# An skeleton assessment for St Matthew Blue King crab in GMACS

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# A. Summary of Major Changes

- 1. Management: None
- 2. Input data:
- 3. Assessment methodology:
- 4. Assessment results

Notes: Tagging data contribution to the likelihood is massive.

## B. Comments, responses, and assessment summary

#### C. Introduction

Distribution

Life history characteristics

Natural mortality

Weight at length

Maturity

Molting probability

Reproduction

Growth

Management history

ADFG harvest strategy

History of BMSY

Fishery history

#### D. Data

Catch data

Survey biomass and size composition data

Spatial distribution

## E. Analytic approach

History of modeling approaches

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Fits to data

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### F. Calculation of the OFL

Methodology of the OFL

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Projections under harvest strategies

## G. Calculation of the ABC

Uncertainty in the ABC

Author recommendations

H. Data gaps and research priorities

Methodology

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Scientific uncertainty

I. Ecosystem considerations

Appendix A: Population dynamics

Table 1: Changes in management quantities for each scenario considered. Reported management quantities are derived from maximum likelihood estimates.

Model	MMB	B35	F35	FOFL	OFL
Version 2.01.E	1144.575	3298.391	0.18	0.048	49.323
Version 2.01.F	1144.575	3298.391	0.18	0.048	49.323
Version 2.01.G	1144.575	3298.391	0.18	0.048	49.323
Version 2.01.H	1144.575	3298.391	0.18	0.048	49.323
Version 2.01.I	1144.575	3298.391	0.18	0.048	49.323
Version 2.01.K	1144.575	3298.391	0.18	0.048	49.323

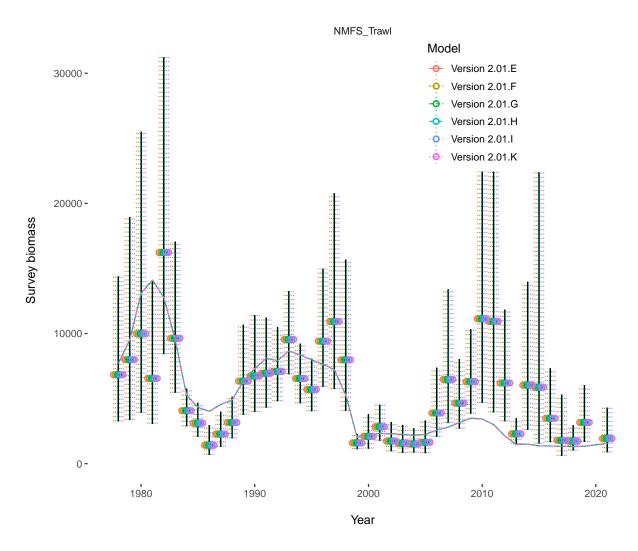


Figure 1: Model fits to the NMFS\_Trawl\_1982 survey.

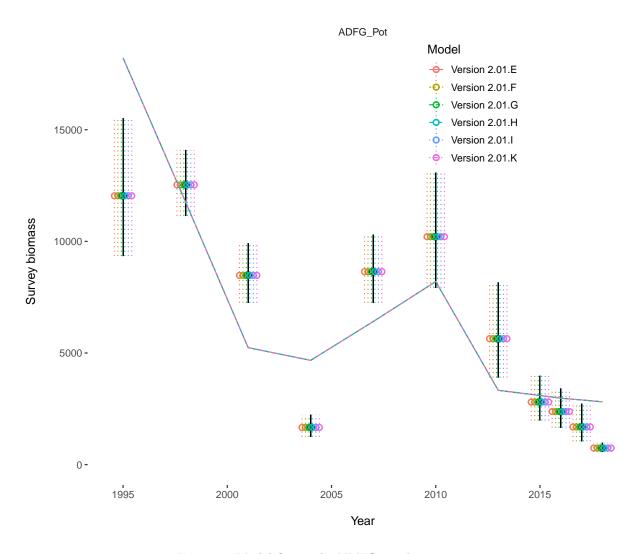


Figure 2: Model fits to the NMFS trawl 1989 survey.

