***Highlights***

* Growth parameters were estimated for *P. filamentosus* using Bayesian and integrative maximum likelihood methods.
* The best parameters were = 67.6 cm FL, *k* = 0.22, *to = -0.37 yr.*
* These estimates support those derived from using radioisotopic analysis of bomb-carbon.
* Growth parameters estimated with length-at-age, length-frequency, and growth-increment data consistently outperform estimates from any single method.
* Negatively biased growth predictions for the largest individuals suggests the potential for sexually dimorphic growth.