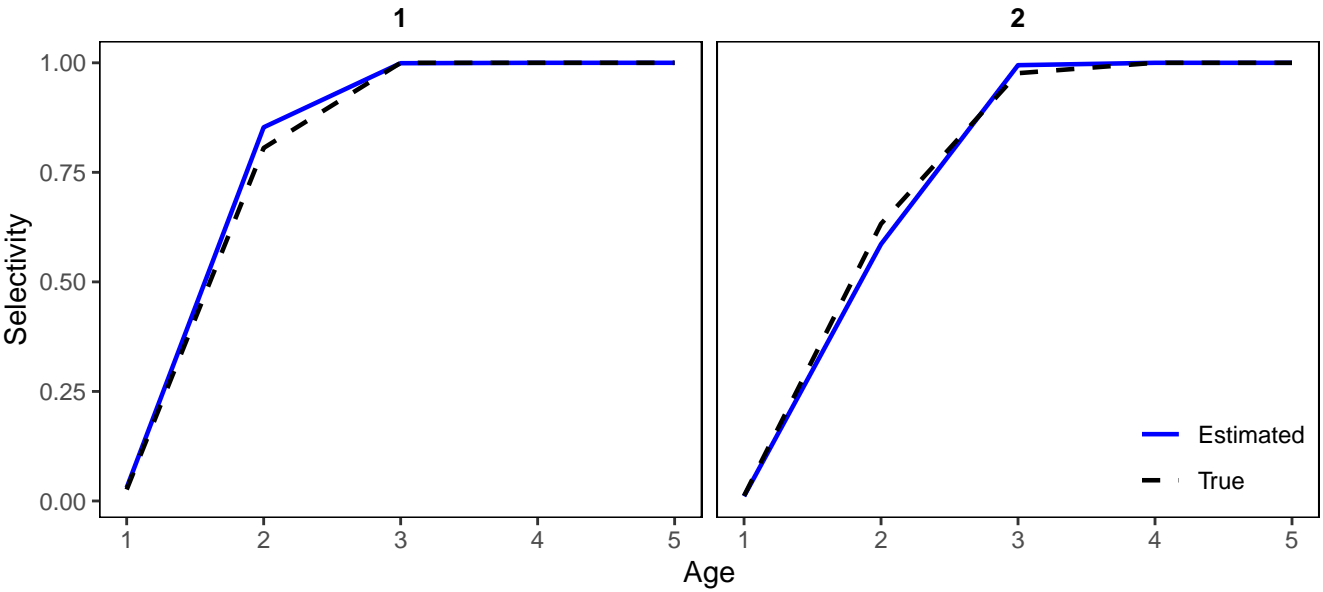Total Biomass

Biomass Residuals

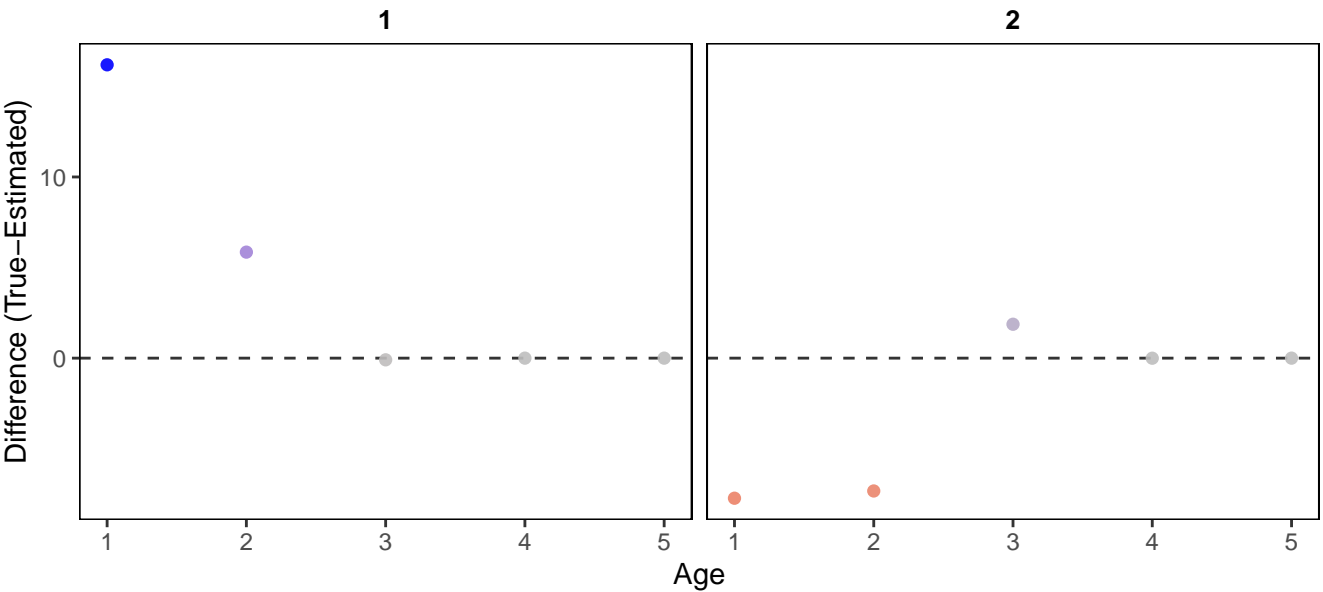## SSB

