SIOFA Sharks

Annex 6: Priors derived from FishBase

DELEGATION OF THE EUROPEAN UNION

04 March, 2024

main shark's species caught by SIOFA

- Portuguese dogfish (Centroscymnus coelolepis)
- Birdbeak dogfish (Deania calcea)
- Kitefin shark (Dalatias licha)
- Gulper sharks (Centrophorus spp)
- Lanternshark ($Etmopterus\ spp$)

fisheries, ,depending on the areas are

- bottom longline
- midwater trawl
- demersal trawl
- demersal line

Data

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[,2]
     [,1]
[1,] "K"
                     "M"
[2,] "Winfinity"
                     "Loo"
[3,] "tmax"
                     "tm"
[4,] "Lm"
                     "Temperature"
[5,] "ln_margsd"
                     "rho"
[6,] "logitbound_h" "ln_r"
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[1,] "K"
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[6,] "logitbound_h" "ln_r"
Error in Search_species(Genus = Genus, Species = Species) :
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     [,1]
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[5,] "ln_margsd"
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[6,] "logitbound_h" "ln_r"
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     [,1]
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[3,] "tmax"
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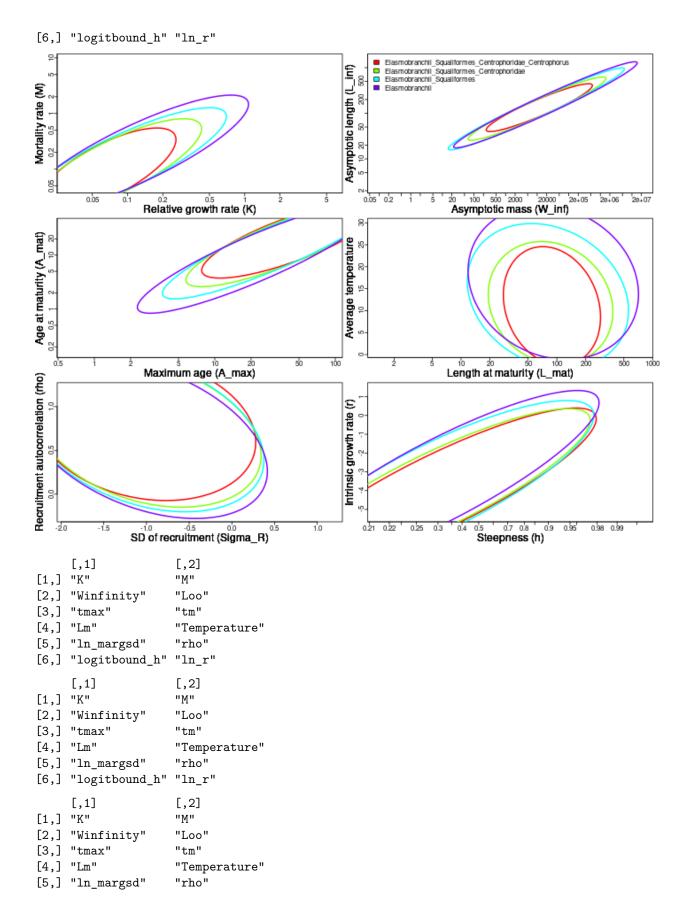
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[5,] "ln_margsd"

