18/18 : 3-B-III

ABT-MSE Operating model fitting report

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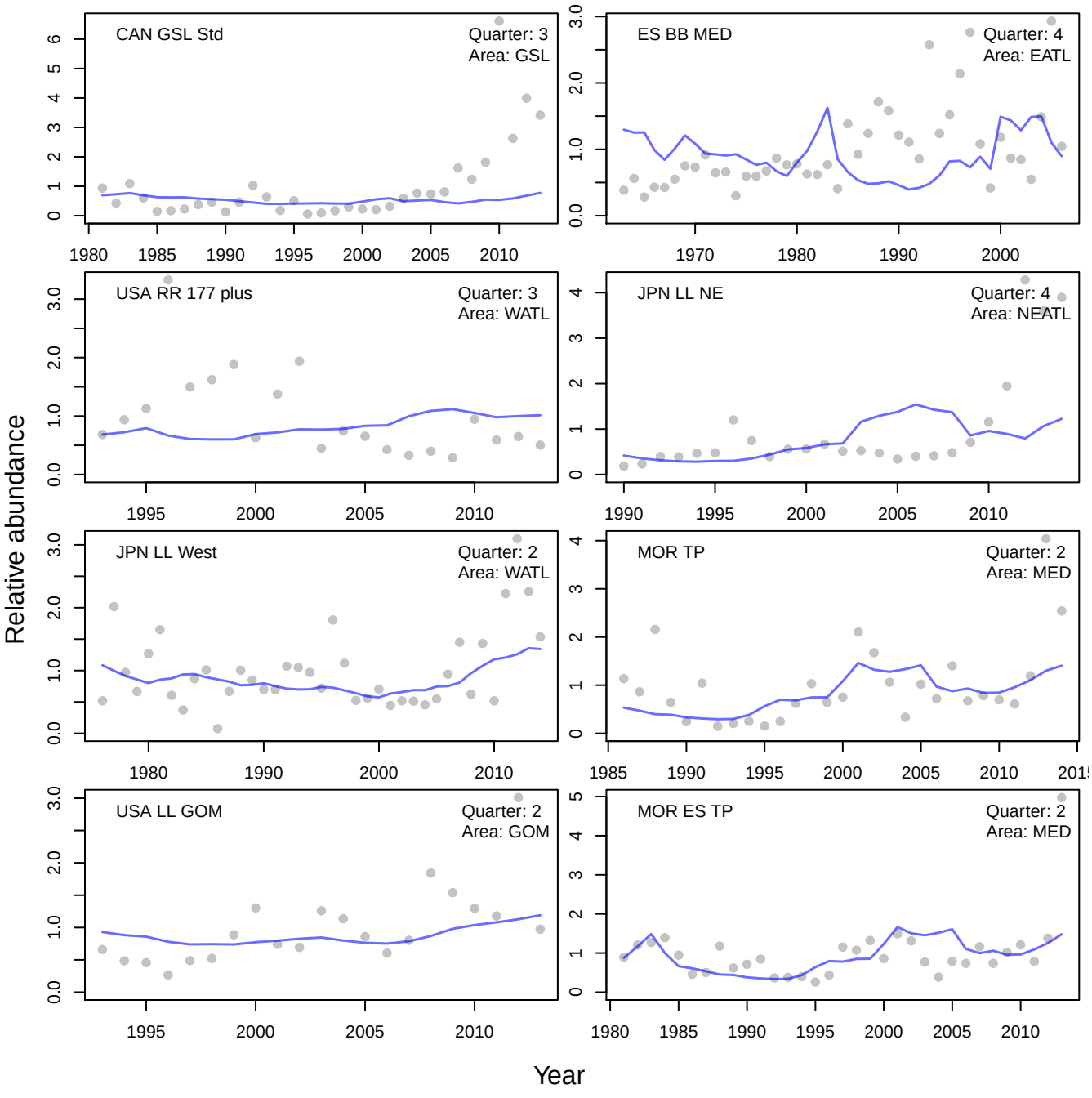
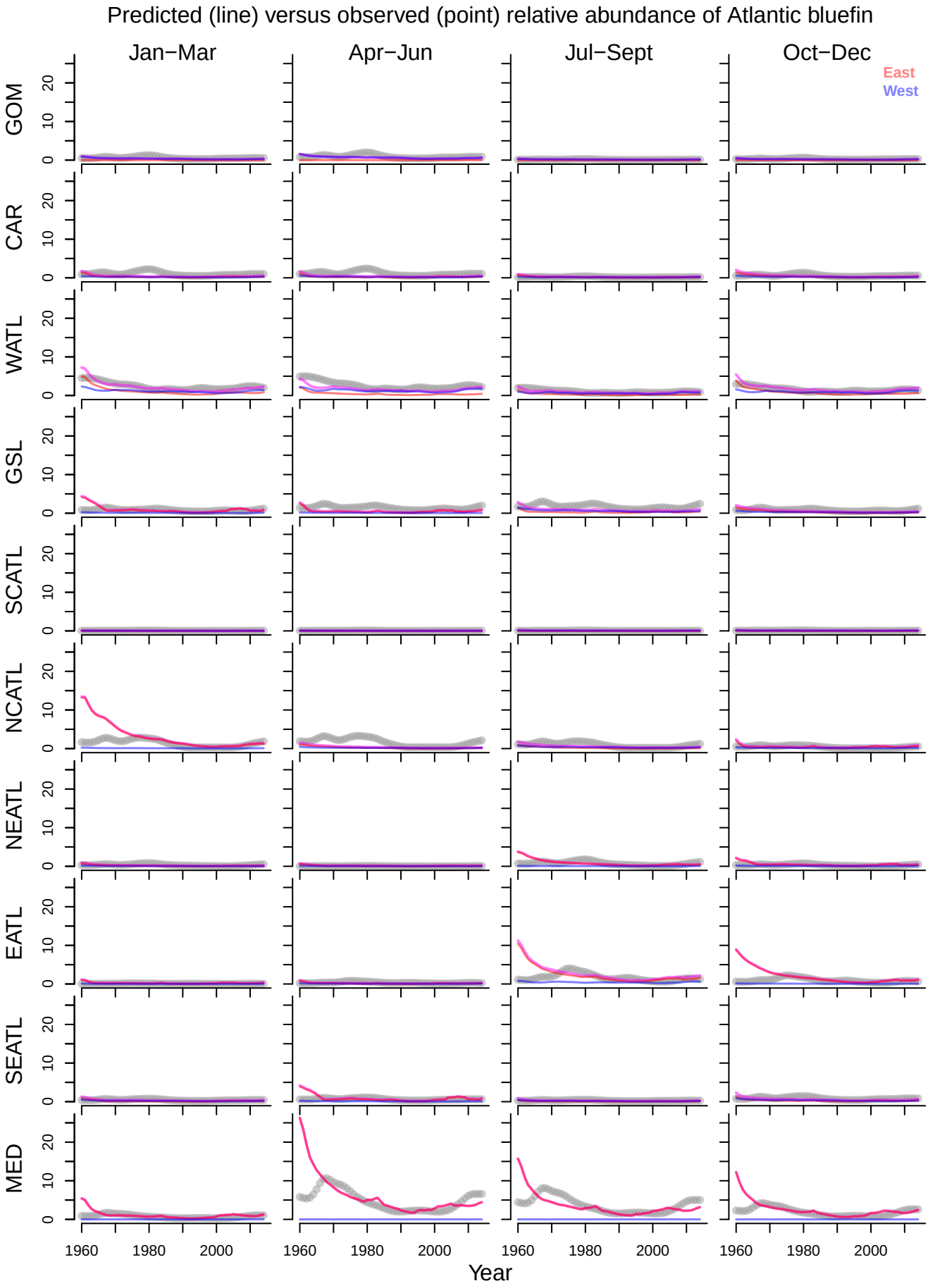
Operating model scenario is:

L3: West - Hockey stock changes to B-H after 10 yrs, East - 83+ B-H with h=0.98 changes to '50-82 B-H with h=0.98 after 10 years
L2: West - 75% best estimate, East - 50% Best estimate
L3: West - M by age, younger maturity, East - M by age, younger maturity

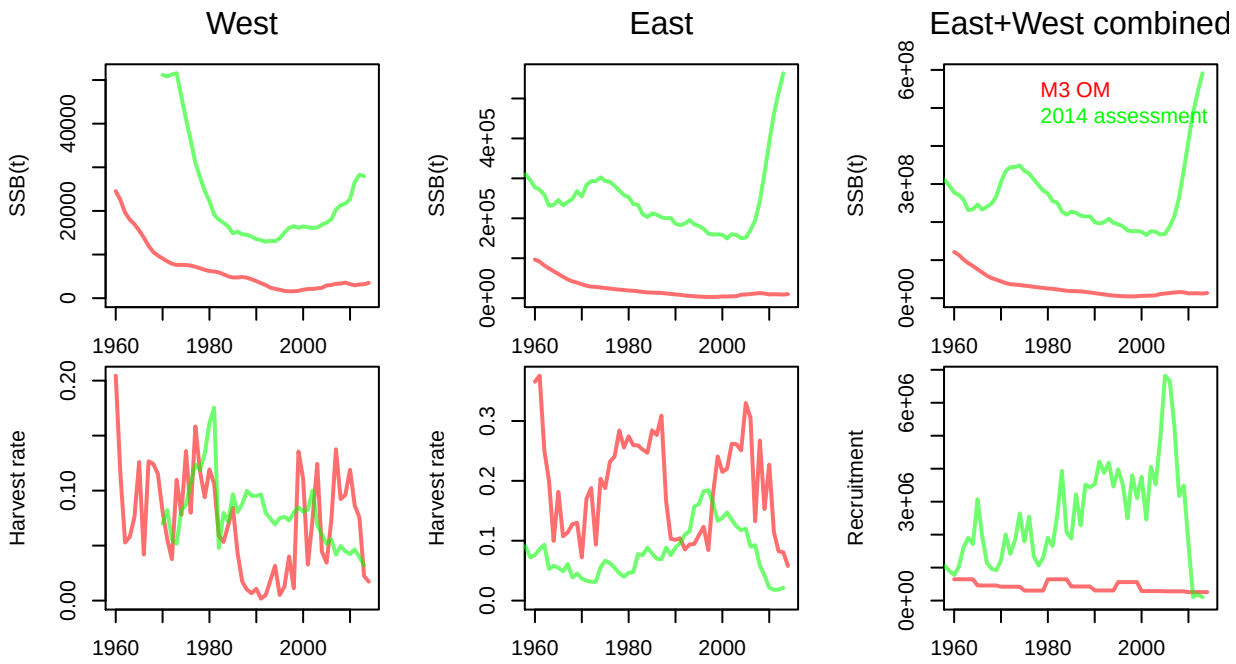
Fits to CPUE indices of relative abundance



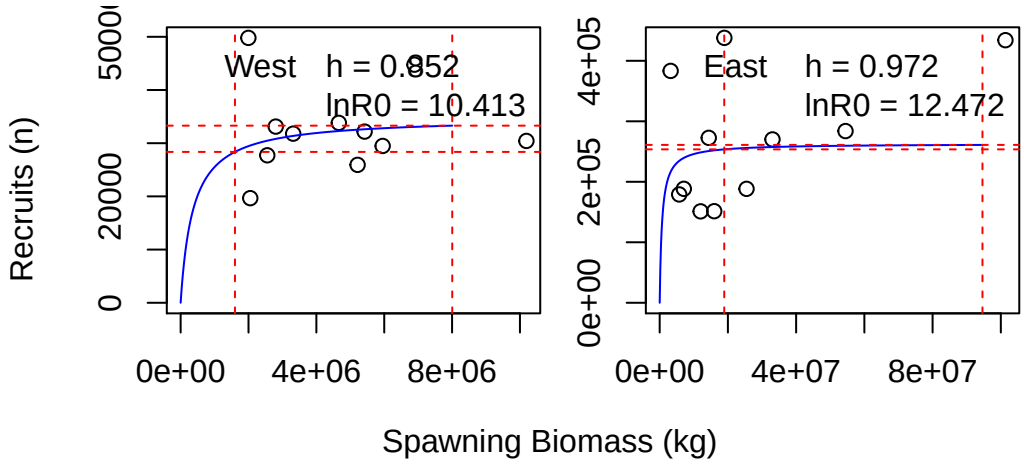
Fit to master abundance indices (standardized effort, partial Fs)



SSB, recruitment and F comparison with 2014 assessment (by East/West area, not East/West stock)



Stock-recruitment relationships (by East/West stock)



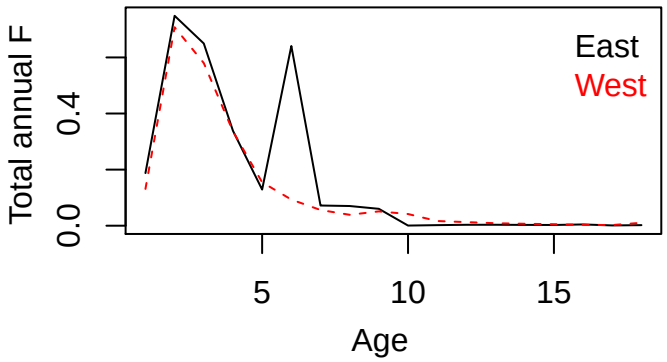
MSY reference points (by East/West stock)

	MSY	FMSYap	UMSY	BMSY	SSBMSY	BMSY_B0	SSBMSY_SSB0	RMSY_R0	F_FMSY	SSB_SSBMSY
East	6540	0.512	0.190	34454	17951	0.202	0.141	0.958	0.183	0.525
West	754	0.447	0.108	6950	2476	0.263	0.212	0.861	0.061	1.106

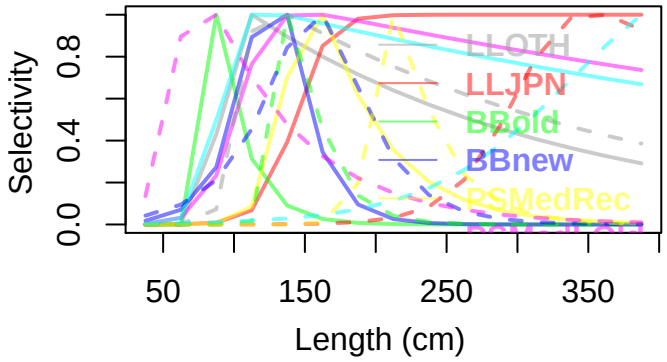
2014 Assessment MSY reference points (by East/West area)

	MSY	FMSYap	UMSY	BMSY	SSBMSY	BMSY_B0	SSBMSY_SSB0	RMSY_R0	F_FMSY	SSB_SSBMSY
East	-	-	-	-	-	-	-	-	0.75	0.45
West	3056	0.23	-	-	13268	-	-	-	0.47-0.85	0.35-2.1

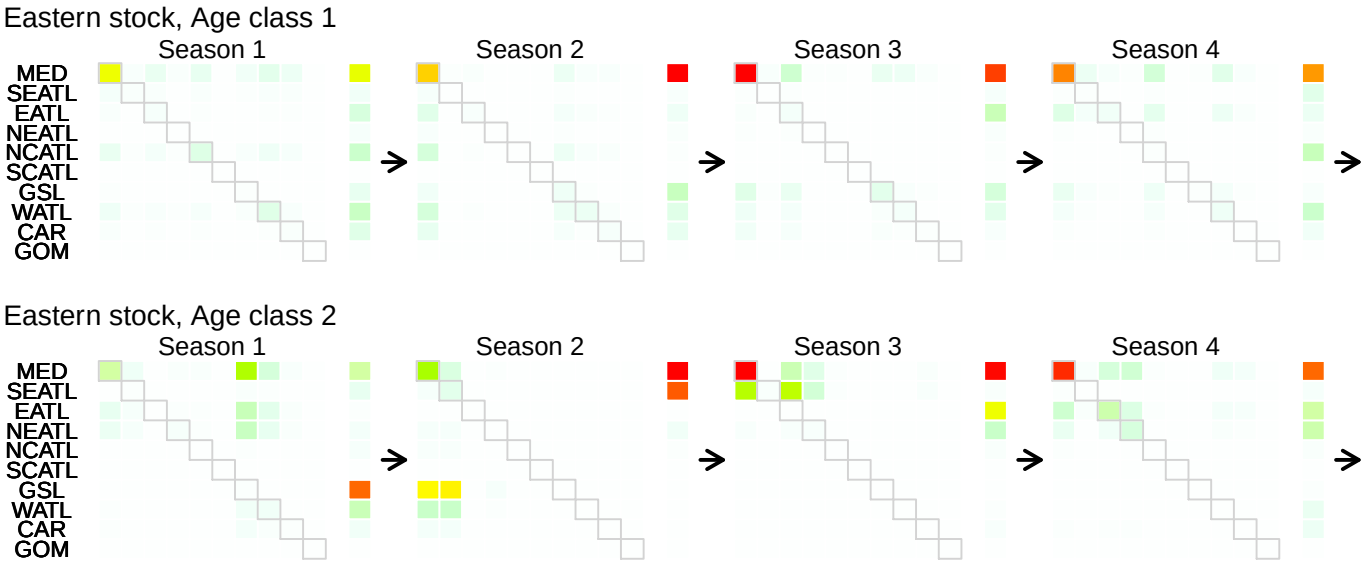
Current annual mean F-at-age profile, all fleets, seasons, areas



