**Starter File (starter.ss)**

#V3.24f line discarded

#C starter comment here line after the “#C” saved in   
 files->starter\_file->header

simple.dat files->data\_file\_name

simple.ctl files->control\_file\_name

0 # 0=use init values in control file; 1=use ss3.par files->checkbox\_use\_par\_file

1 # run display detail files->spinner\_run\_detail (0,1,2)

1 # detailed age-structured reports in REPORT.SSO files->checkbox\_report\_age\_structured  
(0,1)

0 # write detailed checkup.sso file (0,1) files->checkbox\_detailed\_checkup

0 # write parm values to ParmTrace.sso Split into two choice menus:   
(0=no,1=good,active; 2=good,all; files->choiceMenu\_parms (active, all)   
3=every\_iter,all\_parms; 4=every,active) files->choiceMenu\_iters (good, every)

1 # write to cumreport.sso split into two checkboxes: files->checkbox\_like  
(0=no,1=like&timeseries; 2=add survey fits) files->checkbox\_fits

1 # Include prior\_like for non-estimated parameters model->checkbox\_include\_prior  
(0,1)

1 # Use Soft Boundaries to aid convergence model->checkbox\_use\_softbounds  
(0,1) (recommended)

3 # Number of datafiles to produce: files->spinner\_num\_datafiles (1, …, N)  
1st is input, 2nd is estimates, 3rd and higher are bootstrap

10 # Turn off estimation for parameters entering model->spinner\_last\_estim (-1, 0, 1, …, N)  
after this phase

0 # MCeval burn interval model->doublespinner\_mc\_burn

1 # MCeval thin interval model->doublespinner\_mc\_thin

0 # jitter initial parm value by this fraction model->doublespinner\_jitter

1969 # min yr for sdreport outputs (-1 for styr) files->spinner\_std\_min\_yr

2011 # max yr for sdreport outputs (-1 for endyr; files->spinner\_std\_max\_yr  
-2 for last forecast yr

0 # N individual STD years extra sd years to read into list (not kept)

#vector of year values files->list->std\_years

0.0001 # final convergence criteria (e.g. 1.0e-04) model->doublespinner\_convergence

0 # retrospective year relative to end year (e.g. -4) files->spinner\_retrospect\_year

1 # min age for calc of summary biomass model->spinner\_min\_age

1 # Depletion basis: denom is: model->choiceMenu\_depletion\_basis  
0=skip; 1=rel X\*B0; 2=rel X\*Bmsy; 3=rel X\*B\_styr

0.4 # Fraction (X) for Depletion denominator (e.g. 0.4) model->doublespinner\_depletion\_denom

1 # SPR\_report\_basis: files->choiceMenu\_spr\_basis  
0=skip; 1=(1-SPR)/(1-SPR\_tgt); 2=(1-SPR)/(1-SPR\_MSY); 3=(1-SPR)/(1-SPR\_Btarget); 4=rawSPR

4 # F\_report\_units: files->choiceMenu\_f\_rpt\_units  
0=skip; 1=exploitation(Bio); 2=exploitation(Num); choice 4 enables age spinners below  
3=sum(Frates); 4=true F for range of ages – next line

20 23 #\_min and max age over which average F model->spinner\_f\_min\_age  
will be calculated model->spinner\_f\_max\_age

1 # F\_report\_basis: model->choiceMenu\_f\_rpt\_basis  
 0=raw; 1=F/Fspr; 2=F/Fmsy ; 3=F/Fbtgt

999 # check value for end of file files->spinner\_eof

**Forecast File (forecast.ss)**

#V3.24f line discarded

#C generic forecast file “#C” removed and saved in files->forecast\_file

# for all year entries except rebuilder; enter either: line discarded  
actual year, -999 for styr, 0 for endyr, neg number for rel. endyr

1 # Benchmarks: 0=skip; 1=calc F\_spr,F\_btgt,F\_msy forecast->choiceMenu\_benchmarks