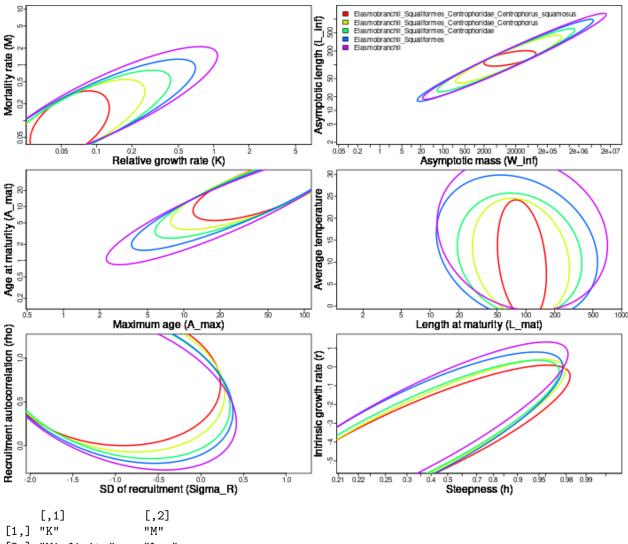
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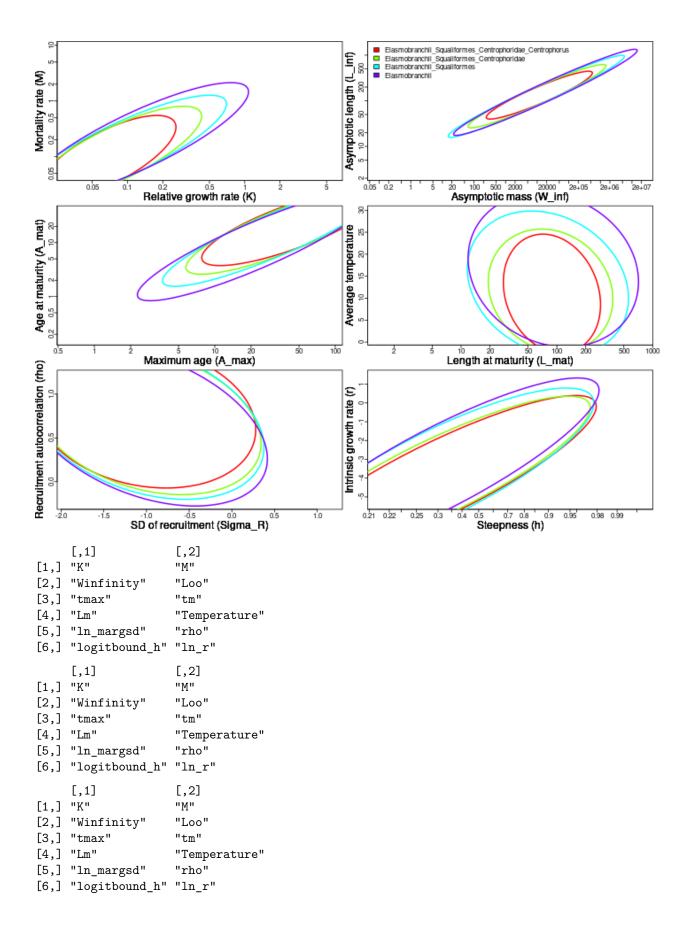
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[6,] "logitbound_h" "ln_r"
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[2,] "Winfinity"
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                     "tm"
[4,] "Lm"
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                     "rho"
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[4,] "Lm"
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[6,] "logitbound_h" "ln_r"
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[5,] "ln_margsd"
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[2,] "Winfinity"
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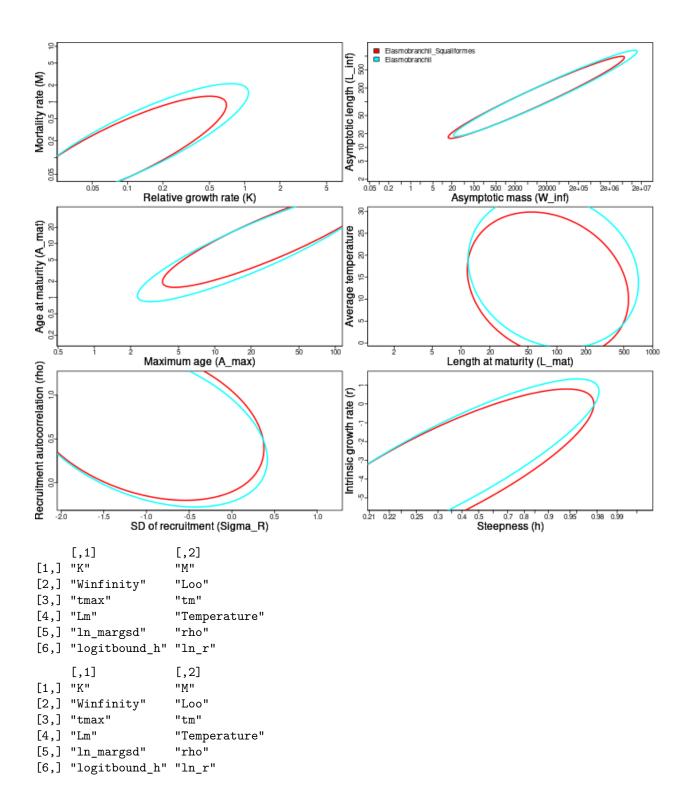