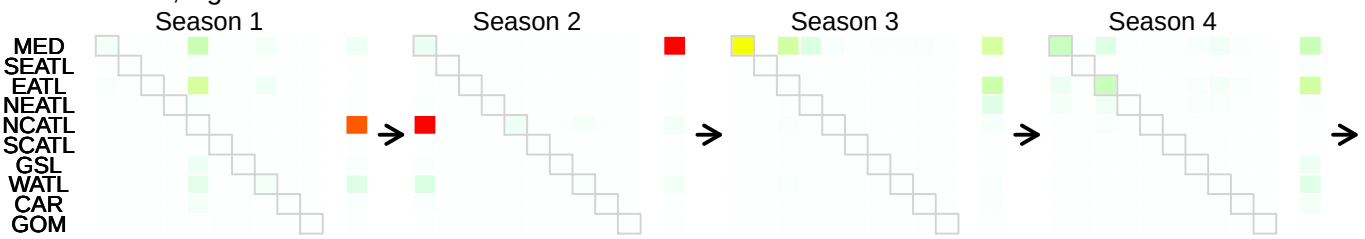
Estimated size selectivity by fleet



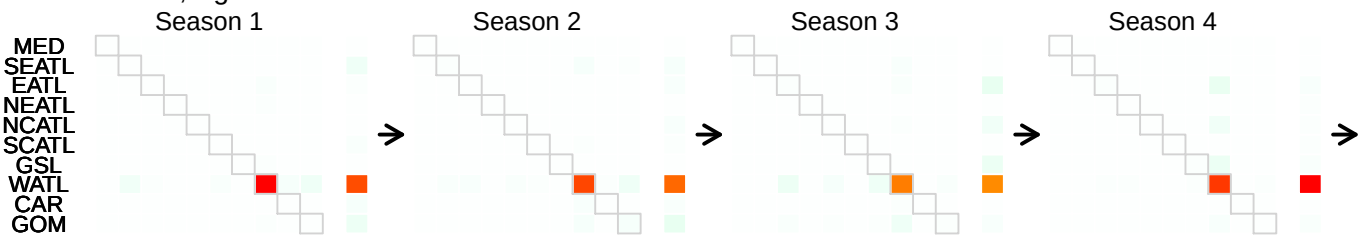
Estimated unfished movement and spatial distribution