SSB Residuals

Survey Selectivity
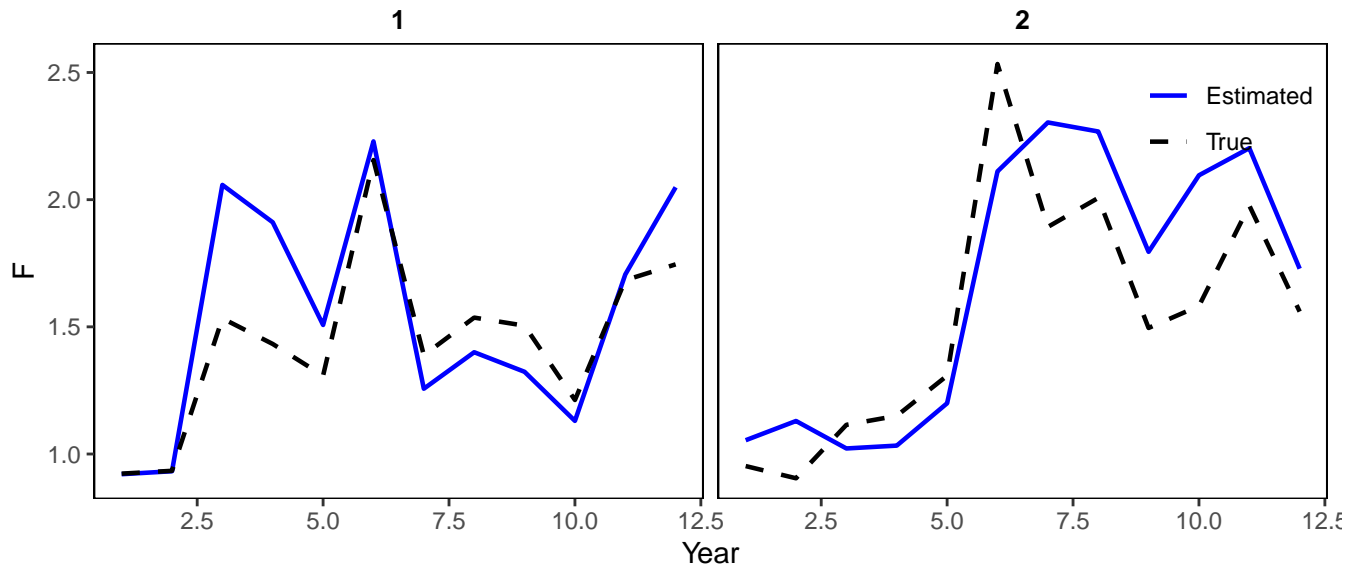
Survey Selectivity Residuals