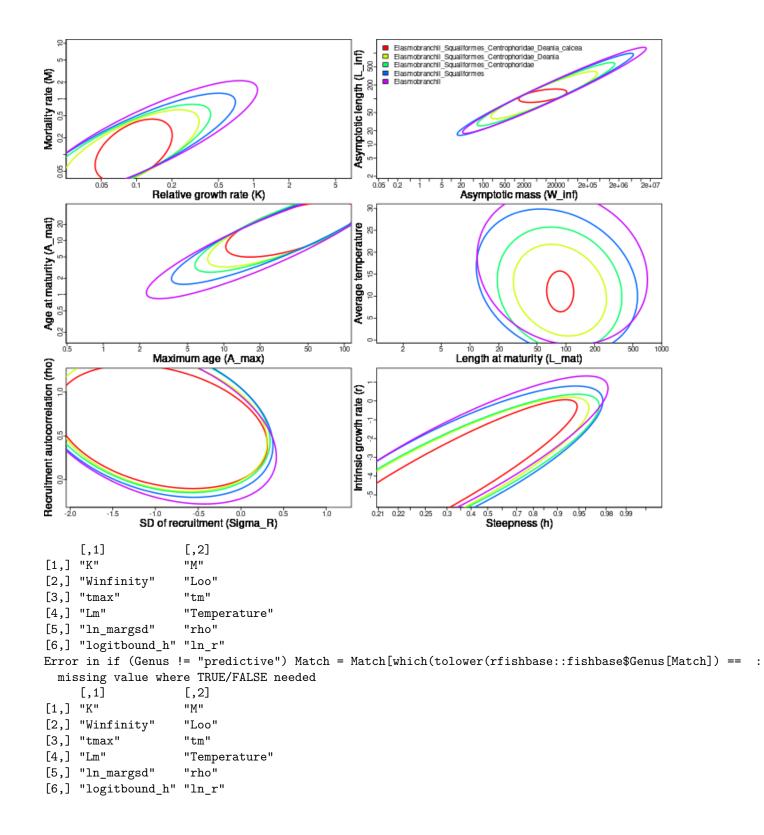
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[6,] "logitbound_h" "ln_r"
Error in if (Genus != "predictive") Match = Match[which(tolower(rfishbase::fishbase$Genus[Match]) == :
 missing value where TRUE/FALSE needed
     [,1]
                     [,2]
[1,] "K"
                     "M"
                     "Loo"
[2,] "Winfinity"
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                     "tm"
[4,] "Lm"
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[5,] "ln_margsd"
                     "rho"
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[2,] "Winfinity"
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[5,] "ln_margsd"
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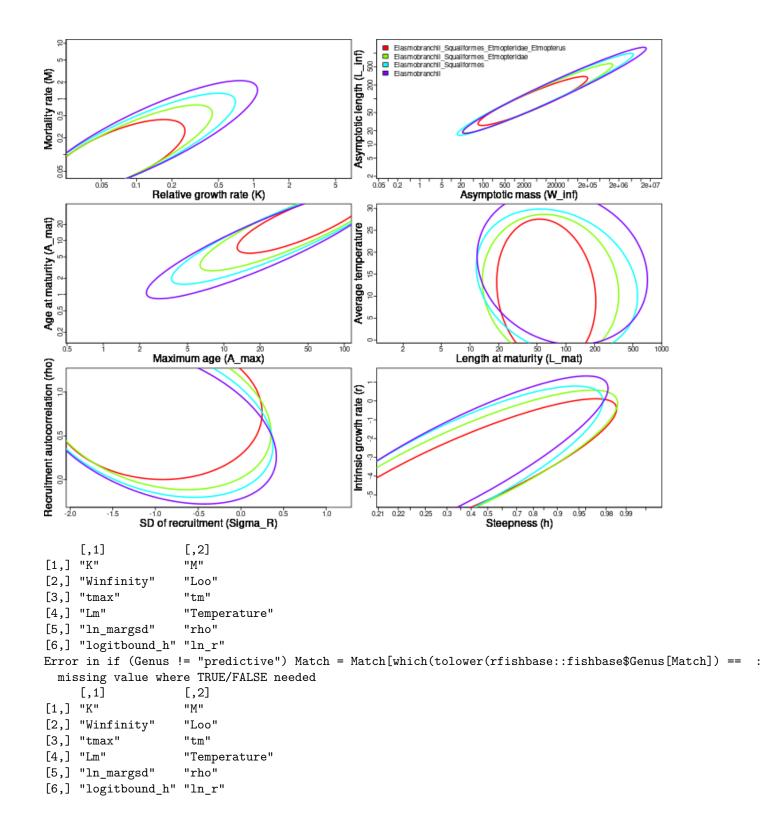