2 # MSY: forecast->choiceMenu\_msy  
1= set to F(SPR); 2=calc F(MSY); 3=set to F(Btgt); 4=set to F(endyr)

0.4 # SPR target (e.g. 0.40) forecast->doublespinner\_spr\_target

0.342 # Biomass target (e.g. 0.40) forecast->doublespinner\_biomass\_target

#\_Bmark\_years: line discarded  
beg\_bio, end\_bio, beg\_selex, end\_selex, beg\_relF, end\_relF (enter actual year, or values of 0 or -integer to be rel. endyr)

0 0 0 0 0 0 values read into forecast->list\_bmark\_yrs

# 2001 2001 2001 2001 2001 2001 # after processing line discarded

1 #Bmark\_relF\_Basis: forecast->choiceMenu\_bmark\_relf\_basis  
1 = use year range; 2 = set relF same as forecast below

# line discarded

1 # Forecast: forecast->choiceMenu\_method  
0=none; 1=F(SPR); 2=F(MSY) 3=F(Btgt); 4=Ave F (uses first-last relF yrs); 5=input annual F scalar

10 # N forecast years forecast->spinner\_num\_years

0.2 # F scalar (only used for Do\_Forecast==5) forecast->list\_annual\_f\_scalar

#\_Fcast\_years: beg\_selex, end\_selex, beg\_relF, end\_relF (enter actual year, or values of 0 or -integer to be rel. endyr)

0 0 -10 0 forecast->list\_fcast\_yrs

# 2001 2001 1991 2001 # after processing line discarded

1 # Control rule method forecast->choiceMenu\_ctrl\_method  
(1=catch=f(SSB) west coast; 2=F=f(SSB) )

0.4 # Control rule Biomass level for constant F forecast->doublespinner\_ctrl\_bmass\_cnst\_f  
(as frac of Bzero, e.g. 0.40); (Must be > the no F level below)

0.1 # Control rule Biomass level for no F forecast->doublespinner\_ctrl\_bmass\_no\_f  
(as frac of Bzero, e.g. 0.10)

0.75 # Control rule target as fraction of Flimit (e.g. 0.75) forecast->doublespinner\_ctrl\_tgt\_frac

3 #\_N forecast loops forecast->spinner\_loop\_num  
(1=OFL only; 2=ABC; 3=get F from forecast ABC catch with allocations applied)

3 #\_First forecast loop with stochastic recruitment forecast->spinner\_loop\_recruit

0 #\_Forecast loop control #3 forecast->spinner\_loop\_ctrl\_3

0 #\_Forecast loop control #4 forecast->spinner\_loop\_ctrl\_4

0 #\_Forecast loop control #5 forecast->spinner\_loop\_ctrl\_5

2010 #FirstYear for caps and allocations forecast->spinner\_caps\_alloc\_first\_yr  
(should be after years with fixed inputs)

0 # stddev of log in forecast forecast->doublespinner\_log\_sd  
(set value>0.0 to cause active impl\_error)

0 # Do West Coast gfish rebuilder output (0/1) forecast->checkbox\_rebuilder

1999 # Rebuilder: first year catch could have been forecast->spinner\_rebuilder\_first\_yr  
set to zero (Ydecl)(-1 to set to 1999)

2002 # Rebuilder: year for current age structure forecast->spinner\_rebuilder\_cur\_age\_yr  
(Yinit) (-1 to set to endyear+1)

1 # fleet relative F: forecast->choiceMenu\_fleet\_rel\_f  
1=use first-last alloc year; 2=read seas(row) x fleet(col) below

# Note that fleet allocation is used directly as average F if Do\_Forecast=4

2 # basis for fcast catch tuning and for fcast catch forecast->choiceMenu\_catch\_basis  
caps and allocation (2=deadbio; 3=retainbio; 5=deadnum; 6=retainnum)