Fishery Selectivity

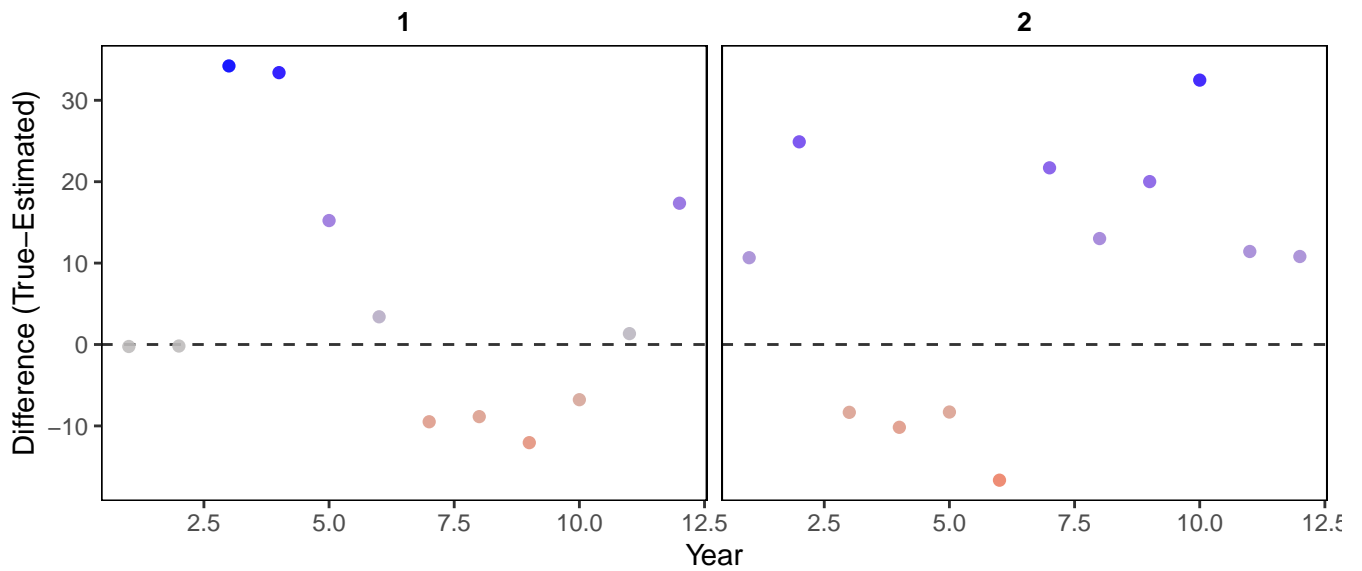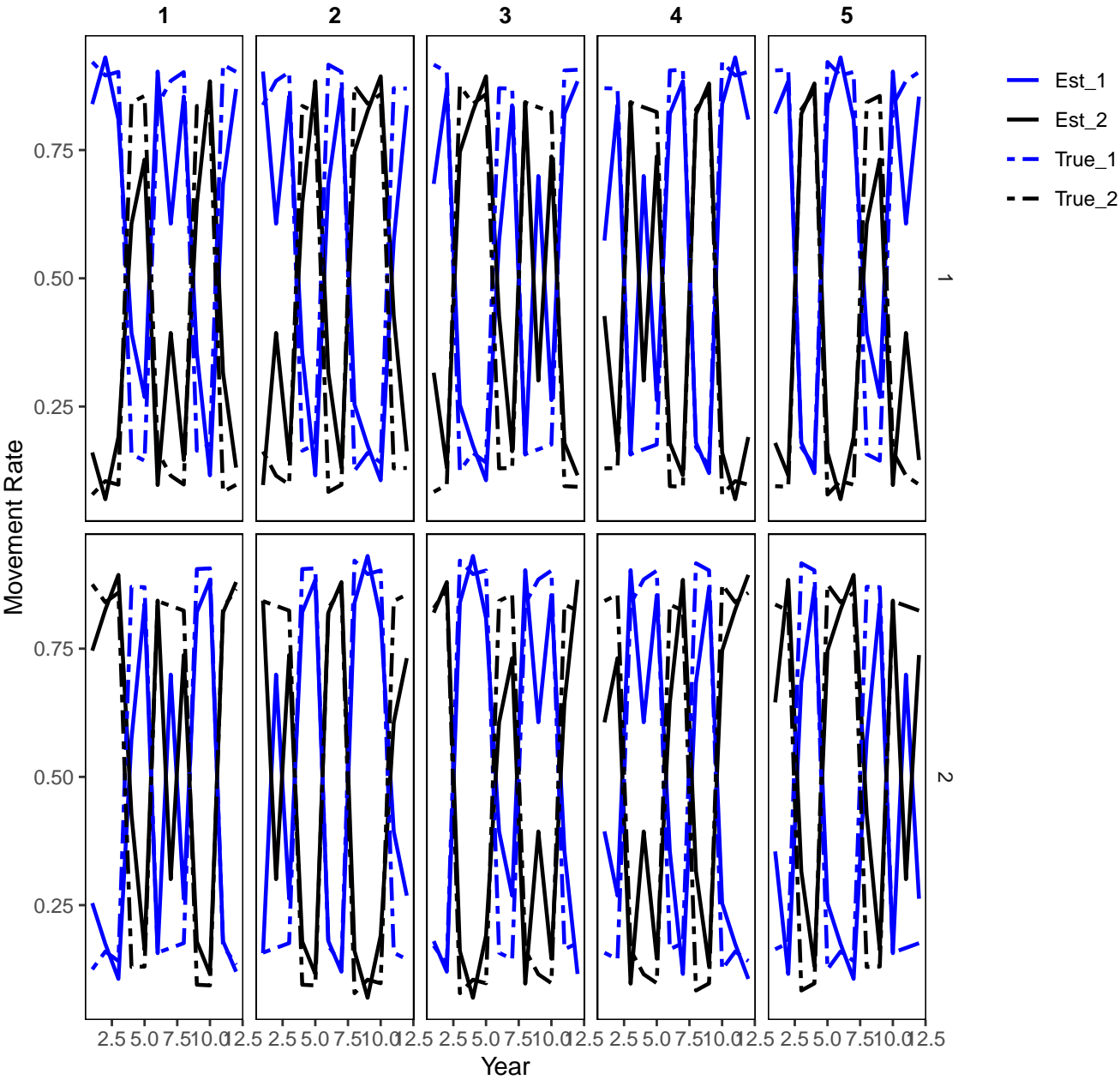Fishery