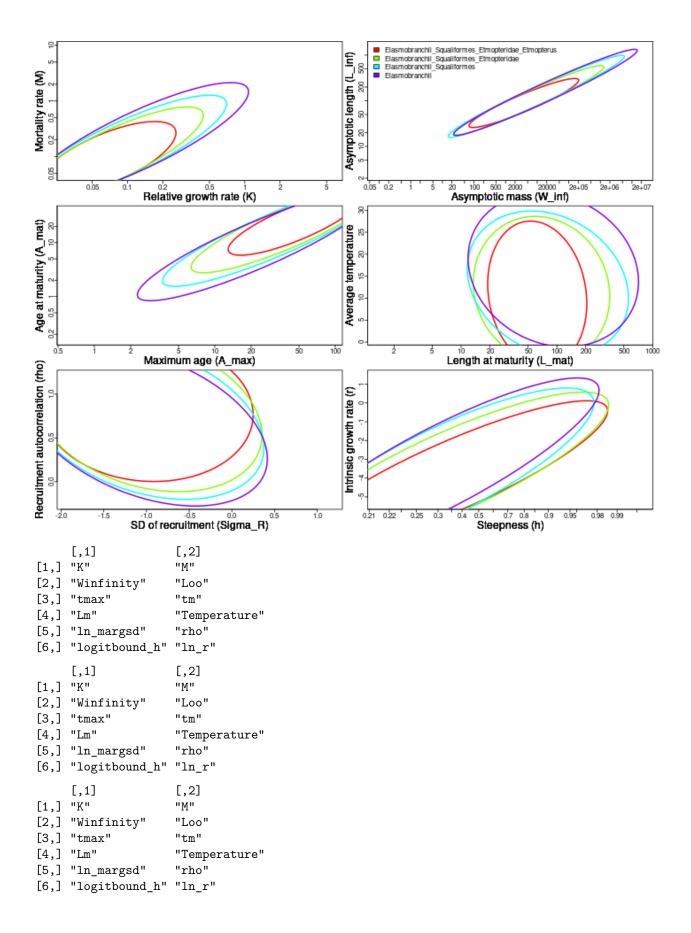
- [2,] "Winfinity" "Loo"
- [3,] "tmax" "tm"
- [4,] "Lm" "Temperature"
- [5,] "ln_margsd" "rho"
- [6,] "logitbound_h" "ln_r"