# Conditional input if relative F choice = 2

# Fleet relative F: rows are seasons, columns are fleets

#\_Fleet: FISHERY1

# 1 fleets->doublespinner\_rel\_f

# max totalcatch by fleet (-1 to have no max) must enter value for each fleet

-1 fleets->doublespinner\_max\_catch

# max totalcatch by area (-1 to have no max); must enter value for each fleet

-1 fleets->area\_list->doublespinner\_max\_catch

# fleet assignment to allocation group (enter group ID# for each fleet, 0 for not included in an alloc group)

0 fleets->spinner\_group\_id

#\_Conditional on >1 allocation group

# allocation fraction for each of: 0 allocation groups model->list\_alloc\_grp\_frac

# no allocation groups model->spinner\_num\_alloc\_grps

0 # Number of forecast catch levels to input forecast->spinner\_num\_levels  
(else calc catch from forecast F)

2 # basis for input Fcast catch: forecast->choiceMenu\_catch\_basis  
2=dead catch; 3=retained catch; 99=input Hrate(F) (units are from fleetunits; note new codes in SSV3.20)

# Input fixed catch values

#Year Seas Fleet Catch(or\_F)

fleets->list\_observation\_input\_catch

#

999 # verify end of input

**Data File (*data\_file\_name*.dat)**

#V3.24f line discarded

#\_SS-V3.24f-safe-Win64;\_08/03/2012; line discarded  
\_Stock\_Synthesis\_by\_Richard\_Methot\_(NOAA)\_using\_ADMB\_11

#\_Start\_time: Tue Oct 22 11:13:26 2013 line discarded

#\_Number\_of\_datafiles: 3 line discarded

#C data file for simple example “#C” removed and saved in files->data\_file

#\_observed data: line discarded

1971 #\_styr model->start\_year

2001 #\_endyr model->end year

1 #\_nseas model->num\_seasons

12 #\_months/season model->seasons->num\_months

1 #\_spawn\_seas model->seasons->spawning

1 #\_Nfleet model->num fleets

2 #\_Nsurveys model->num surveys

1 #\_N\_areas model->num areas

FISHERY1%SURVEY1%SURVEY2 fleets->name

0.5 0.5 0.5 #\_surveytiming\_in\_season fleets->timing in season (double)

1 1 1 #\_area\_assignments\_for\_each\_fishery\_and\_survey fleets->area

1 #\_units of catch: 1=bio; 2=num fleets->catch units (fisheries only)

0.01 #\_se of log(catch) only used for init\_eq\_catch and for Fmethod 2 and 3; use -1 for discard only fleets

2 #\_Ngenders model-> num genders

40 #\_Nages model->num ages

0 #\_init\_equil\_catch\_for\_each\_fishery fleets->initial equil catch

31 #\_N\_lines\_of\_catch\_to\_read

#\_catch\_biomass(mtons):\_columns\_are\_fisheries,year,season

0 1971 1 fleets->catch by year season (fisheries only)

…

#

21 #\_N\_cpue\_and\_surveyabundance\_observations

#\_Units: 0=numbers; 1=biomass; 2=F

#\_Errtype: -1=normal; 0=lognormal; >0=T

#\_Fleet Units Errtype

1 1 0 # FISHERY1 fleets->abund\_units, fleets->abund\_error\_type

…

#\_year seas index obs err

1977 1 2 339689 0.3 # SURVEY1 fleets->list\_observation\_abundance

…

0 #\_N\_fleets\_with\_discard model->num\_discard\_fleets

#\_discard\_units (1=same\_as\_catchunits(bio/num); 2=fraction; 3=numbers)

#\_discard\_errtype: >0 for DF of T-dist(read CV below); 0 for normal with CV; -1 for normal with se; -2 for lognormal