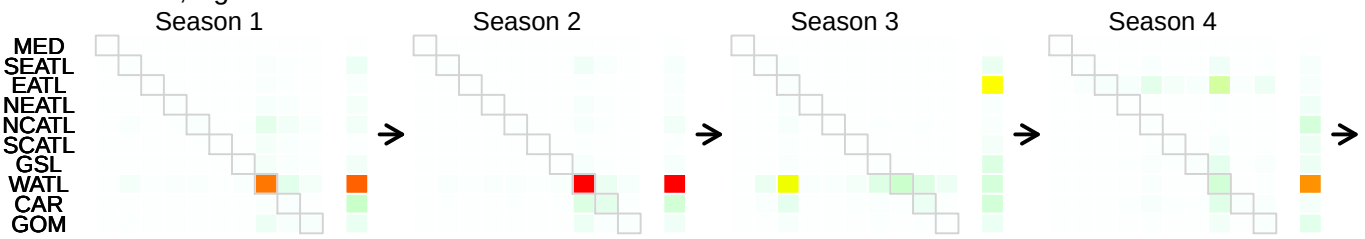
Eastern stock, Age class 3



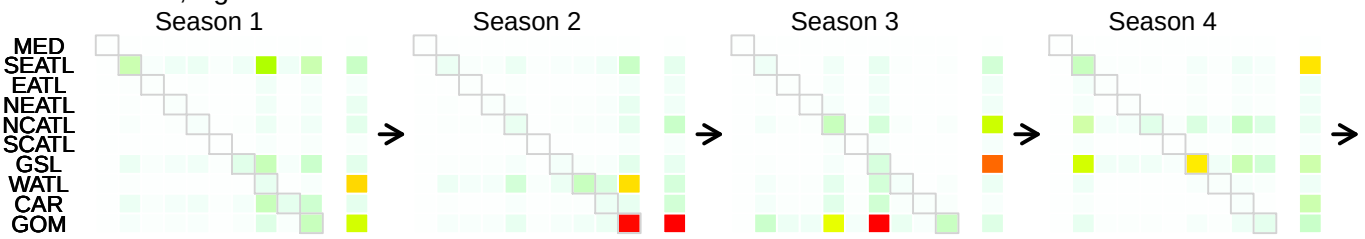
Western stock, Age class 1



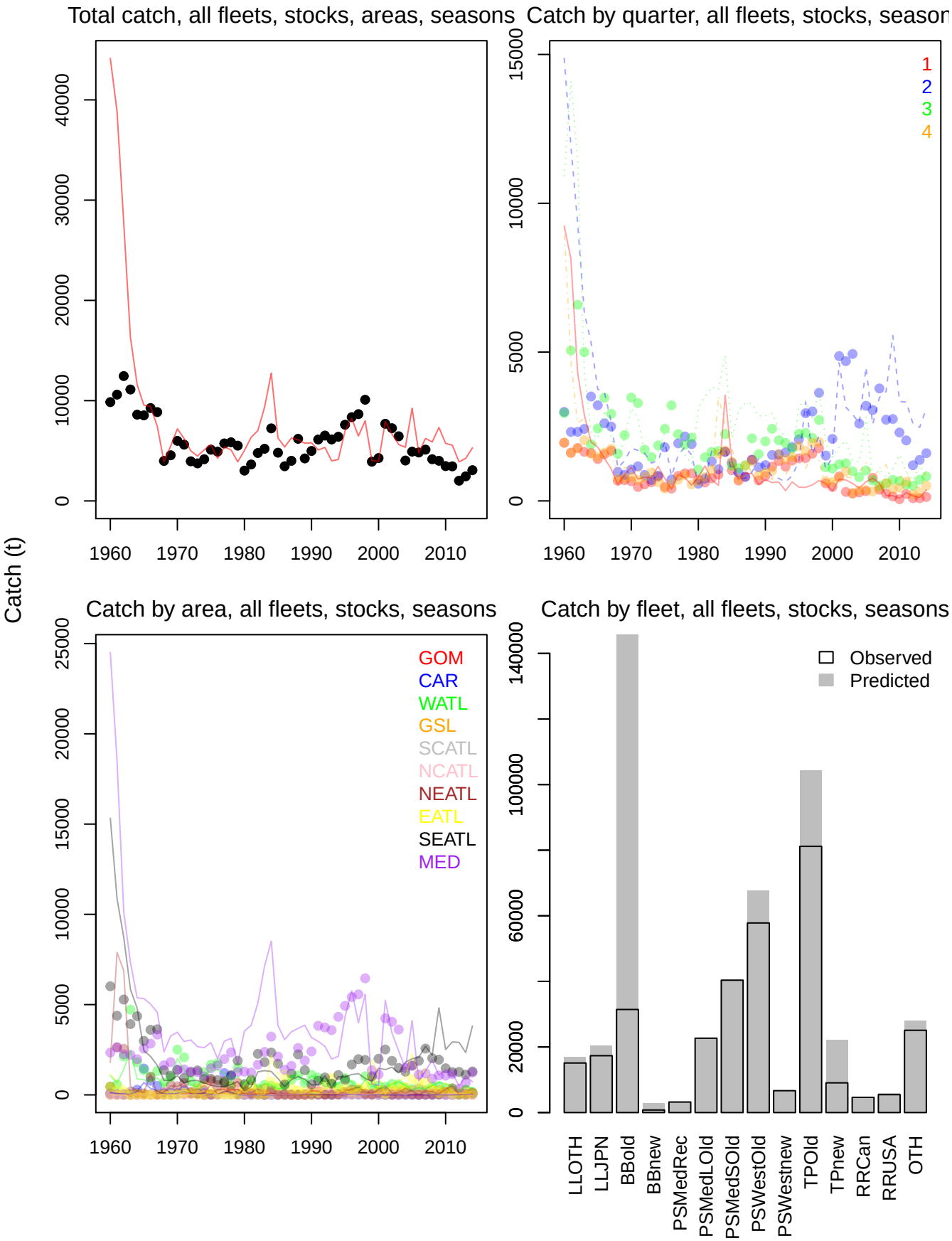
Western stock, Age class 2



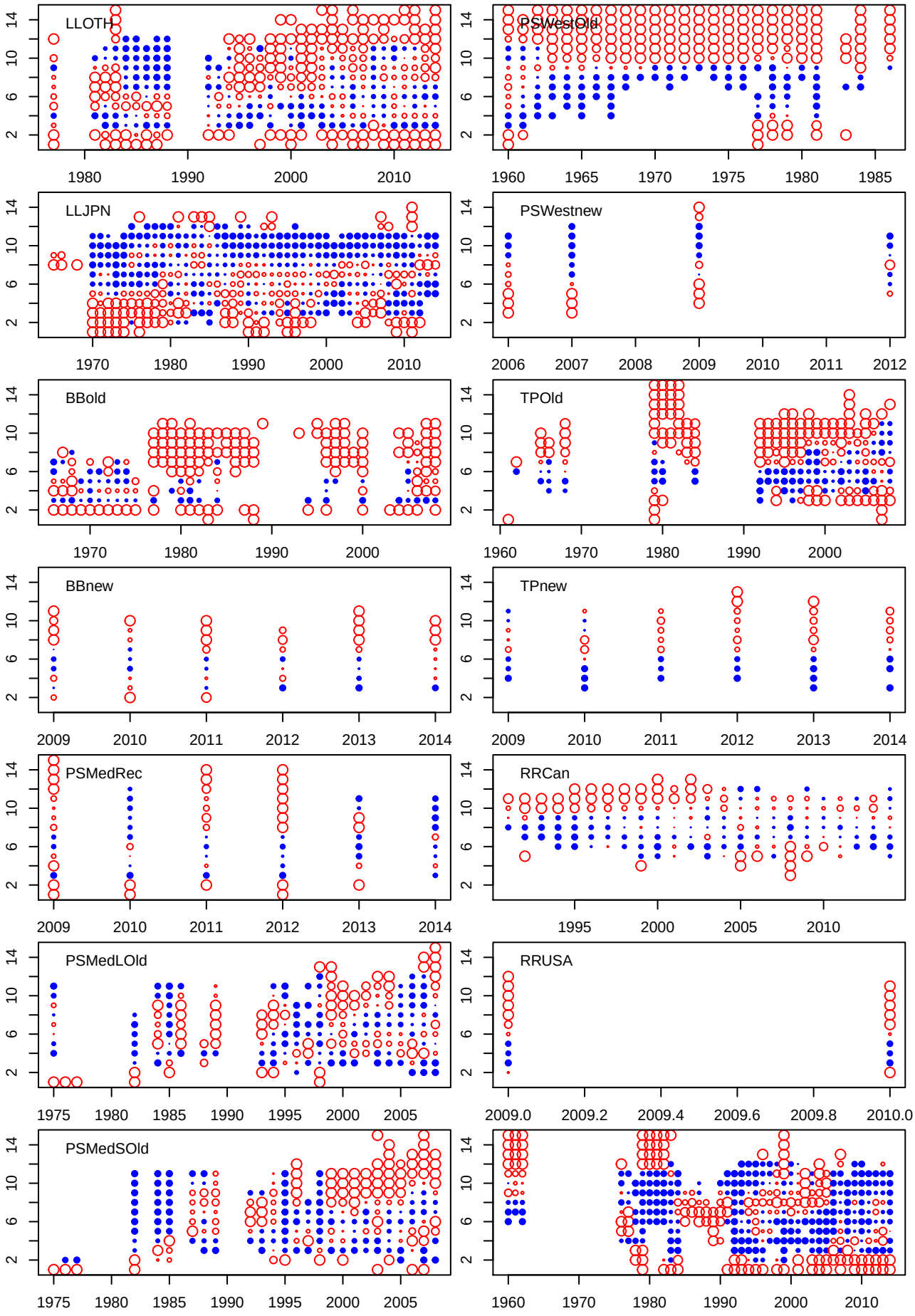
Western stock, Age class 3



Fit to aggregate catches



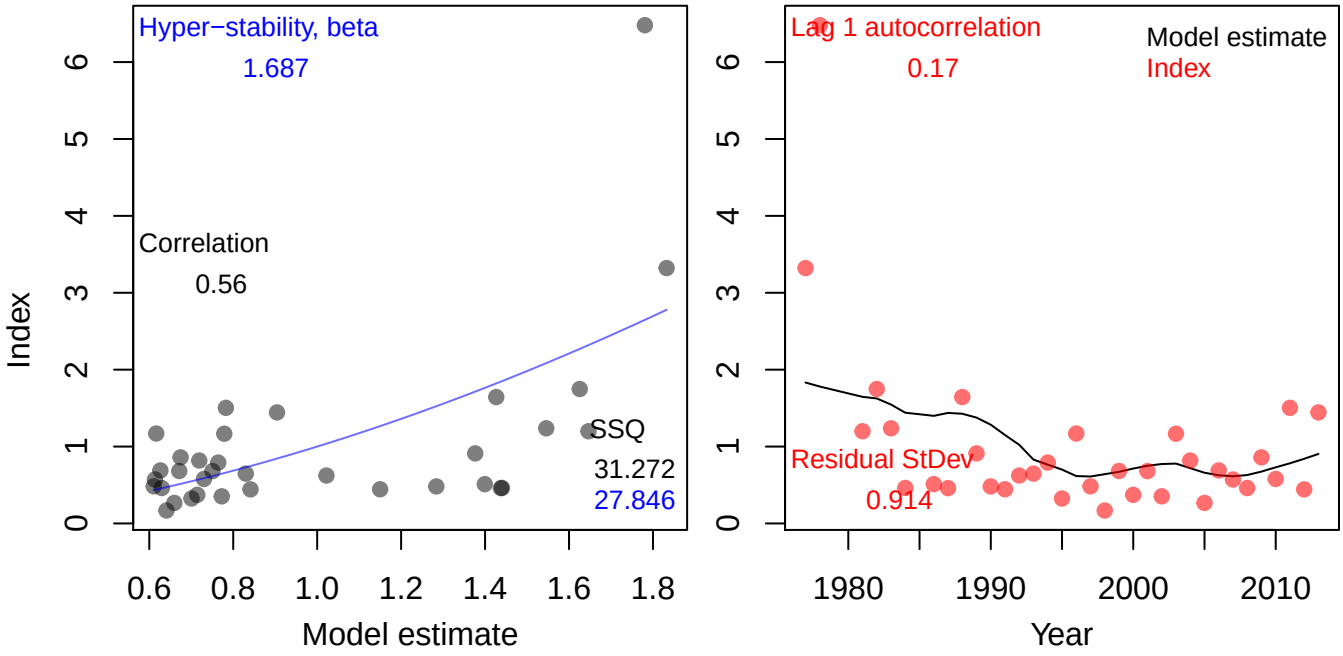
Fit to aggregate length composition



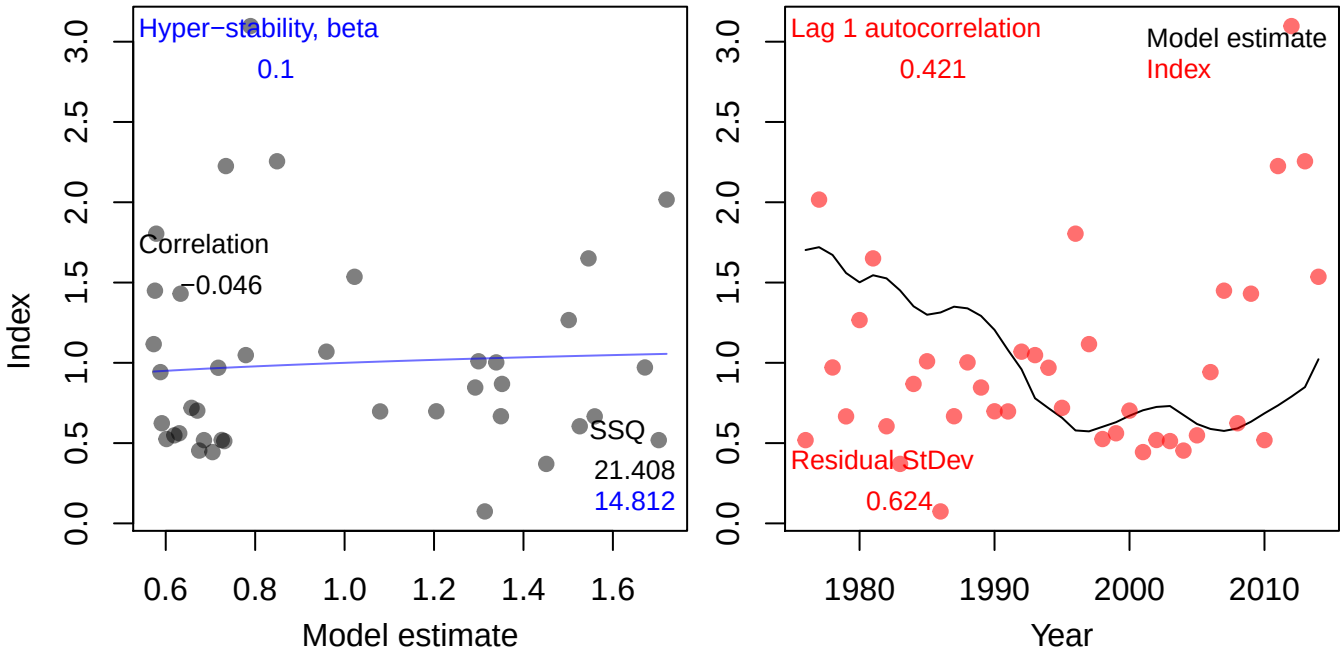
Other model estimates and fits

Statistical properties of indices for use in Management Procedures

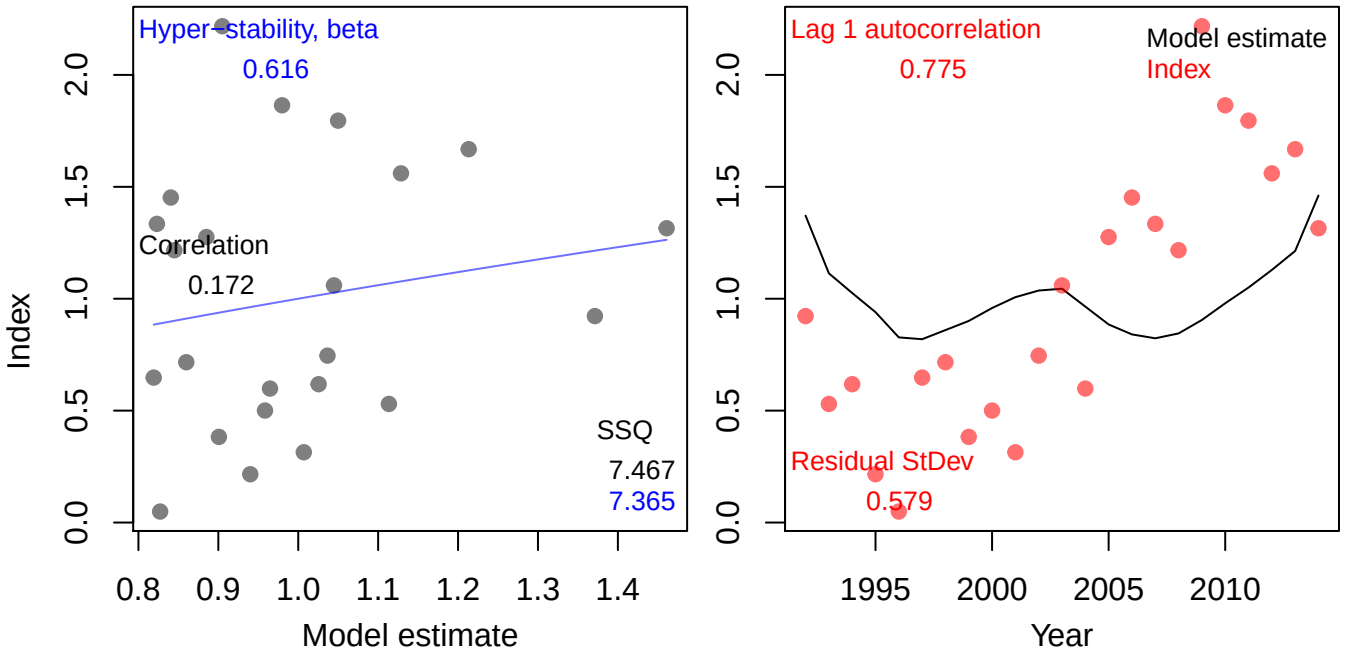
Index fit and statistical properties for GOM_Larval



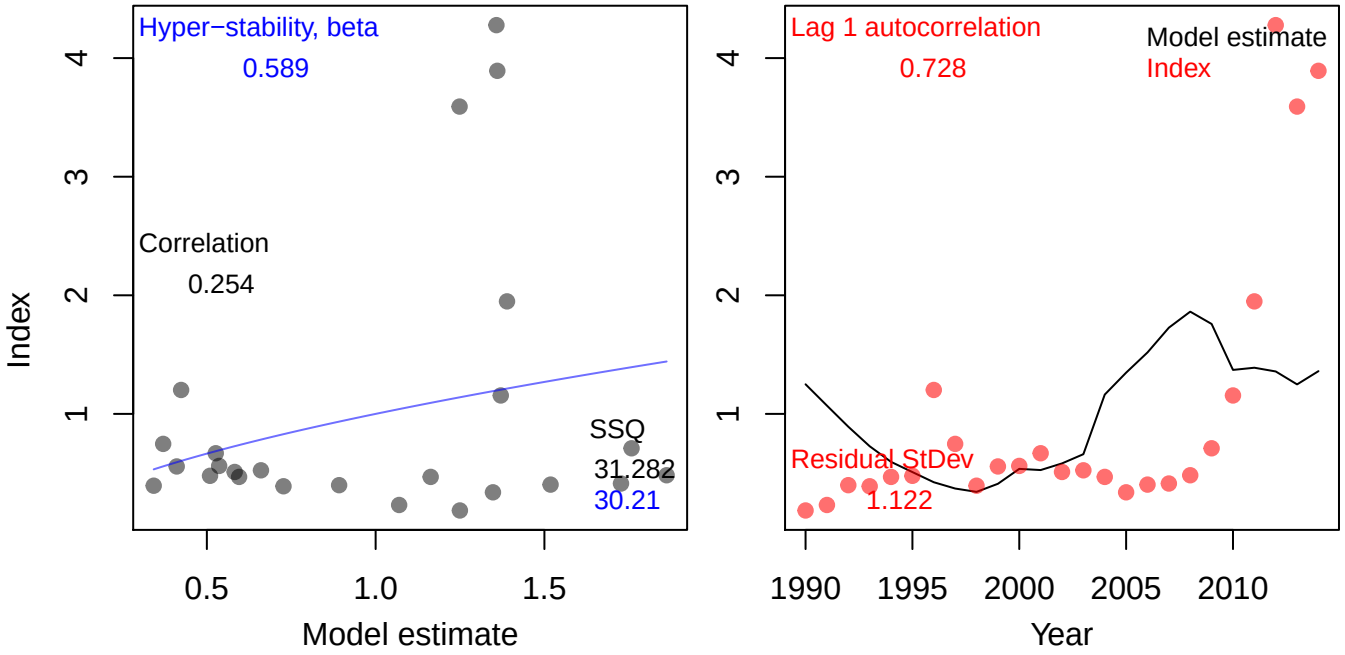
Index fit and statistical properties for JP_LL_W



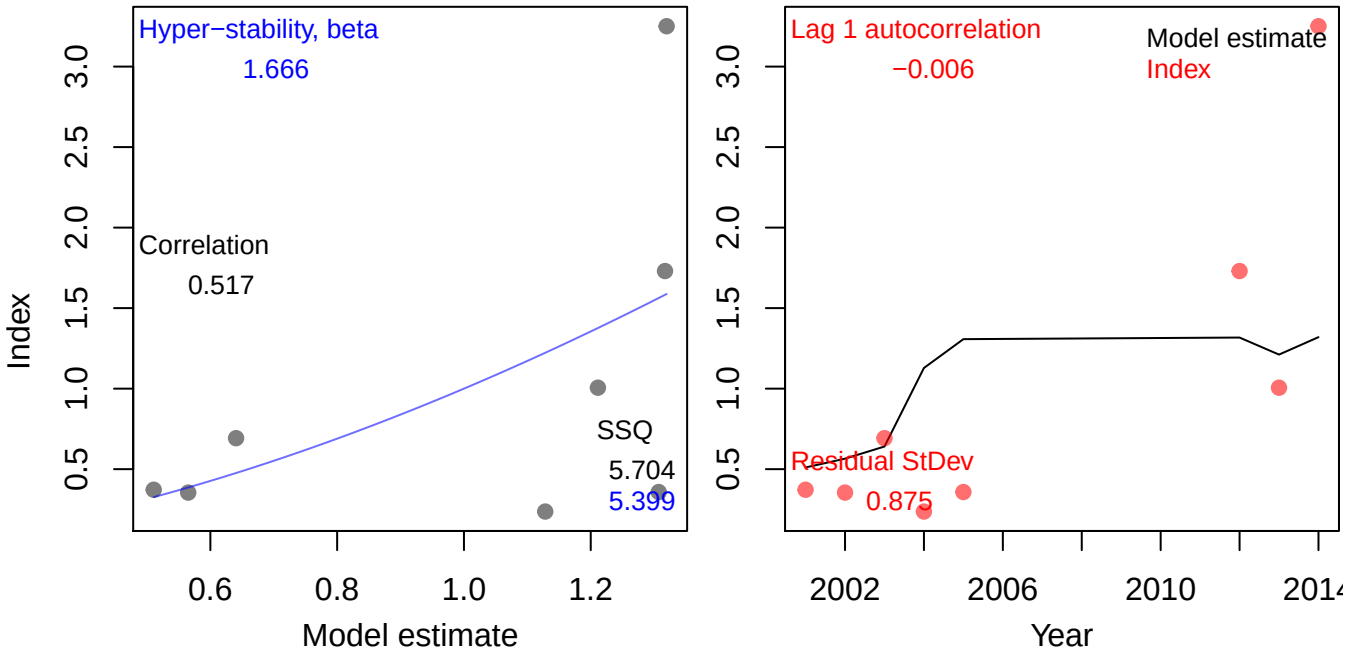
Index fit and statistical properties for US-CAN