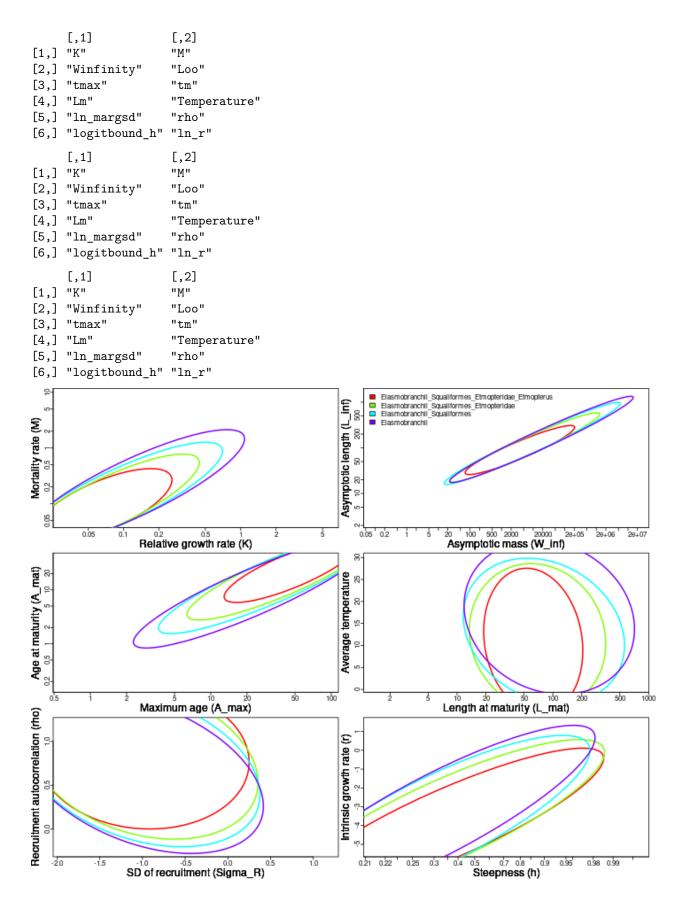












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[4,] "Lm"
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[5,] "ln_margsd"
                     "rho"
[6,] "logitbound_h" "ln_r"
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[3,] "tmax"
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[4,] "Lm"
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[1,] "K"
                     "M"
[2,] "Winfinity"
                     "Loo"
                     "tm"
[3,] "tmax"
[4,] "Lm"
                     "Temperature"
[5,] "ln_margsd"
                     "rho"
[6,] "logitbound_h" "ln_r"
     [,1]
                     [,2]
[1,] "K"
                     "M"
[2,] "Winfinity"
                     "Loo"
[3,] "tmax"
                     "tm"
[4,] "Lm"
                     "Temperature"