Selectivity Residuals
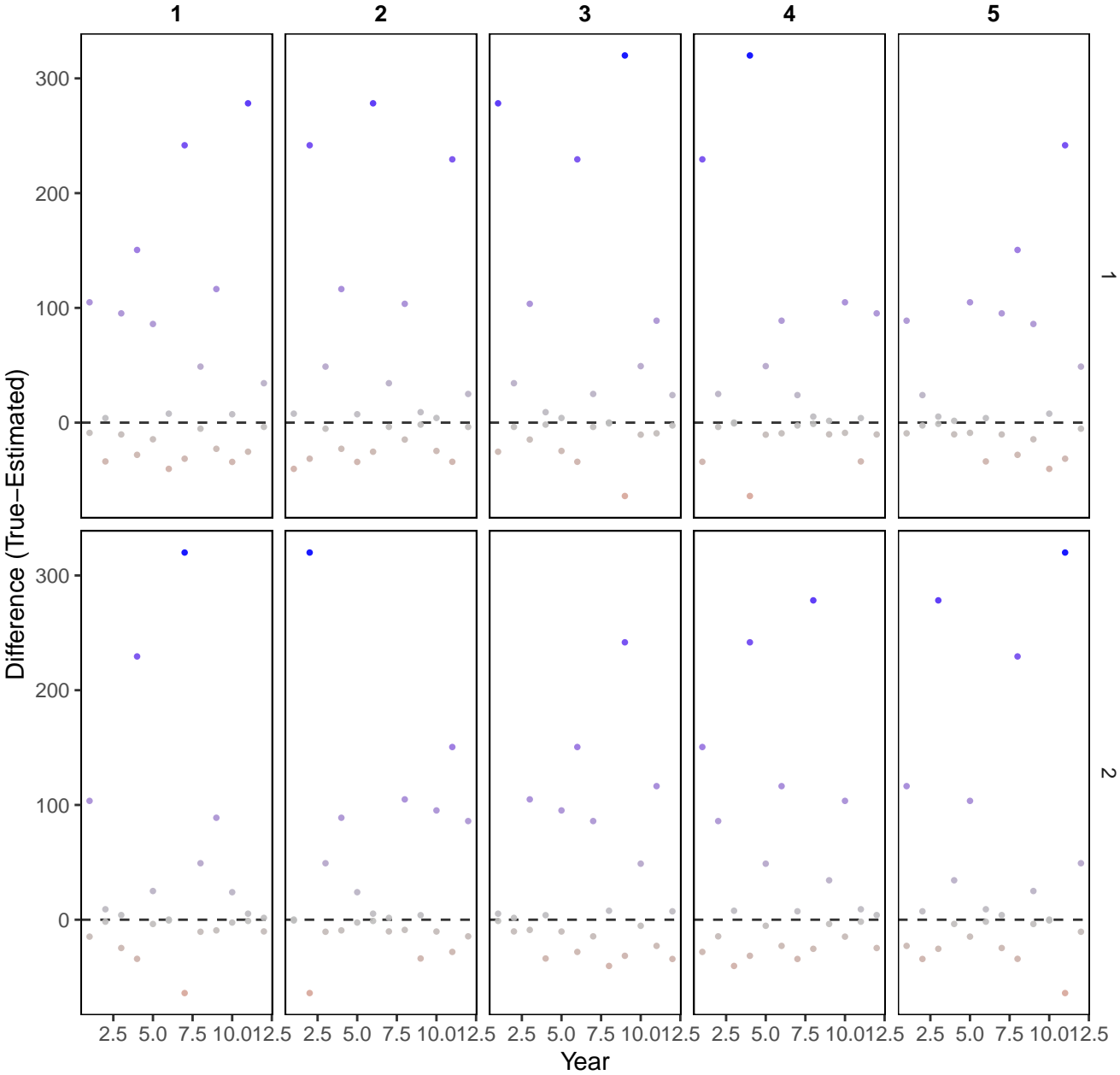
Fishing Mortality

Fully selected F by Year