Index fit and statistical properties for JP_LL_NE

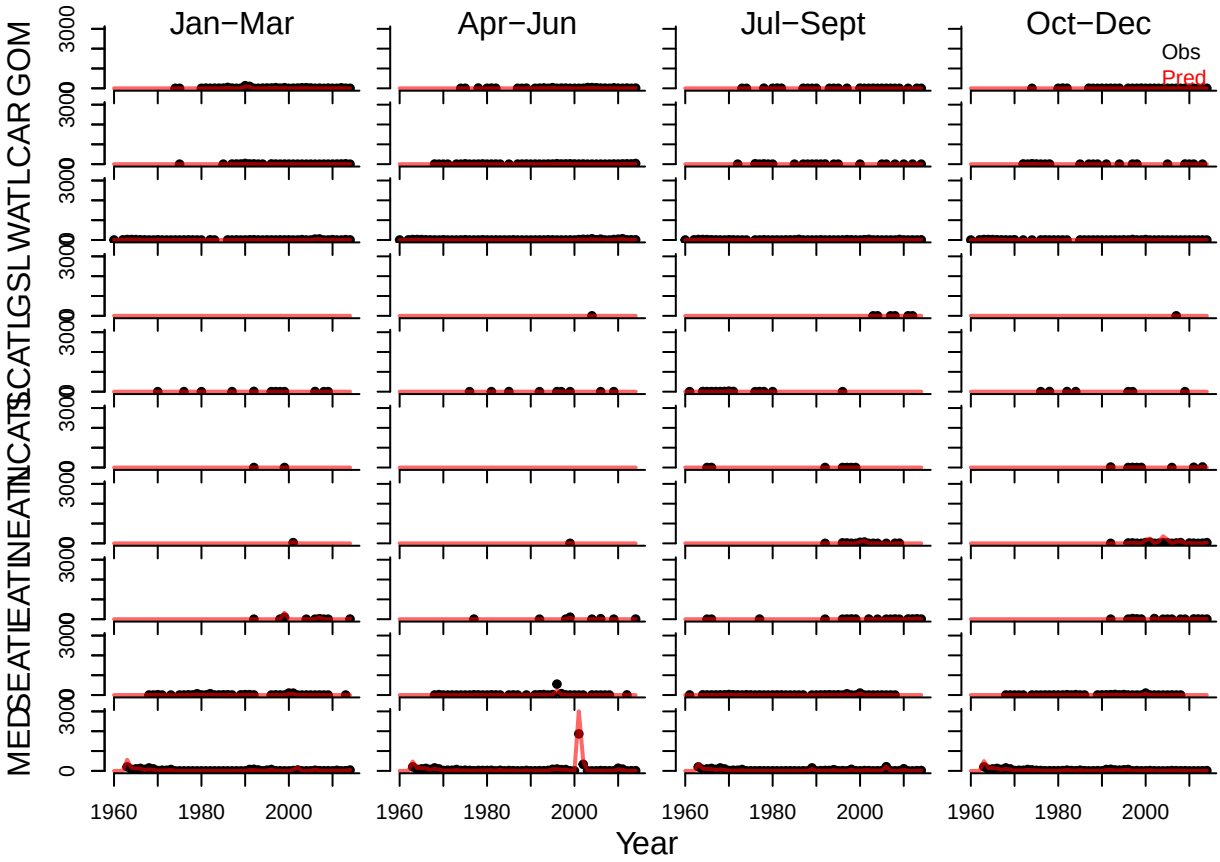


Index fit and statistical properties for MED_Larval

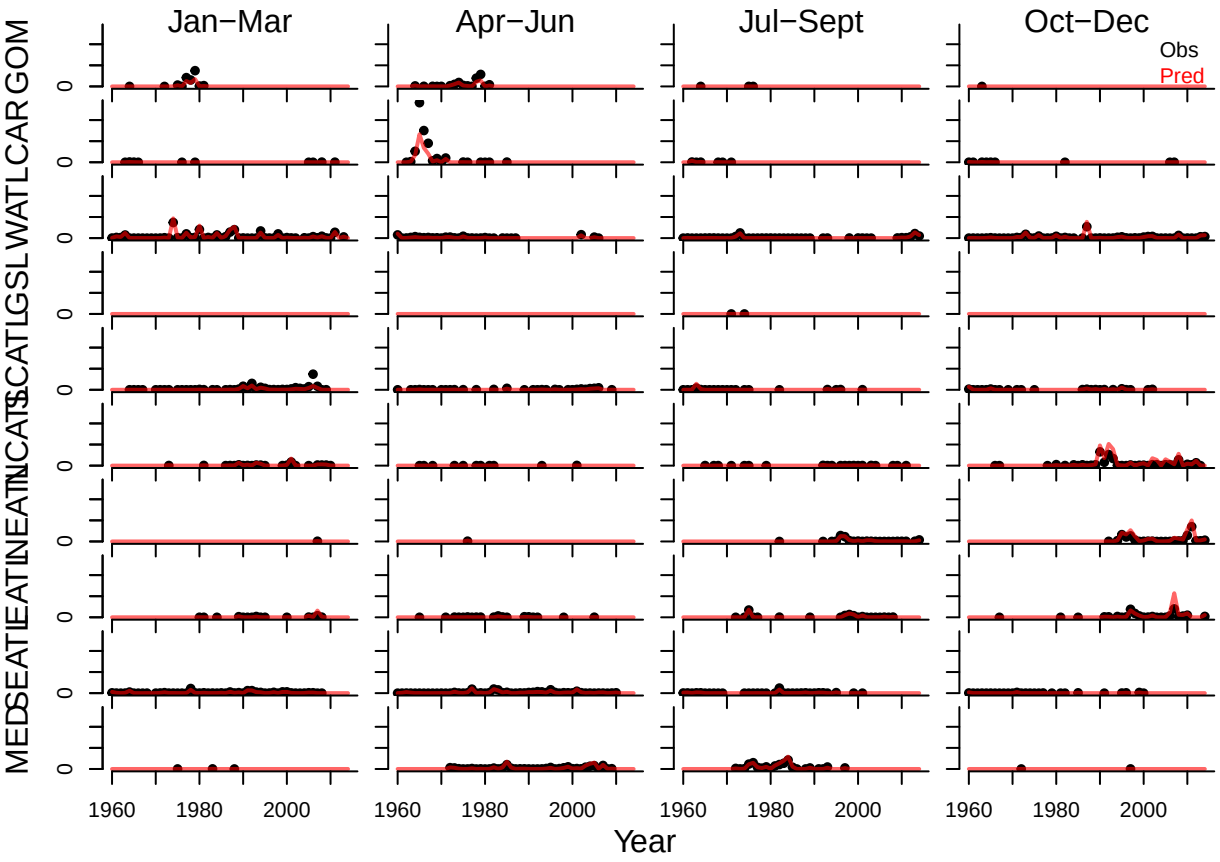


Fit to observed catches

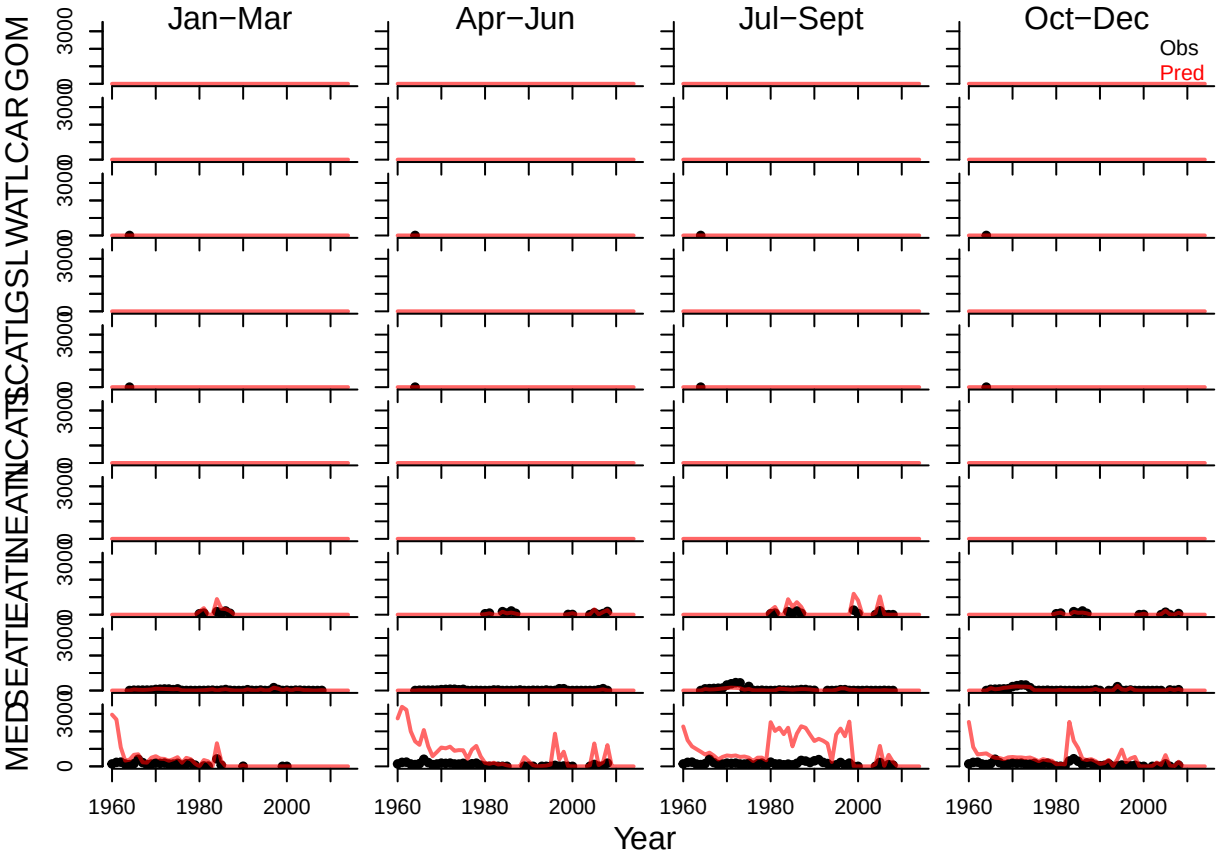
Observed catches (tonnes) for LLOTH



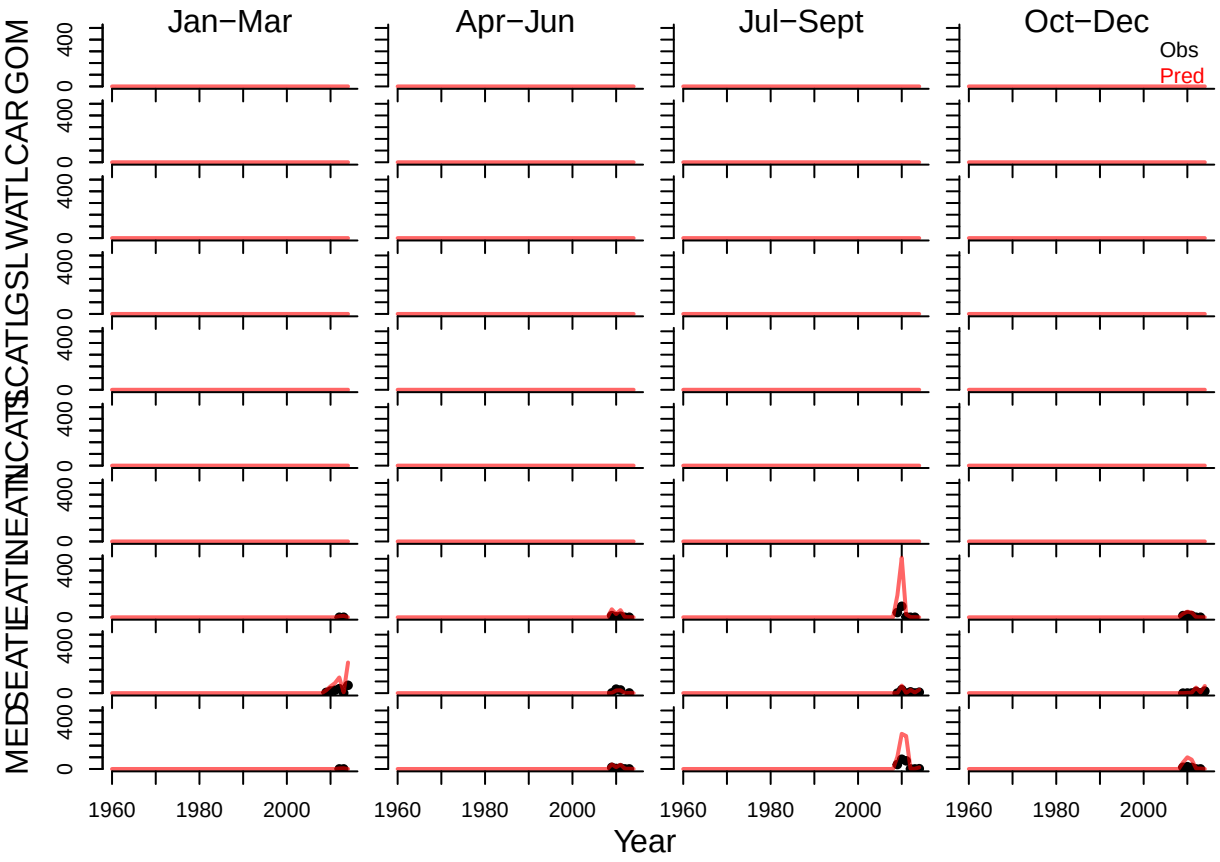
Observed catches (tonnes) for LLJPN



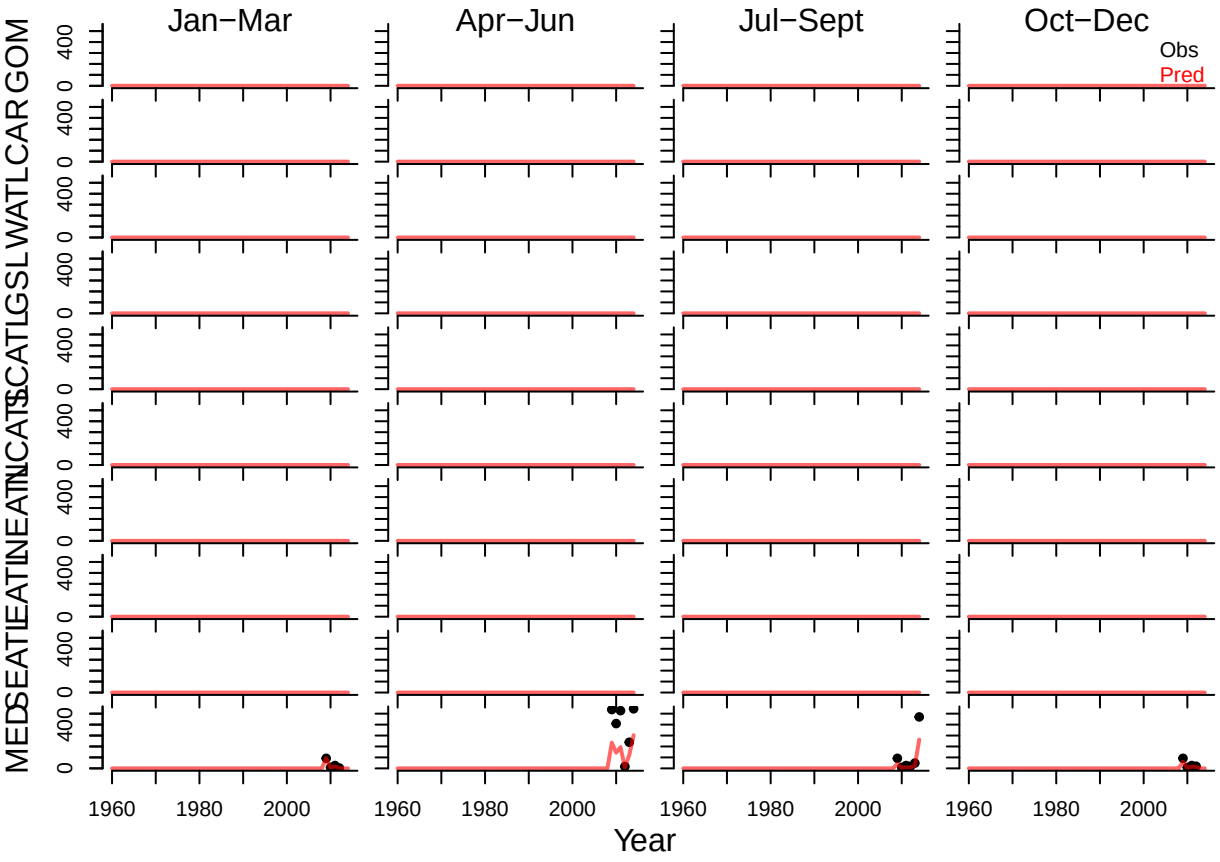
Observed catches (tonnes) for BBold



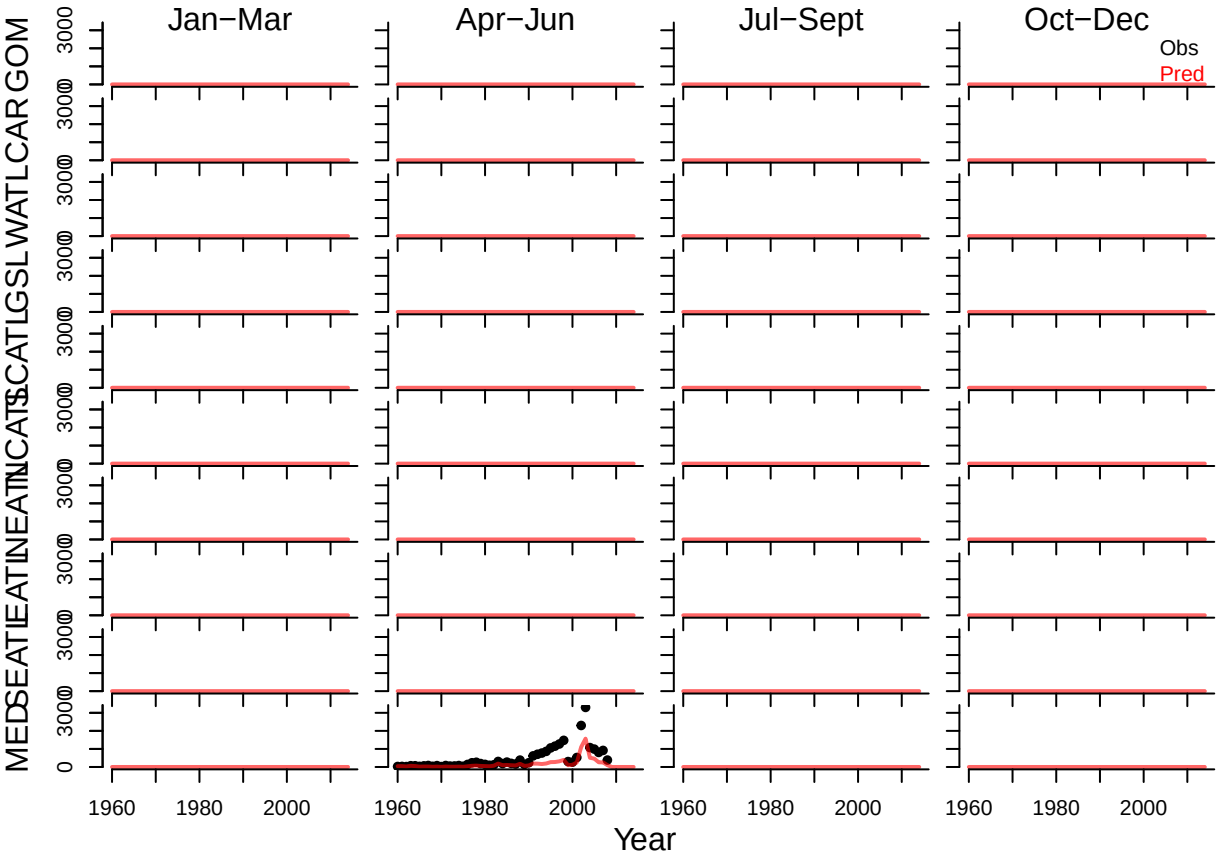