#Fleet Disc\_units err\_type

fleets->disc\_units, fleets->disc\_error\_type

0 #N discard obs

#\_year seas index obs err

fleets->list\_observation\_discard

…

0 #\_N\_meanbodywt\_obs

30 #\_DF\_for\_meanbodywt\_T-distribution\_like model->mean\_bodywt\_df

model->list\_observation\_mean\_bodywt

2 # length bin method: model->composition\_length-> bin\_method  
1=use databins; 2=generate from binwidth,min,max below; 3=read vector

2 # binwidth for population size comp model->composition\_length->bin\_width

10 # minimum size in the population model->composition\_length->bin\_min  
(lower edge of first bin and size at age 0.00)

94 # maximum size in the population fleets->composition\_length->bin\_max  
(lower edge of last bin)

0 #\_comp\_tail\_compression fleets->composition\_length->tail\_compress

1e-007 #\_add\_to\_comp fleets->composition\_length->add\_to

0 #\_combine males into females at or below this bin number fleets->composition\_length->bin\_comb

25 #\_N\_LengthBins

26 28 30 32 34 36 38 40 42 44 46 48 50 52 54 fleets->composition\_length->list\_bins  
56 58 60 62 64 68 72 76 80 90

40 #\_N\_Length\_obs fleets->composition\_length->observations

#Yr Seas Flt/Svy Gender Part Nsamp datavector(female-male)

1971 1 1 3 0 125 0 0 0 0 0 0 0 0 0 4 1 1 2 4 1 5 6 2 3 11 8 4 5 0 0 0 0 0 0 0 0 0 0 1 0 1 3 0 3 4 2 4 5 9 17 8 3 8 0 0

…

17 #\_N\_age\_bins fleets->composition\_age

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 20 25 fleets->composition\_age->list\_bins

2 #\_N\_ageerror\_definitions fleets->composition\_age->list\_obs\_age\_error

0.5 1.5 2.5 3.5 4.5 5.5 6.5 7.5 8.5 9.5 10.5 11.5 12.5 13.5 14.5 15.5 16.5 17.5 18.5 19.5 20.5 21.5 22.5 23.5 24.5 25.5 26.5 27.5 28.5 29.5 30.5 31.5 32.5 33.5 34.5 35.5 36.5 37.5 38.5 39.5 40.5

0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001 0.001

…

40 #\_N\_Agecomp\_obs fleets->composition\_age->list\_observations

1 #\_Lbin\_method: 1=poplenbins; 2=datalenbins; 3=lengths fleets->composition\_age->bin\_method

1 #\_combine males into females at or below this bin number fleets->composition\_age->bin\_combine

#Yr Seas Flt/Svy Gender Part Ageerr Lbin\_lo Lbin\_hi Nsamp datavector(female-male)

1971 1 1 3 0 2 1 -1 75 0 0 0 0 3 1 1 4 2 1 0 1 2 2 13 2 3 0 0 4 2 1 1 2 1 2 2 1 2 1 2 6 5 8

…

4 #\_N\_MeanSize-at-Age\_obs fleets->list\_observation\_mean\_saa

#Yr Seas Flt/Svy Gender Part Ageerr Ignore datavector(female-male)

# samplesize(female-male)

1971 1 1 3 0 1 2 29.8931 40.6872 44.7411 50.027 52.5794 56.1489 57.1033 61.1728 61.7417 63.368 64.4088 65.6889 67.616 68.5972 69.9177 71.0443 72.3609 32.8188 39.5964 43.988 50.1693 53.1729 54.9822 55.3463 60.3509 60.7439 62.3432 64.3224 65.1032 64.1965 66.7452 67.5154 70.8749 71.2768 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20

…

0 #\_N\_environ\_variables model->list\_environ\_vars

0 #\_N\_environ\_obs model->list\_observation\_environ

0 # N sizefreq methods to read model->composition\_size

0 # no tag data model-> tag\_recapture\_data

0 # no morphcomp data model->composition\_morph

999

**Control File (*control\_file\_name*.dat)**

#V3.24f line discarded

#C growth parameters are estimated “#C” removed and saved in files->control\_file