Fully Selected F Residuals
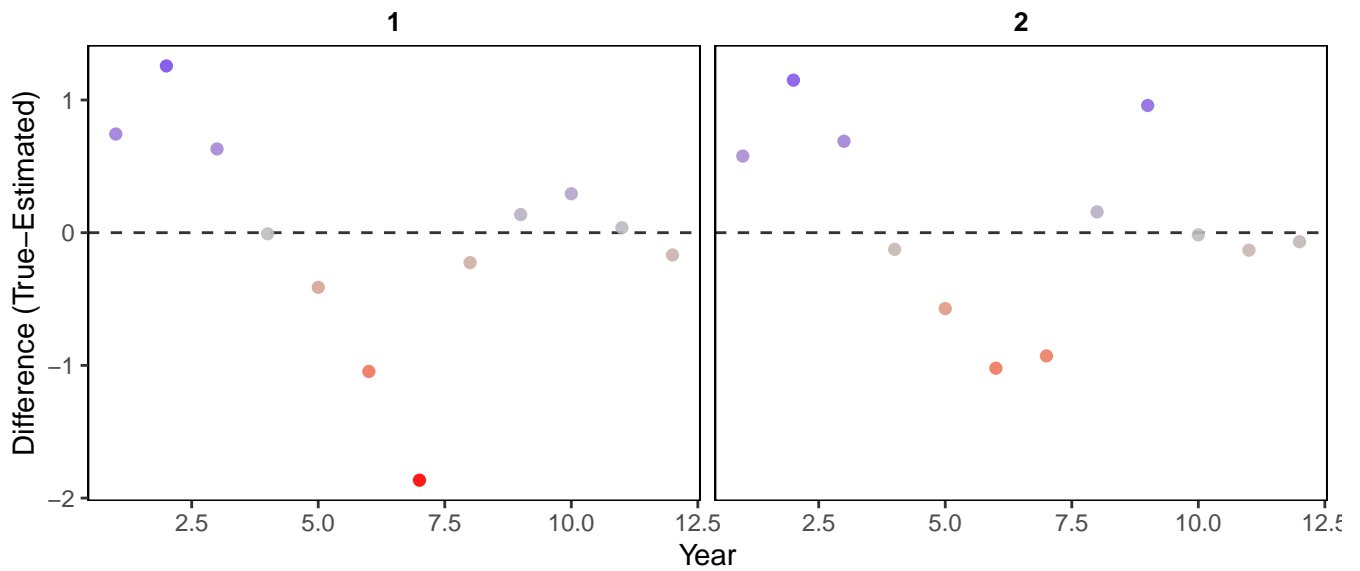
Yearly Movement Rate
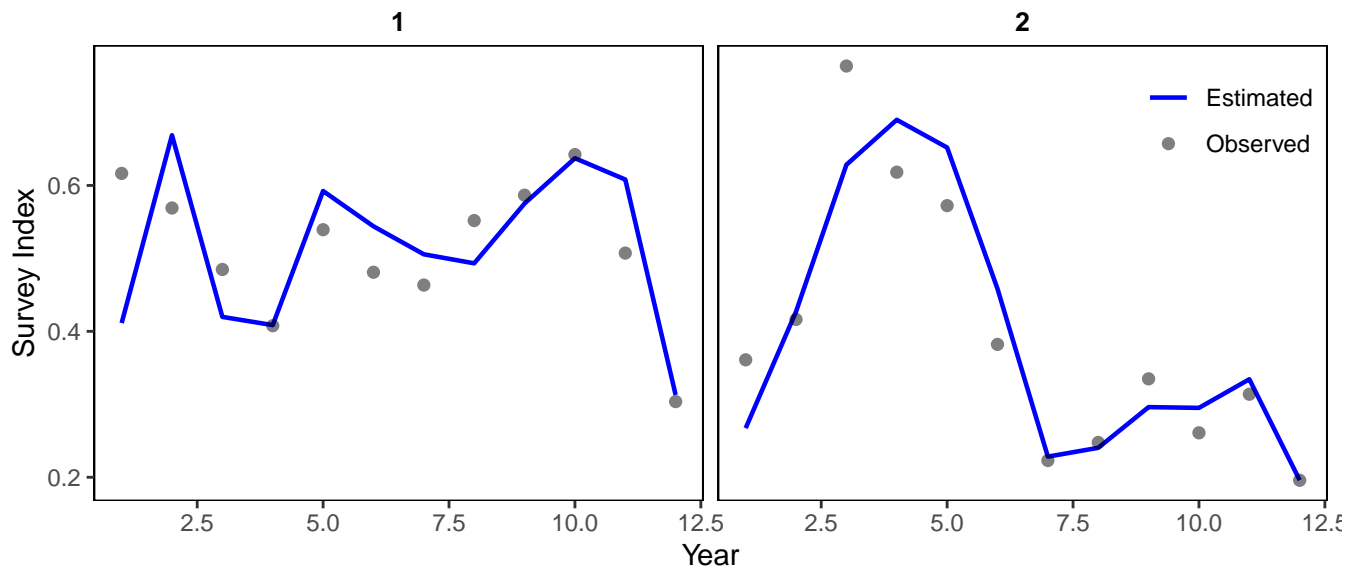