Observed catches (tonnes) for BBnew



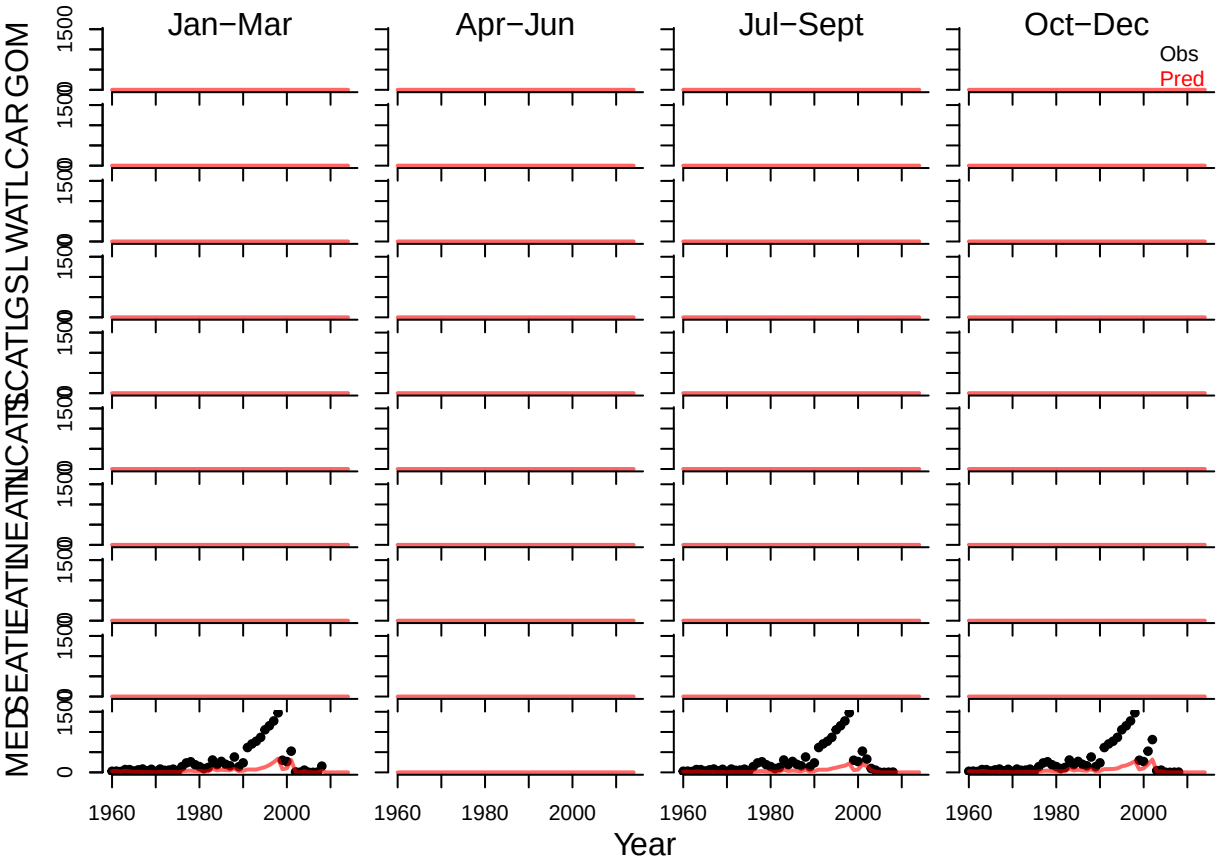
Observed catches (tonnes) for PSMedRec



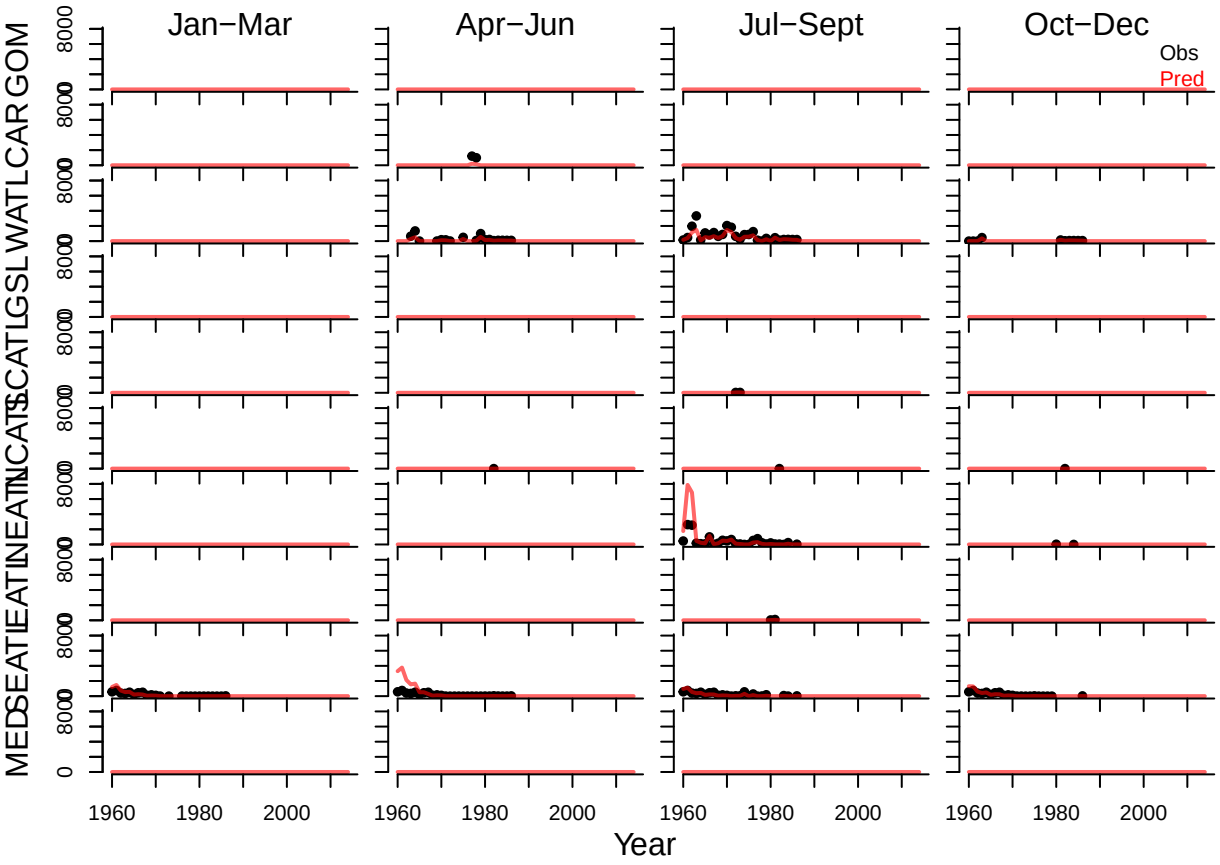
Observed catches (tonnes) for PSMedLOld



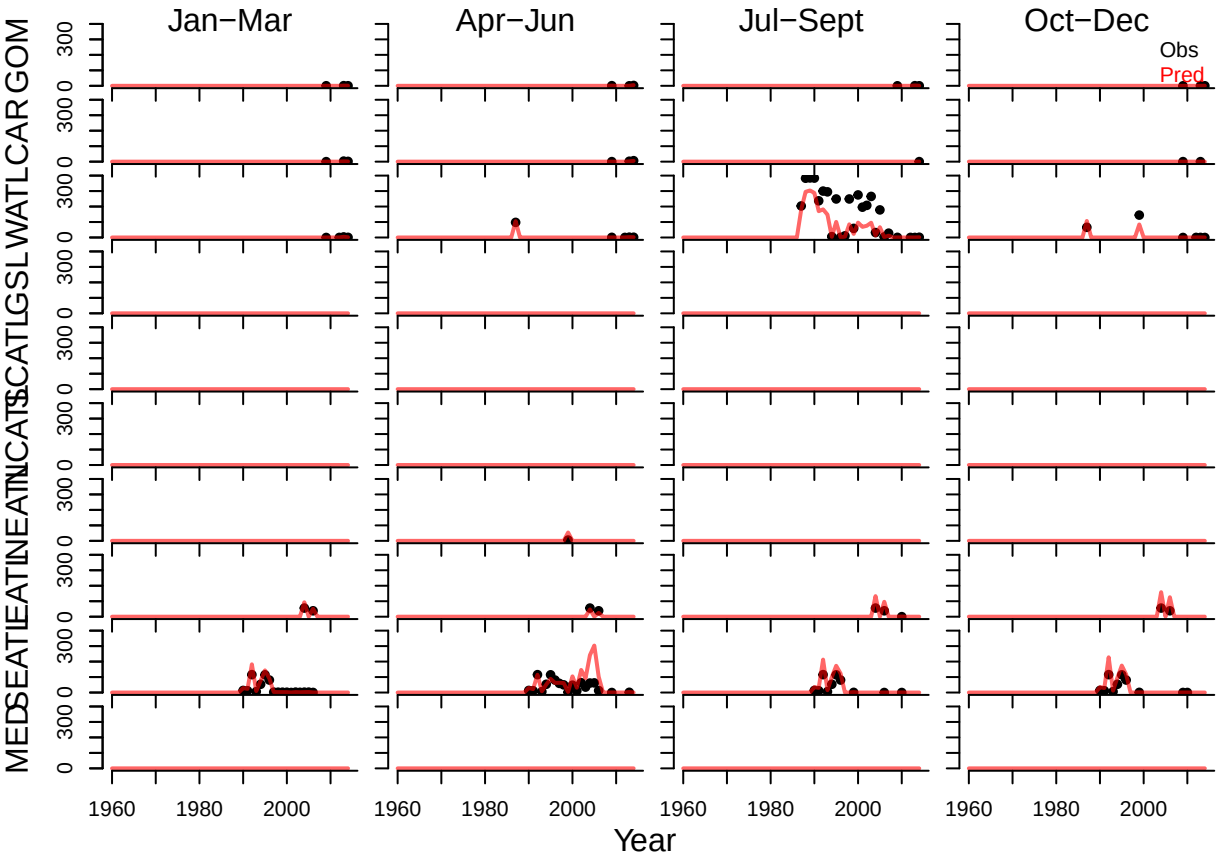
Observed catches (tonnes) for PSMedSOld



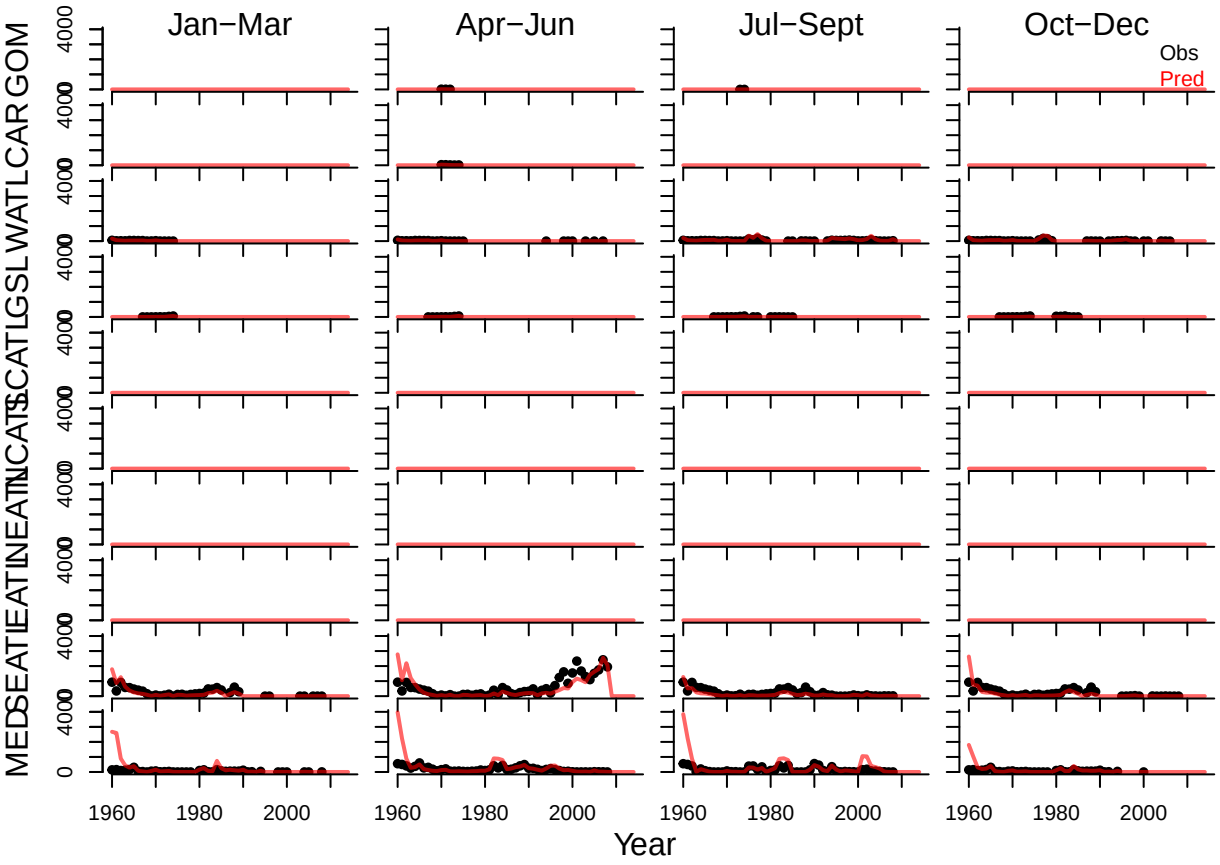
Observed catches (tonnes) for PSWestOld



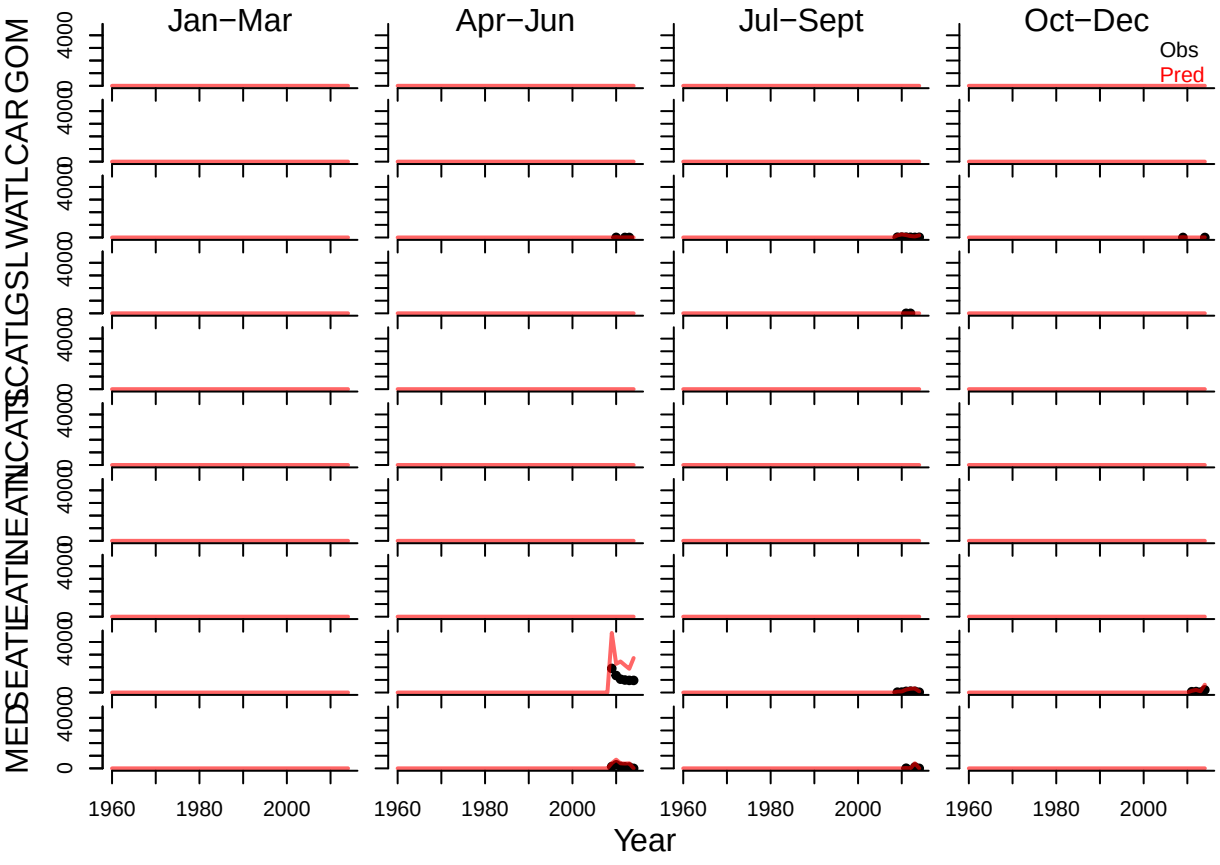
Observed catches (tonnes) for PSWestnew