#C spawner-recruitment bias adjustment Not tuned For optimality

#\_data\_and\_control\_files: simple.dat // simple.ctl line discarded

#\_SS-V3.24f-safe-Win64;\_08/03/2012;\_Stock\_Synthesis\_by\_Richard\_Methot\_(NOAA)\_using\_ADMB\_11

1 #\_N\_Growth\_Patterns Population->list\_growth\_patts

1 #\_N\_Morphs\_Within\_GrowthPattern Population->list\_growth\_patts->num\_morphs

#\_Cond 1 #\_Morph\_between/within\_stdev\_ratio Population->list\_growth\_patts->morph\_in\_std  
(no read if N\_morphs=1)

#\_Cond 1 #vector\_Morphdist\_ Population->list\_growth\_patts->list\_morph\_dist  
(-1\_in\_first\_val\_gives\_normal\_approx)

#

#\_Cond 0 # N recruitment designs goes here Population->list\_recr\_designs  
if N\_GP\*nseas\*area>1

#\_Cond 0 # placeholder for recruitment interaction Population->list\_recr\_designs->m  
request

#\_Cond 1 1 1 # example recruitment design element   
for GP=1, seas=1, area=1

# Population->list\_recr\_designs->element

#\_Cond 0 # N\_movement\_definitions goes here if Population->list\_movement\_defs  
N\_areas > 1

#\_Cond 1.0 # first age that moves Population->list\_movement\_defs->first\_age  
(real age at begin of season, not integer) also cond on do\_migration>0

#\_Cond 1 1 1 2 4 10 # example move definition   
for seas=1, morph=1, source=1 dest=2, age1=4, age2=10

# Population->list\_movement\_defs->

0 #\_Nblock\_Patterns model->block\_patts

#\_Cond 0 #\_blocks\_per\_pattern model->block\_patts->num\_blocks

# begin and end years of blocks model->block\_patts->block->begin

# model->block\_patts->block->end

0.5 #\_fracfemale population->frac\_female

0 #\_natM\_type:\_0=1Parm; population->growth->mortality\_type 1=N\_breakpoints;\_2=Lorenzen;\_3=agespecific;\_4=agespec\_withseasinterpolate

#\_no additional input for selected M option; read 1P per morph

1 # GrowthModel: population->growth->type  
1=vonBert with L1&L2; 2=Richards with L1&L2; 3=age\_speciific\_K; 4=not implemented

0 #\_Growth\_Age\_for\_L1 population->growth->age\_l1

25 #\_Growth\_Age\_for\_L2 (999 to use as Linf) population->growth->age\_l2

0 #\_SD\_add\_to\_LAA population->growth->sd\_add\_to\_LAA  
(set to 0.1 for SS2 V1.x compatibility)

0 #\_CV\_Growth\_Pattern: population->cv\_growth\_pattern  
0 CV=f(LAA); 1 CV=F(A); 2 SD=F(LAA); 3 SD=F(A); 4 logSD=F(A)

1 #\_maturity\_option: population->maturity\_type  
1=length logistic; 2=age logistic; 3=read age-maturity matrix by growth\_pattern; 4=read age-fecundity; 5=read fec and wt from wtatage.ss

#\_placeholder for empirical age-maturity by growth pattern

1 #\_First\_Mature\_Age population->maturity\_first\_age

1 #\_fecundity option: population->fecundity->type  
(1)eggs=Wt\*(a+b\*Wt);(2)eggs=a\*L^b;(3)eggs=a\*Wt^b; (4)eggs=a+b\*L; (5)eggs=a+b\*W

0 #\_hermaphroditism option: population-> hermaphroditism  
0=none; 1=age-specific fxn

1 #\_parameter\_offset\_approach population->param\_offset\_method  
(1=none, 2= M, G, CV\_G as offset from female-GP1, 3=like SS2 V1.x)

2 #\_env/block/dev\_adjust\_method population->adjustment\_method  
(1=standard; 2=logistic transform keeps in base parm bounds; 3=standard w/ no bound check)