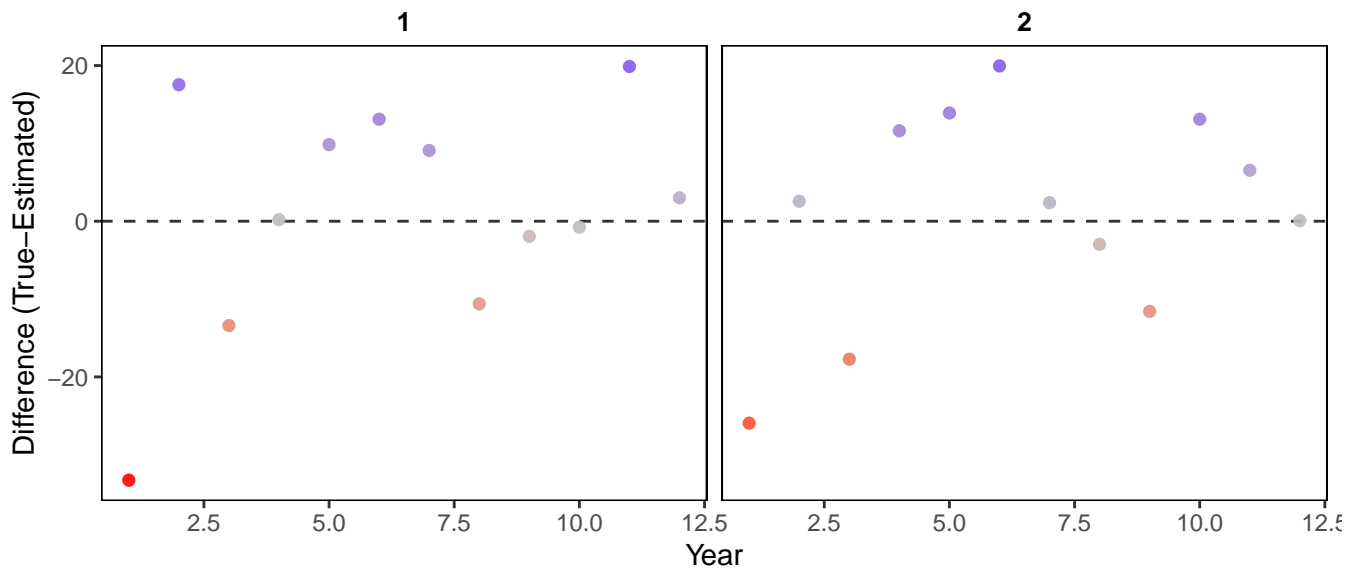Yearly Movement Rate Residuals

Fits to Data