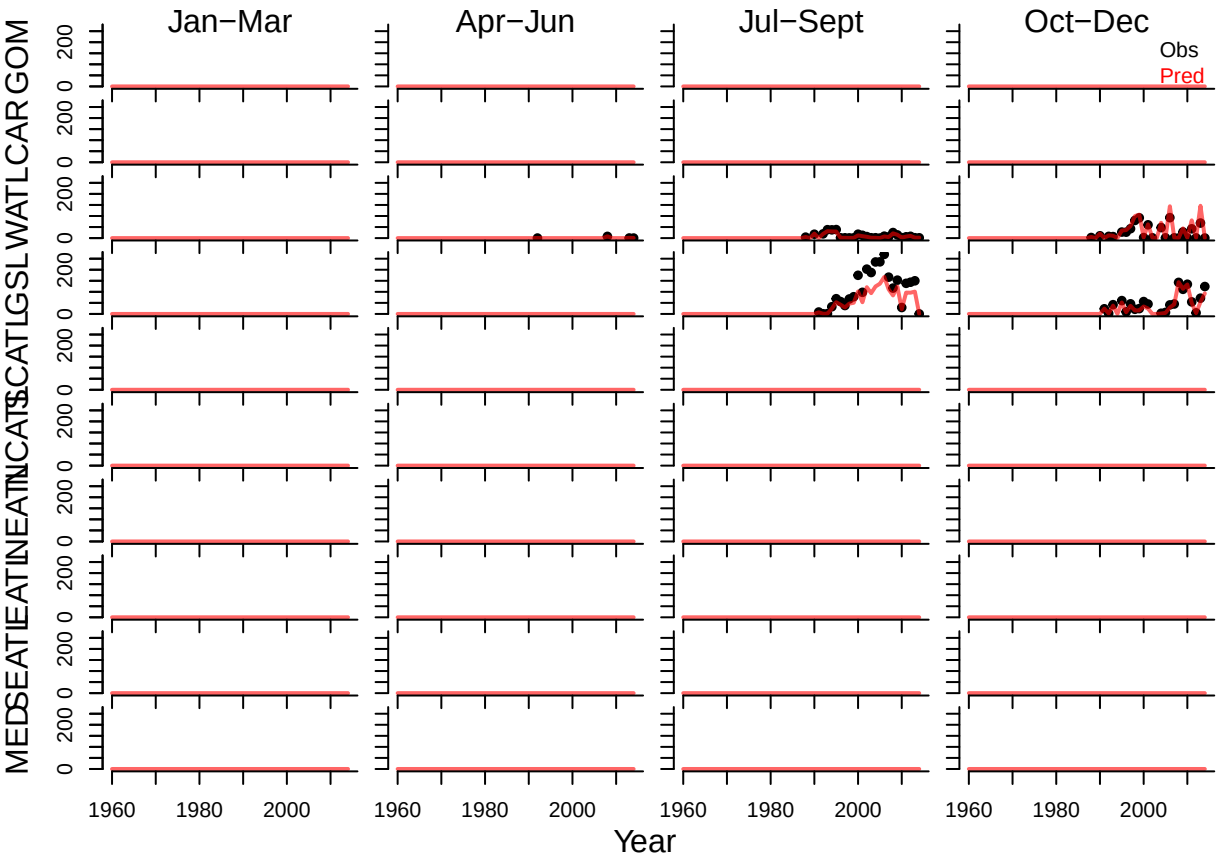
Observed catches (tonnes) for TPOld



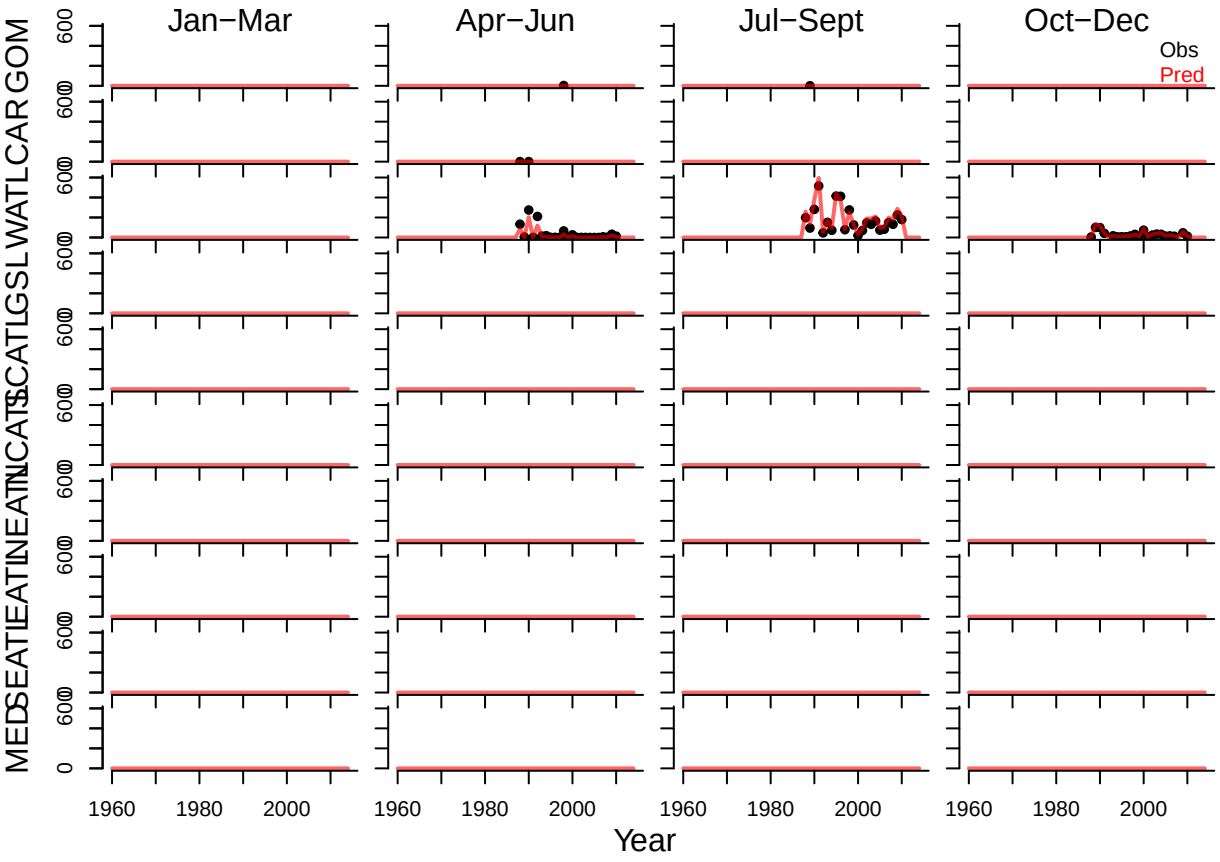
Observed catches (tonnes) for TPnew



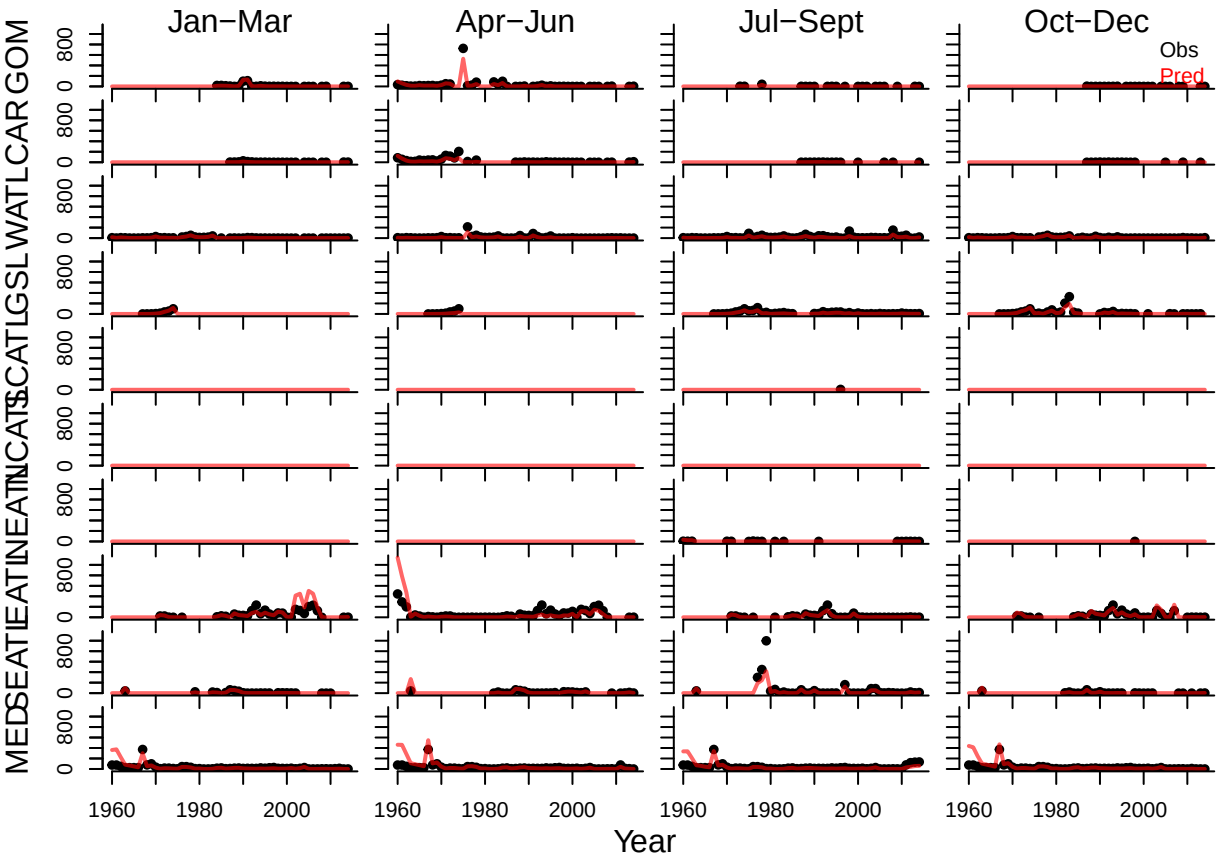
Observed catches (tonnes) for RRCan



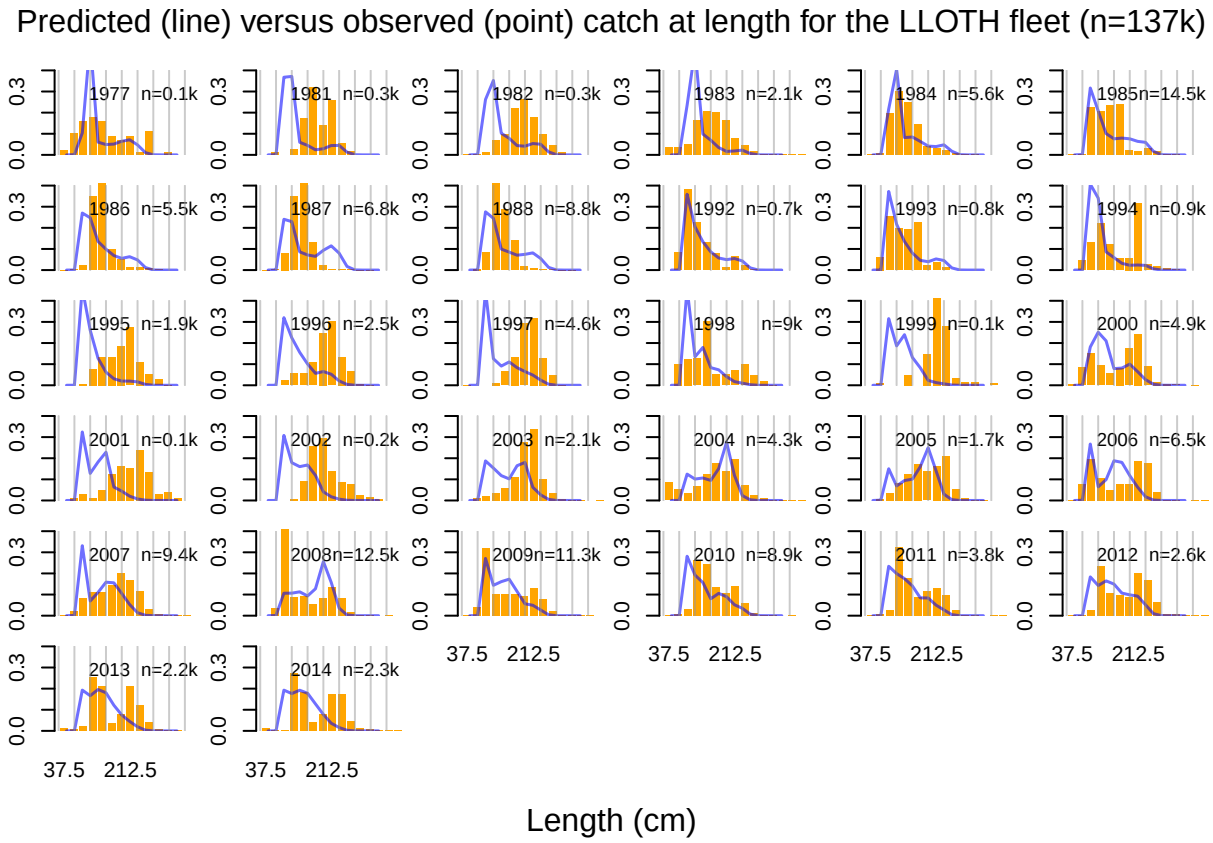
Observed catches (tonnes) for RRUSA



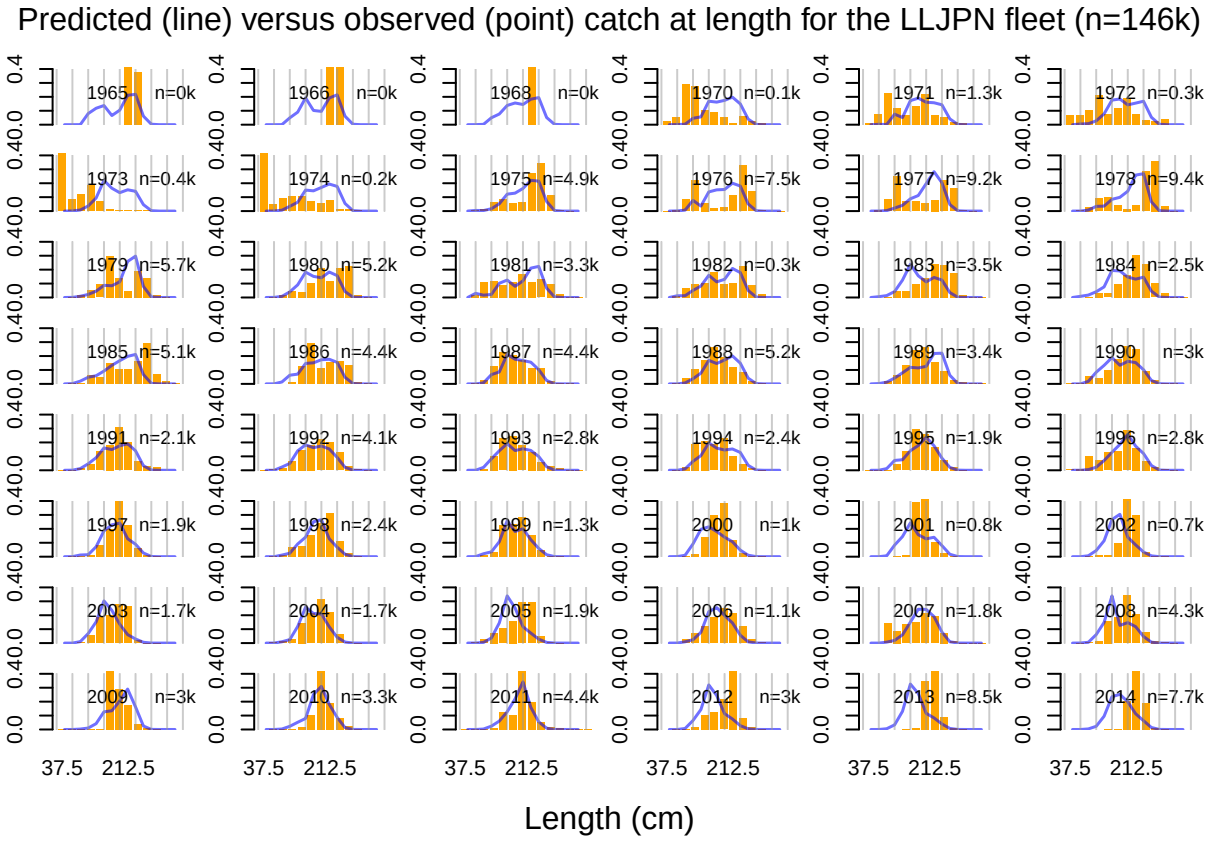
Observed catches (tonnes) for ALL OTH



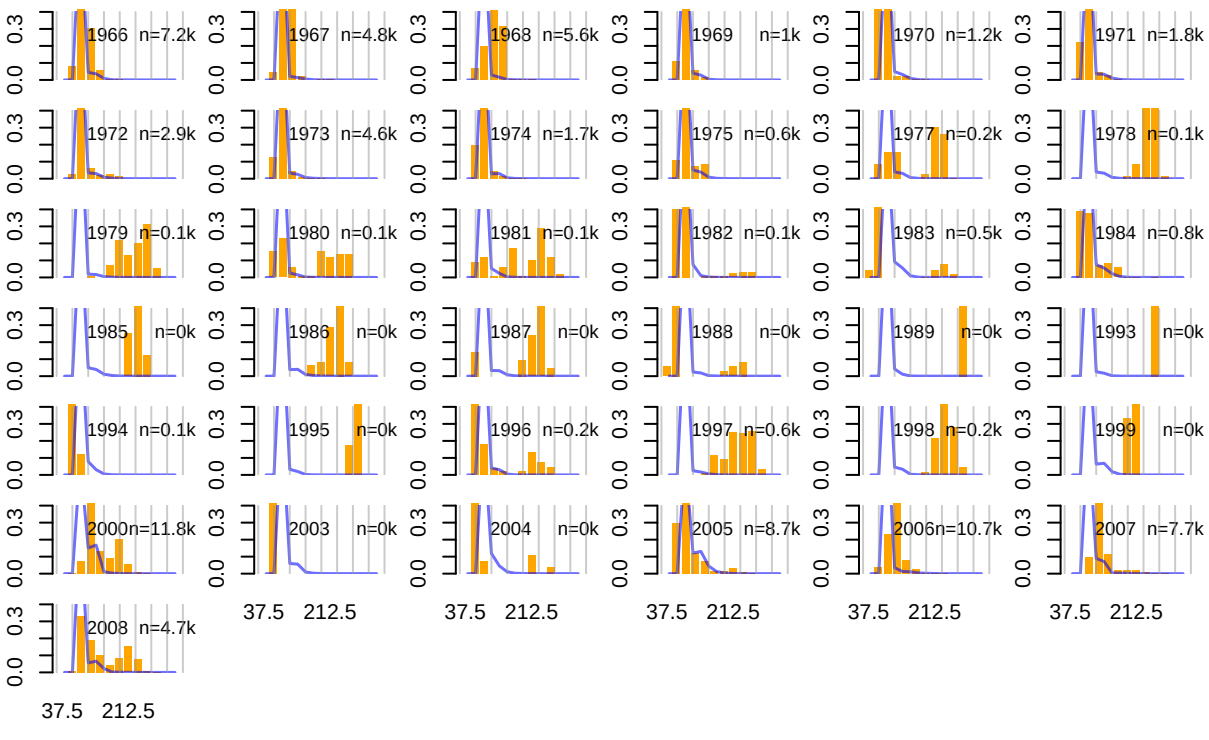
Length composition fit for LLOTH