#

#\_growth\_parms population->growth->list\_params

#\_LO HI INIT PRIOR PR\_type SD PHASE env-var use\_dev dev\_minyr dev\_maxyr dev\_stddev Block Block\_Fxn

0.05 0.15 0.1 0.1 -1 0.8 -3 0 0 0 0 0 0 0 # NatM\_p\_1\_Fem\_GP\_1

…

#

#\_Cond 0 #custom\_MG-env\_setup (0/1) population-> growth->environ\_params

#\_Cond -2 2 0 0 -1 99 -2 #\_placeholder when no MG-environ parameters

#

#\_Cond 0 #custom\_MG-block\_setup (0/1) population-> growth->block\_params

#\_Cond -2 2 0 0 -1 99 -2 #\_placeholder when no MG-block parameters

#\_Cond No MG parm trends

#

#\_seasonal\_effects\_on\_biology\_parms population-> growth->seasonal\_effects

0 0 0 0 0 0 0 0 0 0 #\_femwtlen1,femwtlen2,mat1,mat2,fec1,fec2,Malewtlen1,malewtlen2,L1,K

#\_Cond -2 2 0 0 -1 99 -2 #\_placeholder when no seasonal MG parameters

#

#\_Cond -4 #\_MGparm\_Dev\_Phase

#

#\_Spawner-Recruitment

3 #\_SR\_function: population->recruit->method  
2=Ricker; 3=std\_B-H; 4=SCAA; 5=Hockey; 6=B-H\_flattop; 7=survival\_3Parm

#\_LO HI INIT PRIOR PR\_type SD PHASE population->recruit->params

3 31 8.81544 10.3 -1 10 1 # SR\_LN(R0)

0.2 1 0.613717 0.7 1 0.05 4 # SR\_BH\_steep

0 2 0.6 0.8 -1 0.8 -4 # SR\_sigmaR

-5 5 0.1 0 -1 1 -3 # SR\_envlink

-5 5 0 0 -1 1 -4 # SR\_R1\_offset

0 0 0 0 -1 0 -99 # SR\_autocorr

0 #\_SR\_env\_link population->recruit->env\_link

0 #\_SR\_env\_target\_ population->recruit->env\_target  
0=none;1=devs;\_2=R0;\_3=steepness

1 #do\_recdev: population->recruit->do\_dev  
0=none; 1=devvector; 2=simple deviations

1971 # first year of main recr\_devs; population->recruit->dev->first\_year  
early devs can preceed this era

2001 # last year of main recr\_devs; population->recruit->dev->last\_year  
forecast devs start in following year

2 #\_recdev phase population->recruit->dev->phase

1 # (0/1) to read 13 advanced options population->recruit->dev->advanced

0 #\_recdev\_early\_start population->recruit->dev->early\_start  
(0=none; neg value makes relative to recdev\_start)

-4 #\_recdev\_early\_phase population->recruit->dev->early\_phase

0 #\_forecast\_recruitment phase (incl. late recr) population->recruit->fcast\_phase  
(0 value resets to maxphase+1)

1 #\_lambda for Fcast\_recr\_like population->recruit->fcast\_lambda  
occurring before endyr+1

1900 #\_last\_early\_yr\_nobias\_adj\_in\_MPD population->recruit->MPD\_nobias\_early\_year

1900 #\_first\_yr\_fullbias\_adj\_in\_MPD population->recruit->MPD\_fullbias\_first\_year

2001 #\_last\_yr\_fullbias\_adj\_in\_MPD population->recruit->MPD\_fullbias\_last\_year

2002 #\_first\_recent\_yr\_nobias\_adj\_in\_MPD population->recruit->MPD\_nobias\_first\_year

1 #\_max\_bias\_adj\_in\_MPD MPD population->recruit->MPD\_max\_bias\_adj  
(-1 to override ramp and set biasadj=1.0 for all estimated recdevs)