[5,] "ln_margsd"
                     "rho"
[6,] "logitbound_h" "ln_r"
     [,1]
                     [,2]
[1,] "K"
                     "M"
[2,] "Winfinity"
                     "Loo"
                     "tm"
[3,] "tmax"
[4,] "Lm"
                     "Temperature"
```

[5,] "ln_margsd"

"rho"

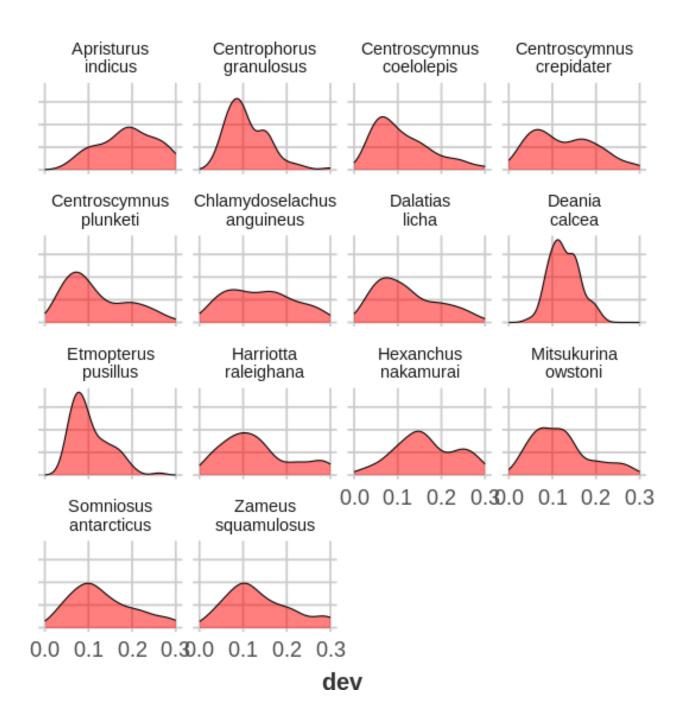
[6,] "logitbound_h" "ln_r"

[,1] [,2]
[1,] "K" "M"
[2,] "Winfinity" "Loo"
[3,] "tmax" "tm"

[4,] "Lm" "Temperature"

[5,] "ln_margsd" "rho"
[6,] "logitbound_h" "ln_r"

Loo	K	Lm	h	150.loo	G	M	r	
	Corr: 0.092	Corr: 0.976***	Corr: -0.468.	Corr: -0.114	Corr: -0.194	Corr: 0.179	Corr: -0.186	Loo
		Corr: -0.040	Corr: 0.156	Corr: -0.607*	Corr: -0.989***	Corr: 0.985***	Corr: 0.673**	_
·*··			Corr: -0.604*	Corr: 0.105	Corr: -0.071	Corr: 0.022	Corr: -0.360	Ē
• • •		••••		Corr: -0.622*	Corr: -0.095	Corr: 0.212	Corr: 0.811***	Ь