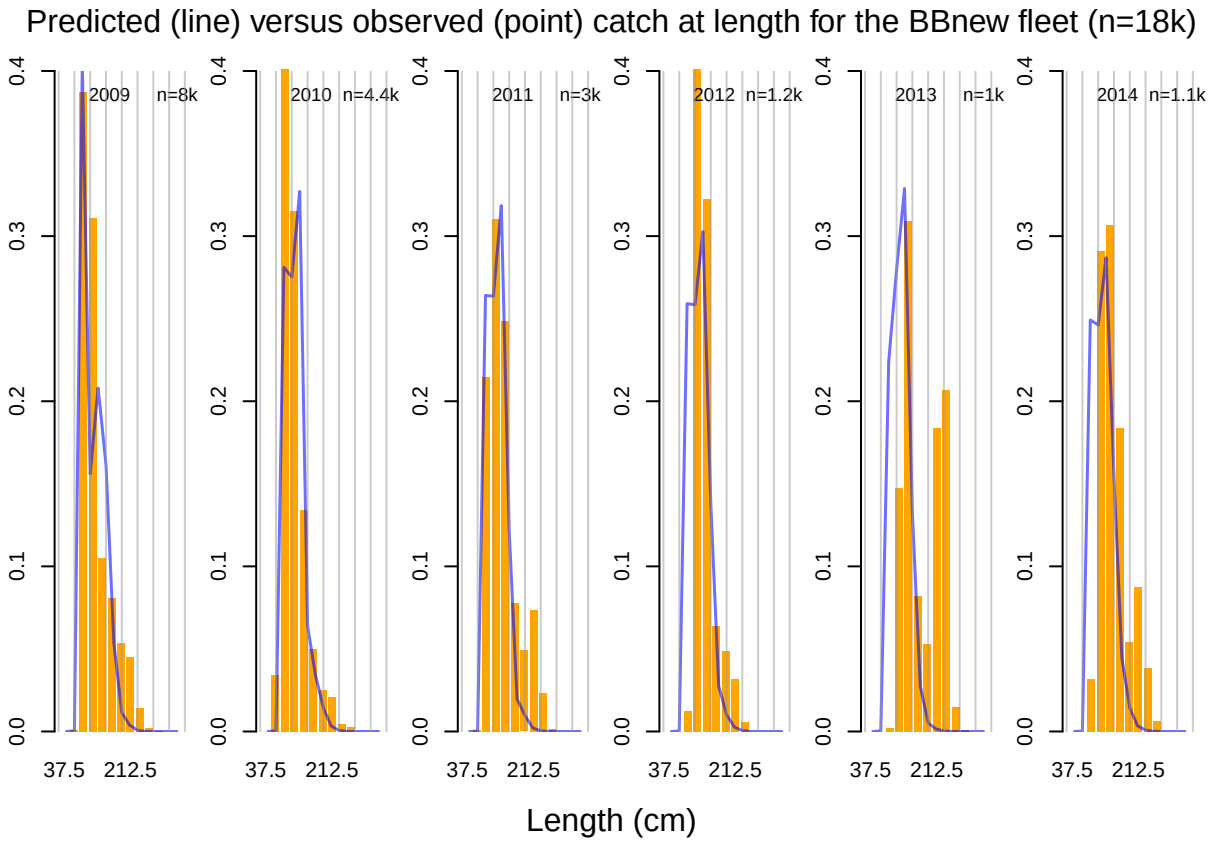
Length composition fit for LLJPN



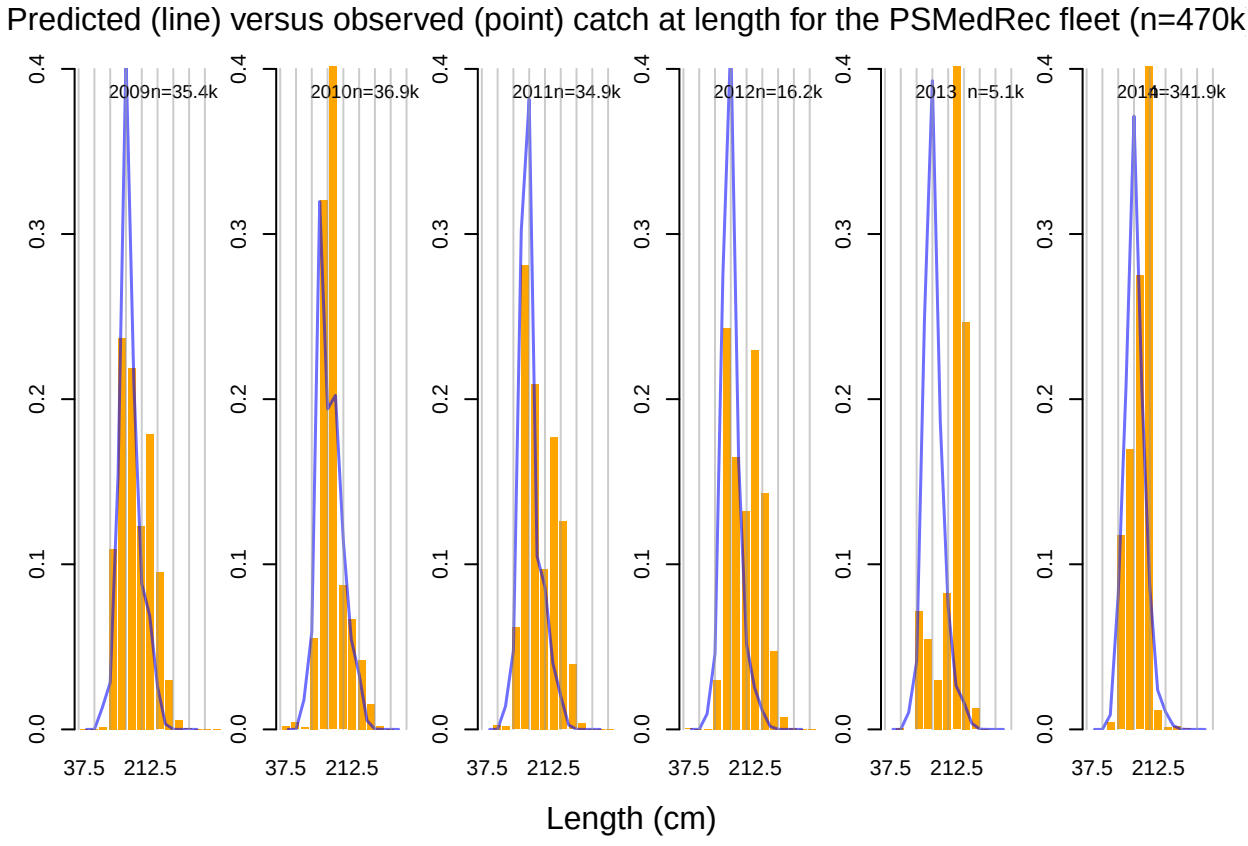
Length composition fit for BBold



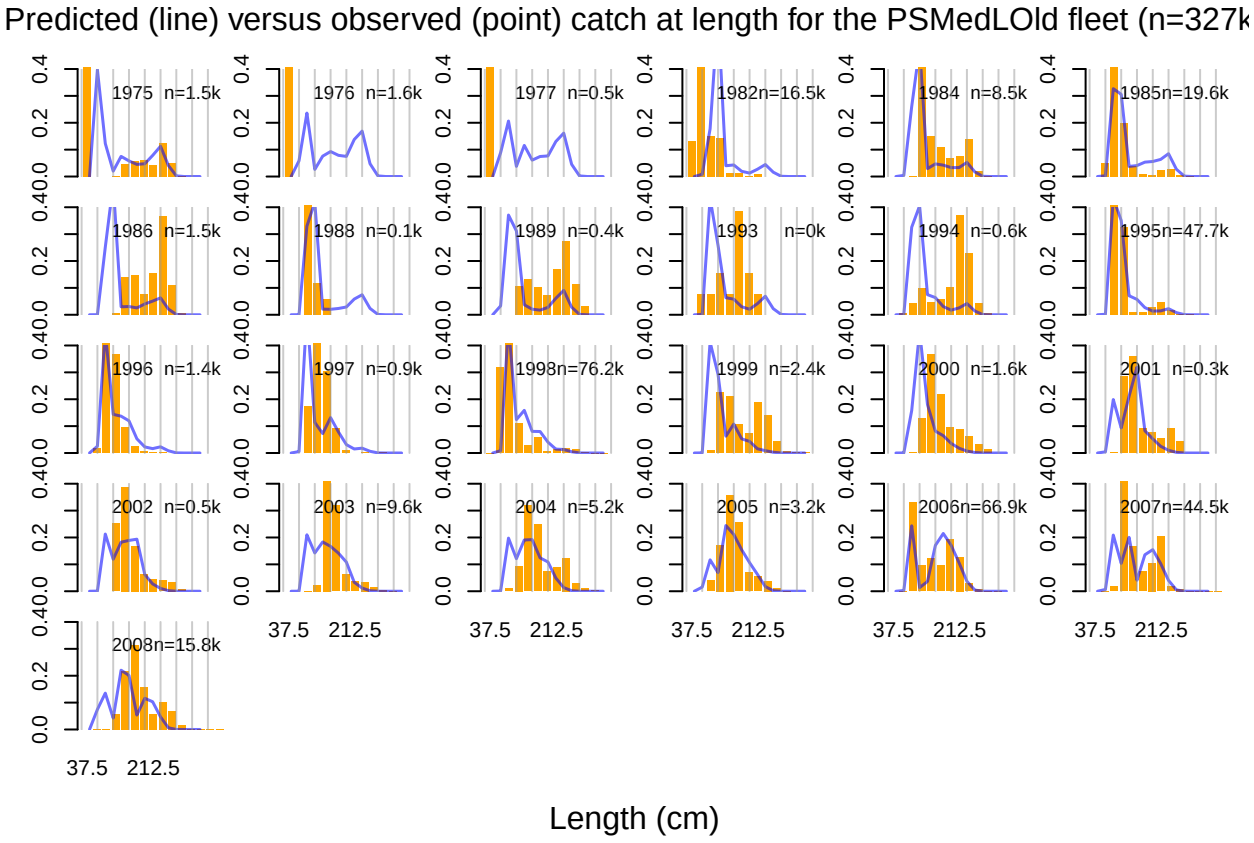
Length composition fit for BBnew



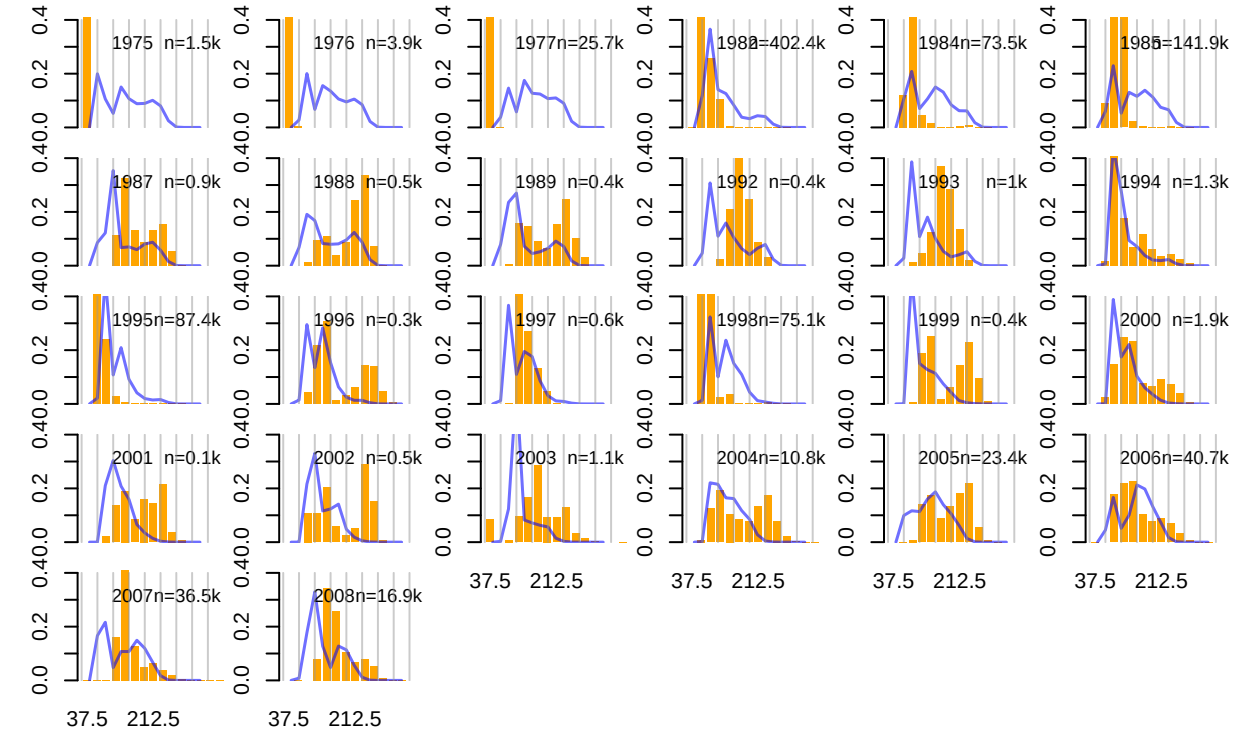
Length composition fit for PSMedRec



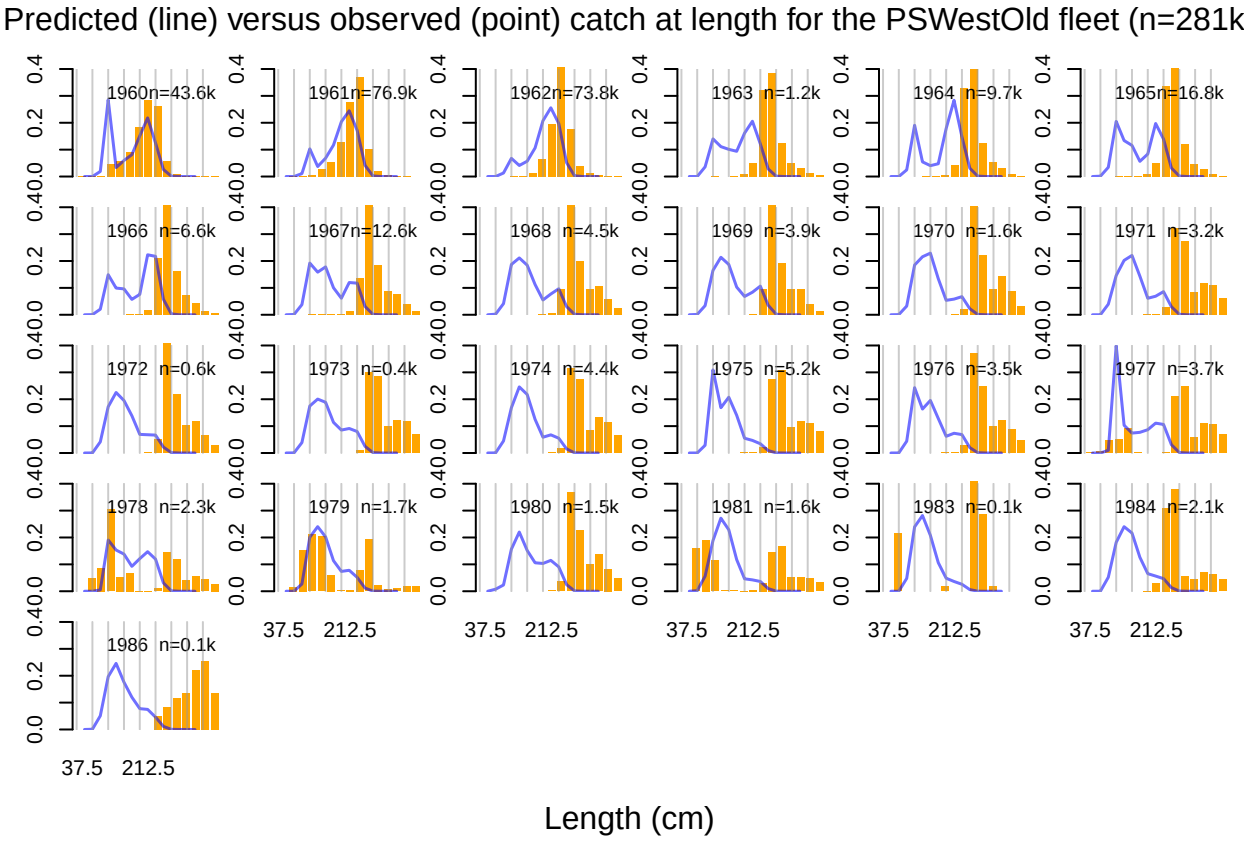
Length composition fit for PSMedLOld



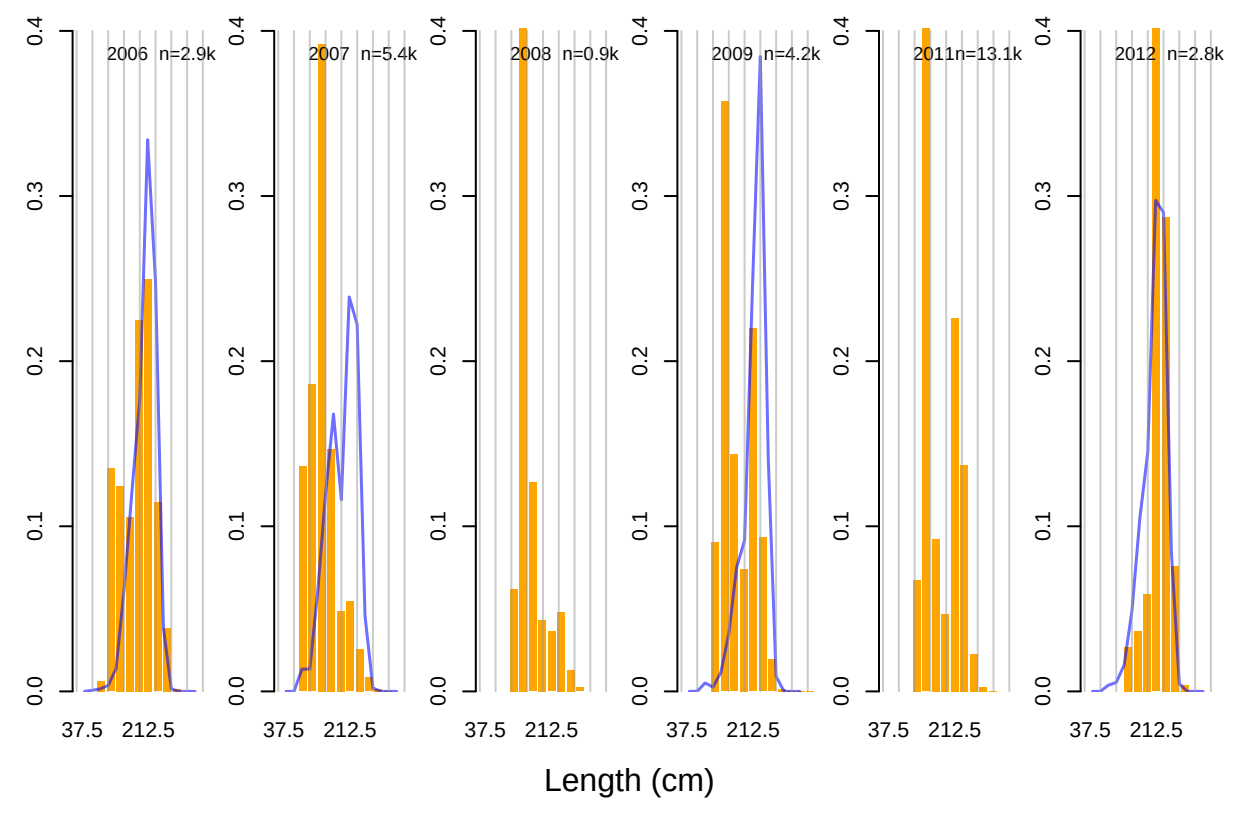
Length composition fit for PSMedSOld



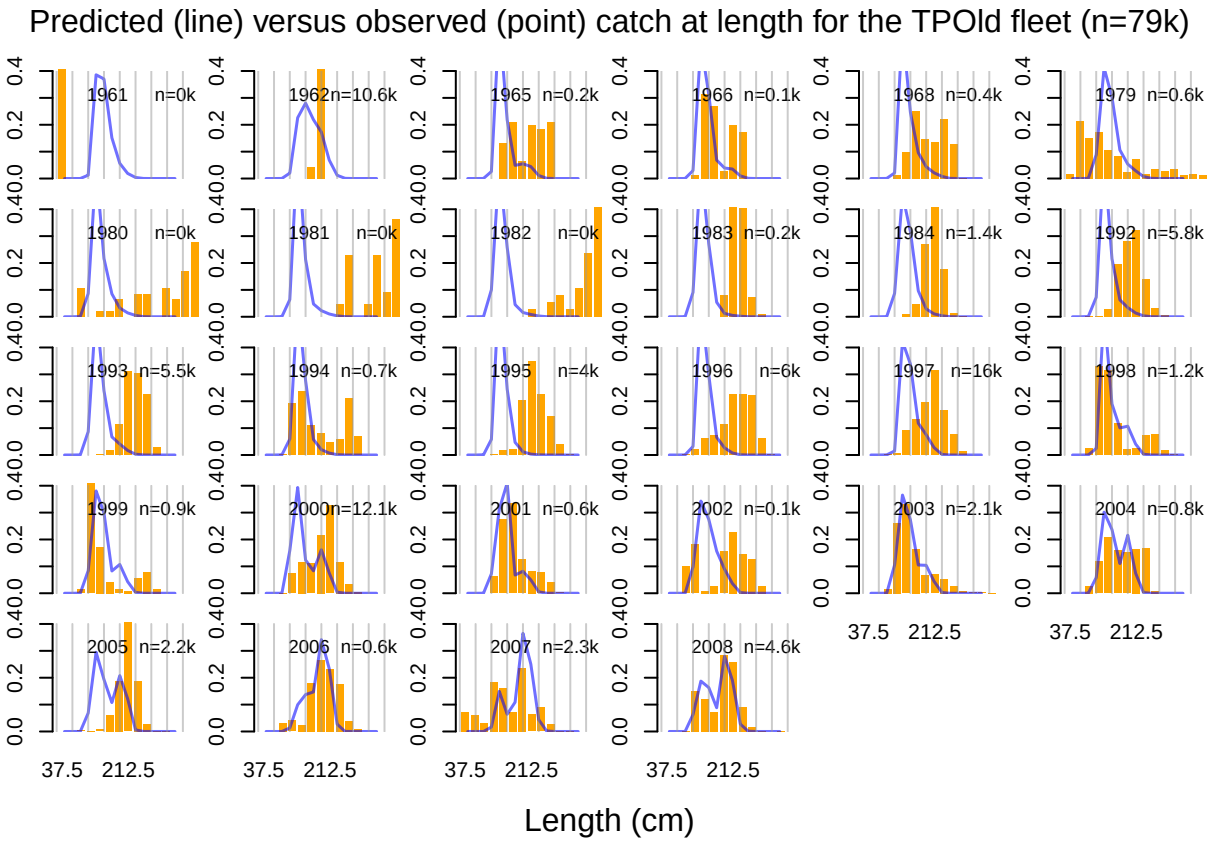