0 #\_period of cycles in recruitment MPD population->recruit->num\_cycles  
(N parms read below)

-5 #min rec\_dev population->recruit->dev->min

5 #max rec\_dev population->recruit->dev->max

0 #\_read\_recdevs

#\_end of advanced SR options

#

#\_placeholder for full parameter lines for population->recruit->dev->cycle\_params  
recruitment cycles

# read specified recr devs

#\_Yr Input\_value

# population->recruit->dev->year\_values

# all recruitment deviations

# population->recruit->dev->deviations

#Fishing Mortality info

0.3 # F ballpark for tuning early phases population->mortality->bpark\_tuning

-2001 # F ballpark year (neg value to disable) population->mortality->bpark\_year

3 # F\_Method: 1=Pope; 2=instan. F; 3=hybrid population->mortality->method  
(hybrid is recommended)

2.9 # max F or harvest rate, depends on F\_Method population->mortality->max

# no additional F input needed for Fmethod 1

# if Fmethod=2; read overall start F value; overall phase; N detailed inputs to read

# if Fmethod=3; read N iterations for tuning for Fmethod 3

4 # N iterations for tuning F in hybrid method population->mortality->num\_inputs   
(recommend 3 to 7) or population->mortality->num\_iters

#

#\_initial\_F\_parms

#\_LO HI INIT PRIOR PR\_type SD PHASE

0 1 0 0.01 0 99 -1 # InitF\_1FISHERY1 population->mortality->params

#

#\_Q\_setup

# Q\_type options: model->q->method  
<0=mirror, 0=float\_nobiasadj, 1=float\_biasadj, 2=parm\_nobiasadj, 3=parm\_w\_random\_dev, 4=parm\_w\_randwalk, 5=mean\_unbiased\_float\_assign\_to\_parm

#\_for\_env-var:\_enter\_index\_of\_the\_env-var\_to\_be\_linked

#\_Den-dep env-var extra\_se Q\_type

0 0 0 0 # 1 FISHERY1 model->fleets->q->settings

0 0 1 2 # 2 SURVEY1

0 0 0 2 # 3 SURVEY2

#

#\_Cond 0 #\_If q has random component, then 0=read one parm for each fleet with random q; 1=read a parm for each year of index

#\_Q\_parms(if\_any)

# LO HI INIT PRIOR PR\_type SD PHASE

0 0.5 0 0.05 1 0 -4 # Q\_extraSD\_2\_SURVEY1 model->q->params

-7 5 0.515263 0 -1 1 1 # Q\_base\_2\_SURVEY1

-7 5 -6.62828 0 -1 1 1 # Q\_base\_3\_SURVEY2

#

#\_size\_selex\_types

#discard\_options:\_0=none;\_1=define\_retention;\_2=retention&mortality;\_3=all\_discarded\_dead

#\_Pattern Discard Male Special

1 0 0 0 # 1 FISHERY1 model->fleets->selectivity->size->method

1 0 0 0 # 2 SURVEY1

0 0 0 0 # 3 SURVEY2

#

#\_age\_selex\_types

#\_Pattern \_\_\_ Male Special

11 0 0 0 # 1 FISHERY1 model->fleets->selectivity->age->method

11 0 0 0 # 2 SURVEY1

11 0 0 0 # 3 SURVEY2

#\_LO HI INIT PRIOR PR\_type SD PHASE env-var use\_dev dev\_minyr dev\_maxyr dev\_stddev Block Block\_Fxn

19 80 53.6526 50 1 0.01 2 0 0 0 0 0 0 0 # SizeSel\_1P\_1\_FISHERY1 model->fleets->selectivity->params

…

#\_Cond 0 #\_custom\_sel-env\_setup (0/1) model->fleets->selectivity->custom

#\_Cond -2 2 0 0 -1 99 -2 #\_placeholder when no enviro fxns model->fleets->selectivity->environ\_fxn