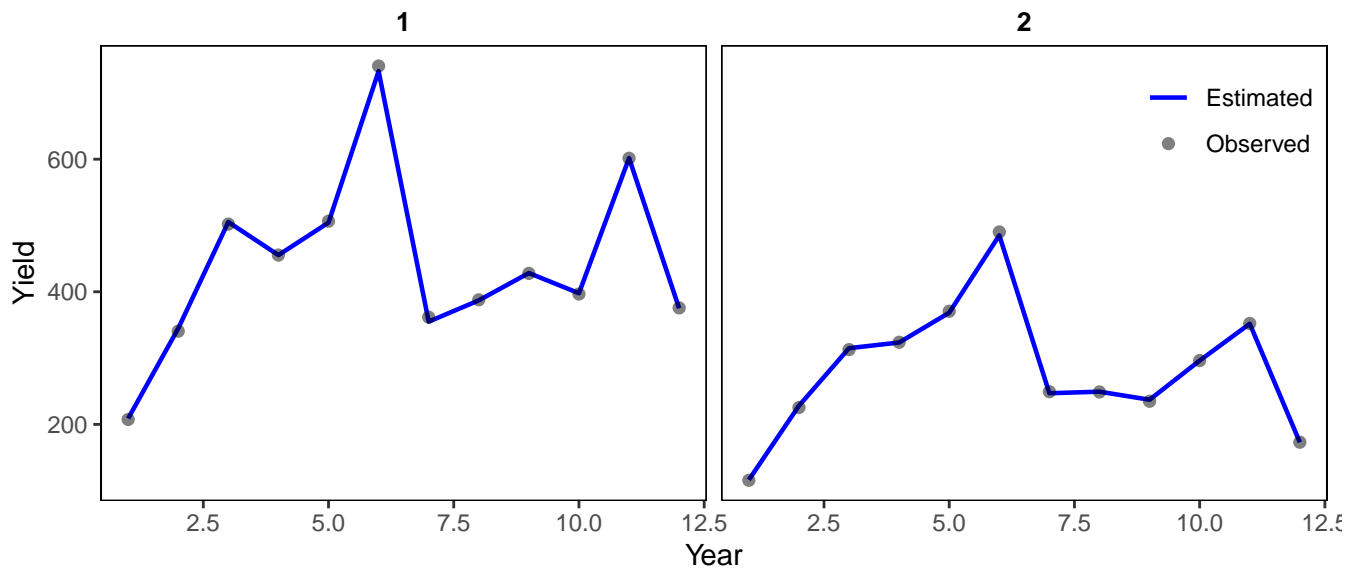
Fits to Data continued

Survey Biomass

Survey Index Residuals

Fits to Data continued