Length composition fit for PSWestOld



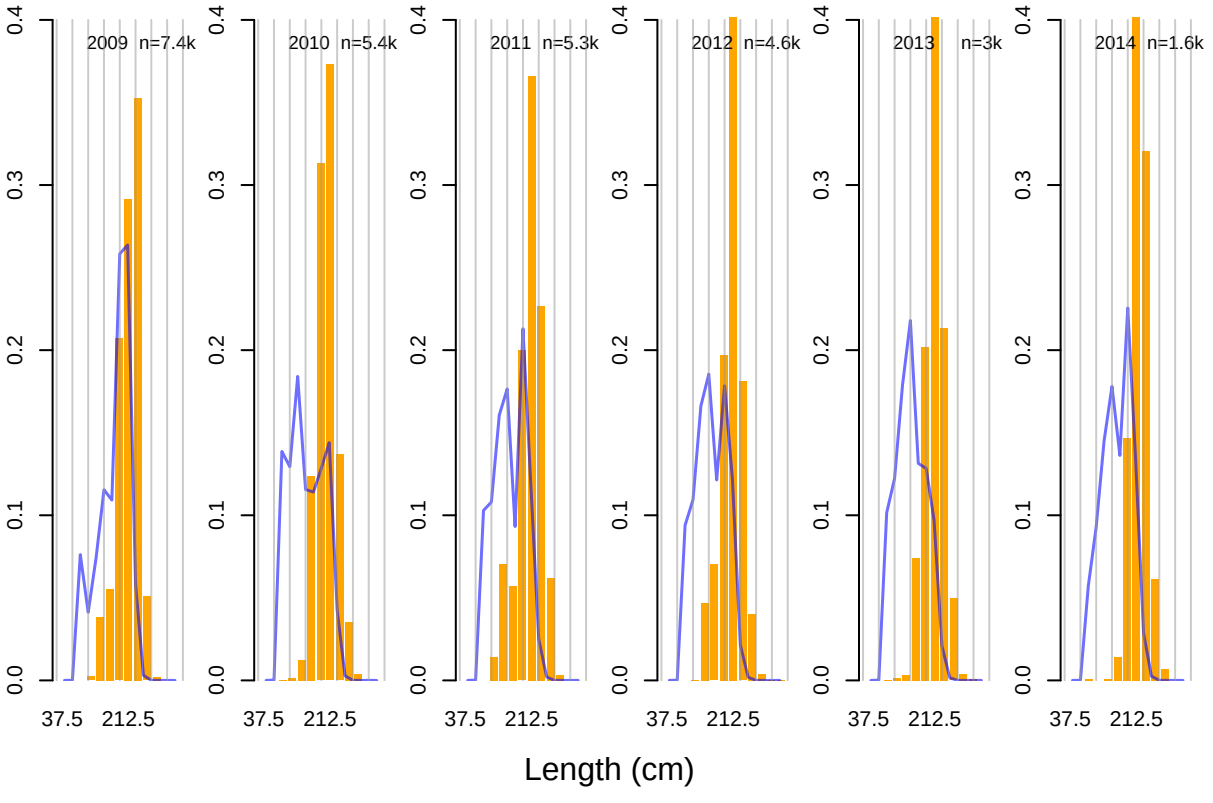
Length composition fit for PSWestnew



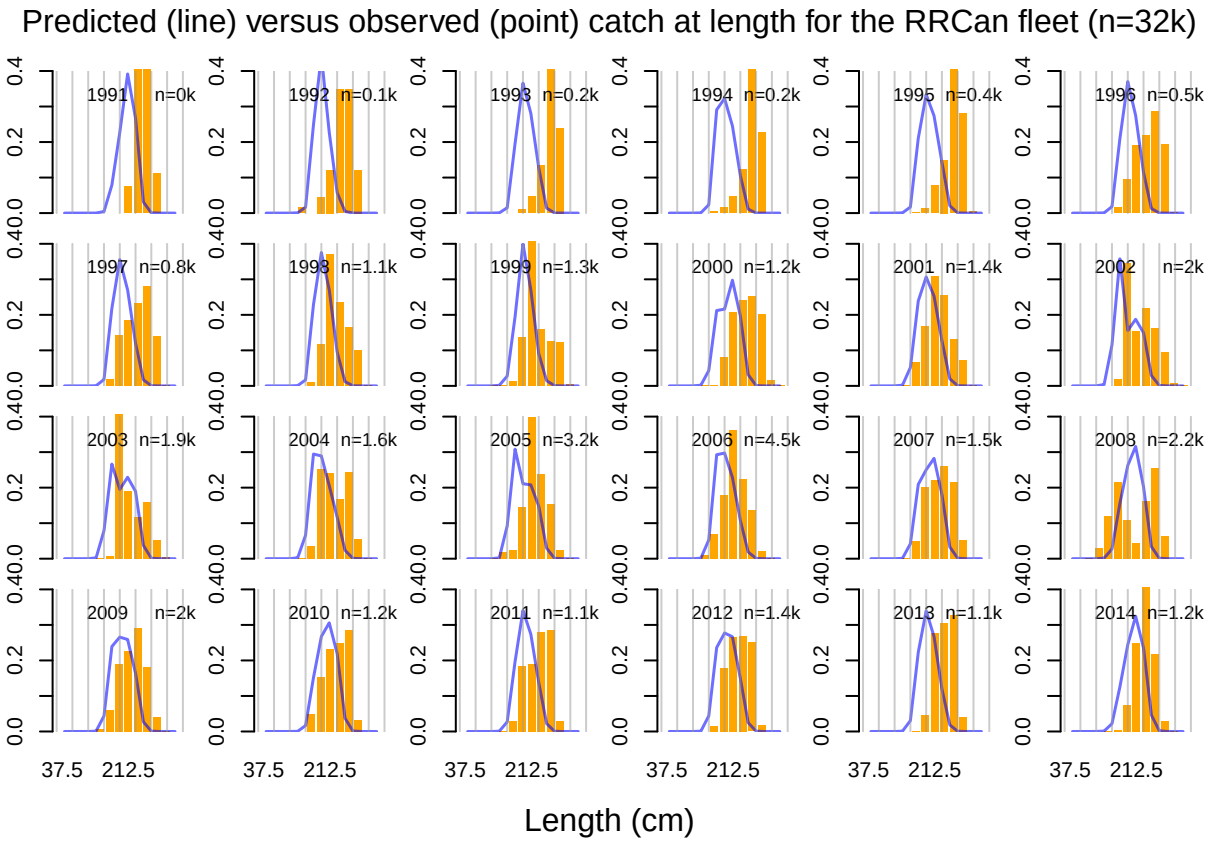
Length composition fit for TPOld



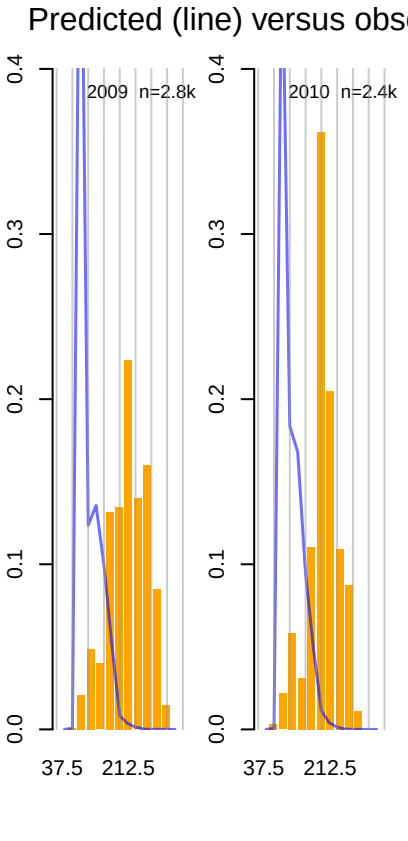
Length composition fit for TPnew



Length composition fit for RRCan



Length composition fit for RRUSA



Length composition fit for ALL OTH

Predicted (line) versus observed (point) catch at length for the ALL OTH fleet (n=170k)