#\_Cond 0 #\_custom\_sel-blk\_setup (0/1) model->fleets->selectivity->custom->block

#\_Cond -2 2 0 0 -1 99 -2 #\_placeholder when no block usage

#\_Cond No selex parm trends

#\_Cond -4 # placeholder for selparm\_Dev\_Phase model->fleets->selectivity->params

#\_Cond 0 #\_env/block/dev\_adjust\_method model->fleets->selectivity->adjust\_method  
(1=standard; 2=logistic trans to keep in base parm bounds; 3=standard w/ no bound check)

#

# Tag loss and Tag reporting parameters go next

0 # TG\_custom: 0=no read; 1=read if tags exist

#\_Cond -6 6 1 1 2 0.01 -4 0 0 0 0 0 0 0 #\_placeholder if no parameters model->fleets->tag\_parameters

#

1 #\_Variance\_adjustments\_to\_input\_values model->variance\_adj

#\_fleet: 1 2 3

0 0 0 #\_add\_to\_survey\_CV model->fleets->variance\_add\_to\_cv

0 0 0 #\_add\_to\_discard\_stddev model->fleets->variance\_add\_to\_discard

0 0 0 #\_add\_to\_bodywt\_CV model->fleets->variance\_add\_to\_bodywt

1 1 1 #\_mult\_by\_lencomp\_N model->fleets->variance\_mult\_by\_lencomp

1 1 1 #\_mult\_by\_agecomp\_N model->fleets->variance\_ mult\_by\_agecomp

1 1 1 #\_mult\_by\_size-at-age\_N model->fleets->variance\_ mult\_by\_saa

#

4 #\_maxlambdaphase model->max\_lambda\_phase

1 #\_sd\_offset model->stddev\_offset

#

3 # number of changes to make to default Lambdas model->num\_lambda\_changes  
(default value is 1.0)

# Like\_comp codes: 1=surv; 2=disc; 3=mnwt; 4=length; 5=age; 6=SizeFreq; 7=sizeage; 8=catch;

# 9=init\_equ\_catch; 10=recrdev; 11=parm\_prior; 12=parm\_dev; 13=CrashPen; 14=Morphcomp; 15=Tag-comp; 16=Tag-negbin

#like\_comp fleet/survey phase value sizefreq\_method

1 2 2 1 1 model->fleets->like\_comp->phase->value

4 2 2 1 1

4 2 3 1 1

#

# lambdas (for info only; columns are phases)

# 0 0 0 0 #\_CPUE/survey:\_1

# 1 1 1 1 #\_CPUE/survey:\_2

# 1 1 1 1 #\_CPUE/survey:\_3

# 1 1 1 1 #\_lencomp:\_1

# 1 1 1 1 #\_lencomp:\_2

# 0 0 0 0 #\_lencomp:\_3

# 1 1 1 1 #\_agecomp:\_1

# 1 1 1 1 #\_agecomp:\_2

# 0 0 0 0 #\_agecomp:\_3

# 1 1 1 1 #\_size-age:\_1

# 1 1 1 1 #\_size-age:\_2

# 0 0 0 0 #\_size-age:\_3

# 1 1 1 1 #\_init\_equ\_catch

# 1 1 1 1 #\_recruitments

# 1 1 1 1 #\_parameter-priors

# 1 1 1 1 #\_parameter-dev-vectors

# 1 1 1 1 #\_crashPenLambda

1 # (0/1) read specs for more stddev reporting

# selex type, len/age, year, N selex bins, Growth pattern, N growth ages, NatAge\_area(-1 for all), NatAge\_yr, N Natages

1 1 -1 5 1 5 1 -1 5 model->add\_stdv\_reporting

5 15 25 35 43 # vector with selex std bin picks (-1 in first bin to self-generate)

1 2 14 26 40 # vector with growth std bin picks (-1 in first bin to self-generate)

1 2 14 26 40 # vector with NatAge std bin picks (-1 in first bin to self-generate)

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