# Correction to Meta-analysis of Striped Marlin Natural Mortality

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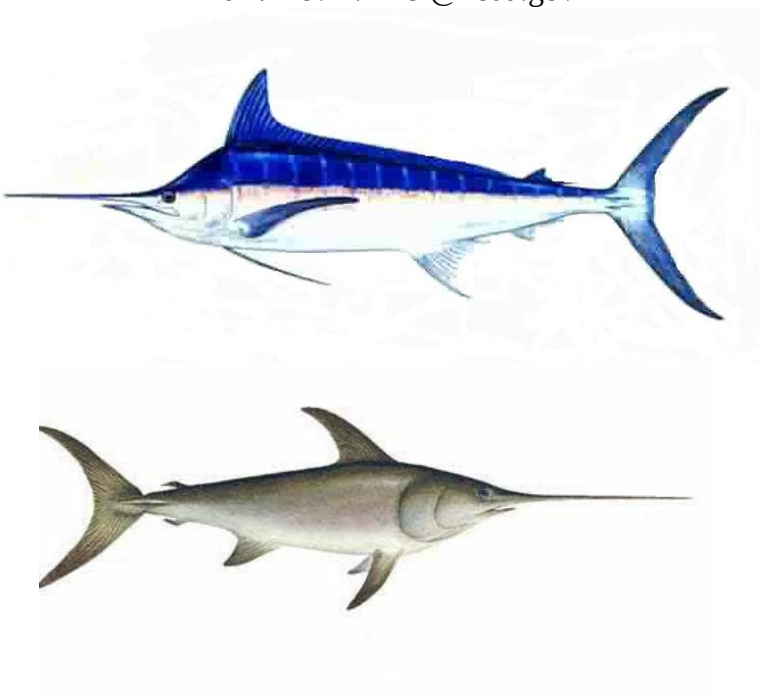

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Natural (M) mortality estimates for North Pacific Ocean striped marlin were derived from a meta-analysis of 9 different estimators and presented to the ISC Billfish Working Group in January 2011. The M estimators relied on a range of factors (e.g. maximum age, maximum size, growth rate) and a broad range of levels within each factor was used to estimate within-method uncertainty. Changes were made to the analysis during the meeting to incorporate new information on age and growth as well as maturation presented during the meeting. Subsequent to the meeting a revision was made to the age and growth paper presented at the meeting. The new paper resulted in changes to the growth form and resulting age at 50% maturity. We accounted for these developments in a new analysis conducted using the same methods described in the January meeting. The overall M estimate was based on a random effects inverse variance weighting of each method ($0.38\ ^{-yr} \pm 0.028$ SE). The estimate of M was assumed to represent adult M and a Lorenzen size-M relationship was used to rescale adult M to represent juvenile M. Age-classes corresponding to juveniles was based on two studies by Sun et al. (2011) and adopted by the working group. Age specific estimates of M are given in table below.

| Age | Weighted |
|---|---|
| 0 | 0.54 |
| 1 | 0.47 |
| 2 | 0.43 |
| 3 | 0.40 |
| 4+ | 0.38 |