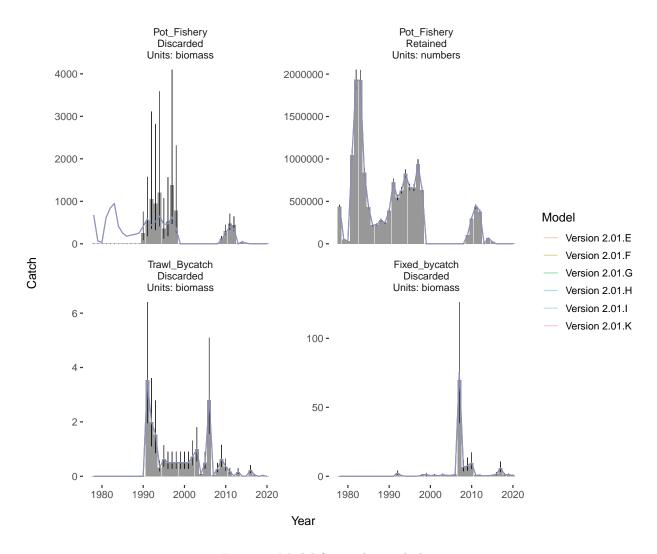


Figure 3: Model fits to the catch data.

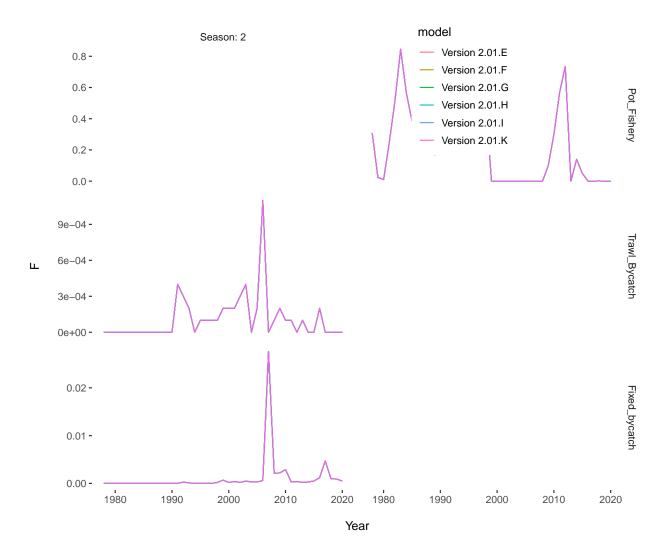


Figure 4: Estimated fishing mortality by fleet.

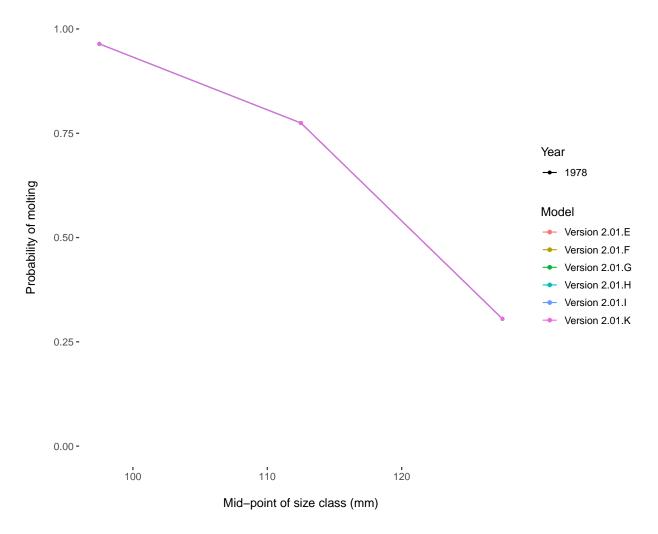


Figure 5: Estimated probability of molting.

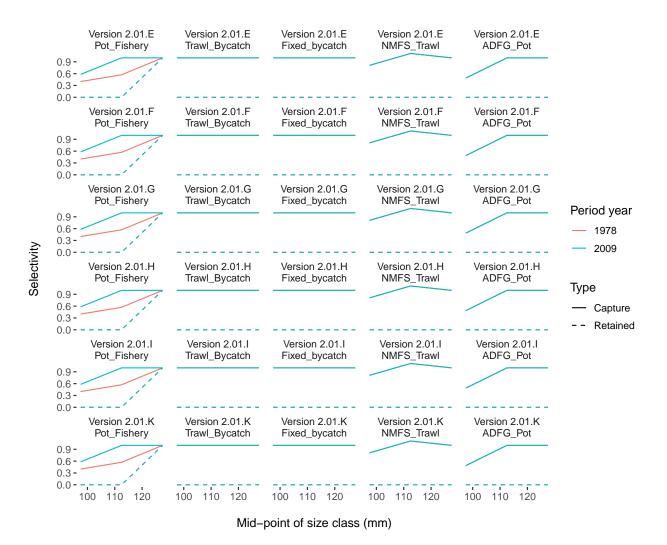


Figure 6: Estimated selectivity.