··.	•••••	···.	• *."		Corr: 0.564*	Corr: -0.718**	Corr: -0.799***	150 Jao
	• • • • • • • • • • • • • • • • • • • •	. · · ·				Corr: -0.976***	Corr: -0.647*	G
				· .	"···.		Corr: 0.716**	M
.` <u>`</u> ." .		·.,	; ï.	`	···	· · · ·	\mathbb{A}	7



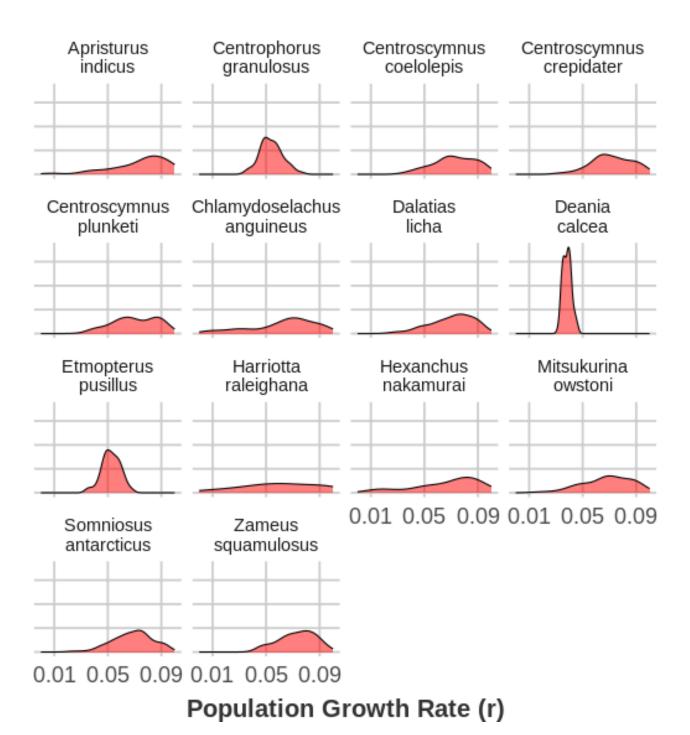


Figure 1 Estimates of population growth r based on life-history theory

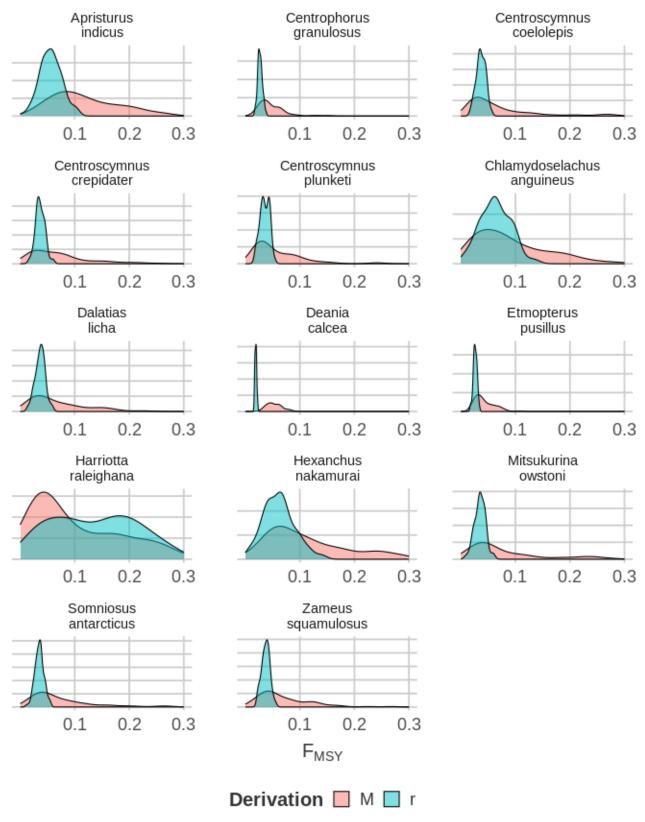
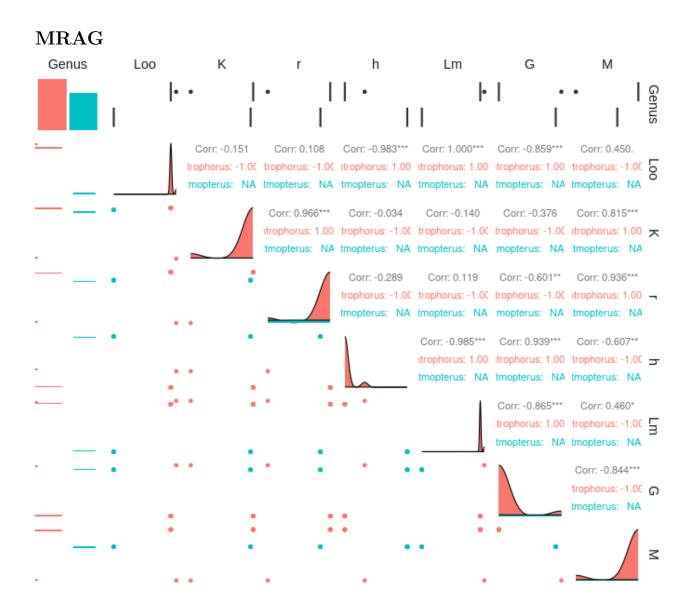


Figure 2 Estimates of F_{MSY} based on life-history theory



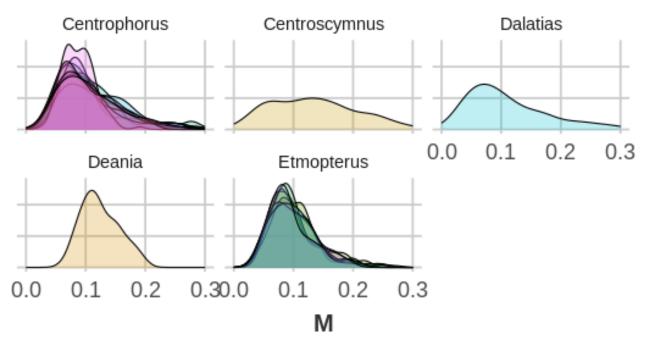


Figure 3 Estimates of natural mortality based on life-history theory

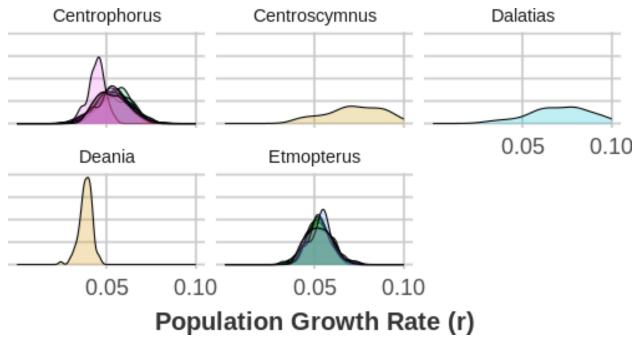


Figure 4 Estimates of population growth r based on life-history theory

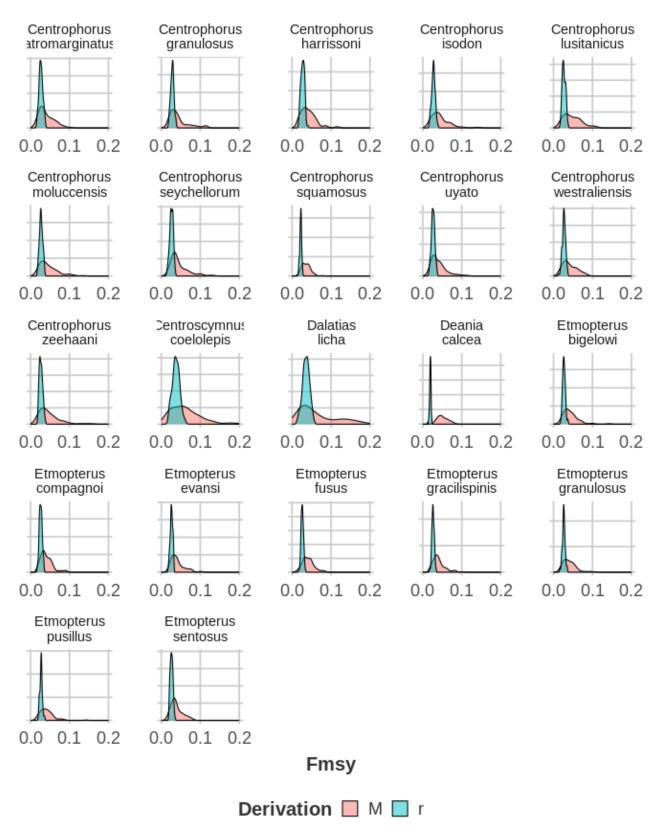


Figure 5 Estimates of F_{MSY} based on life-history theory