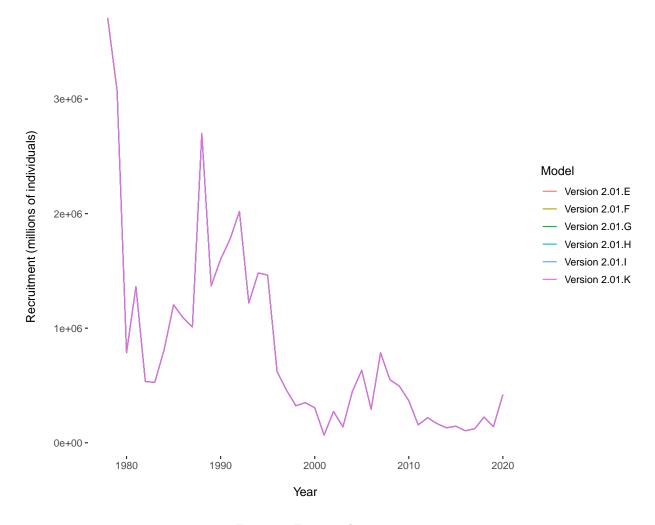


Figure 7: Estimated recruitment.

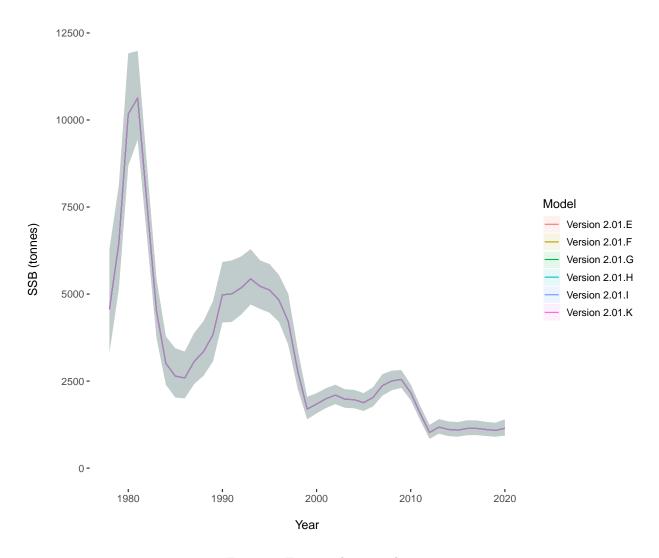


Figure 8: Estimated mature biomass

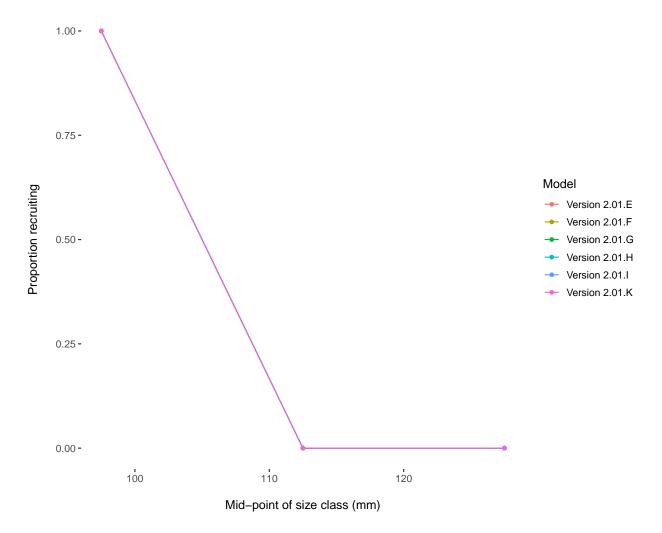


Figure 9: Estimated size at recruitment

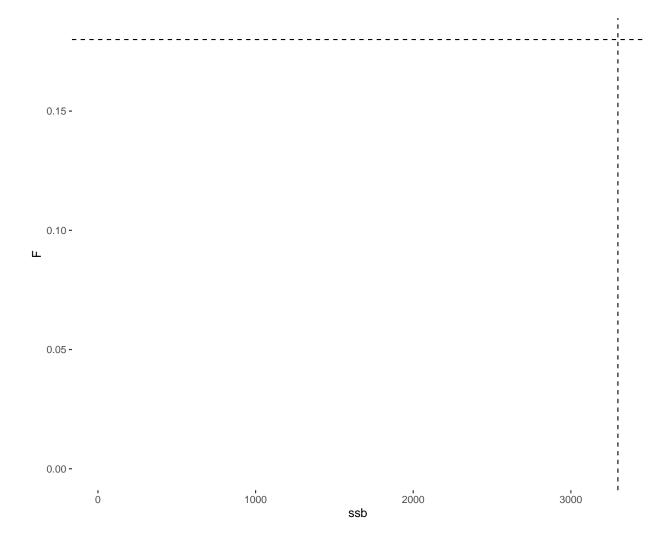


Figure 10: Kobe plot for the summer commercial fleet.