

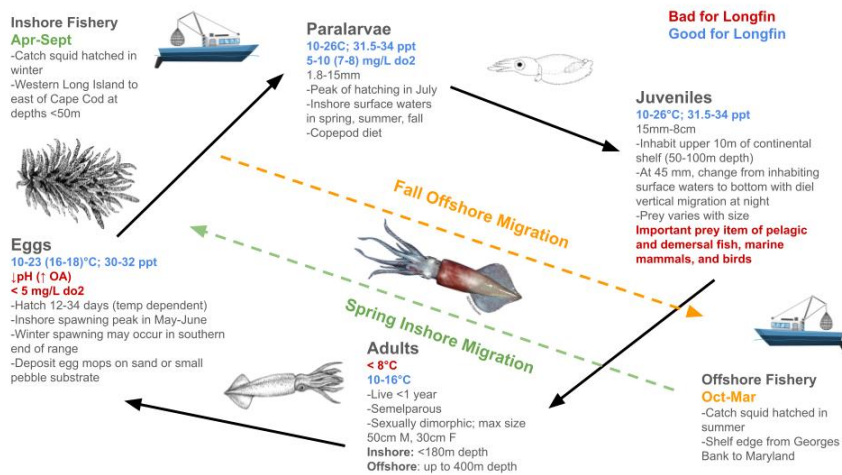


NOAA
FISHERIES

Longfin Inshore Squid (*Doryteuthis pealeii*)
Ecosystem & Socioeconomic Profile Report Card



Spring 2026



Key Findings from the Life History Working Group

Lifespan and aging

- Hypothesis of 1 statolith ring/day is well-established but includes some uncertainty of aging error if daily statolith increments are incorrect. Discussions from the longfin squid summit estimate a maximum age of 15 months. Literature review supports a lifespan of less than 1 year. Recent (2024) statolith aging of longfin squid in the SQUIBS dataset - assuming 1 statolith ring/day - indicate maximum ages of ~7 months for females and ~8.6 months for males.

Migration and movement dynamics

- Previous literature suggests the possibility of a “winter cohort” of longfin squid that hatch south of Cape Hatteras and subsequently migrate onto the Northeast U.S. continental shelf. Fishery observations describe a spatial gradient of 1-6 cm ML squid from waters south of Hatteras through the Mid-Atlantic and southern New England, with the smallest squid detected further south. Dr. David Richardson proposed a mechanism for this migration hypothesis in which the recruitment transport of juvenile squid from winter hatching grounds on the Southeast U.S. shelf is facilitated by the Gulf Stream and warm core rings.

Reproductive dynamics

- Traditionally, longfin squid were thought to spawn in two distinct cohorts: spring and summer/fall. Consideration of the hypothesis of a winter cohort spawning south of Hatteras indicates the presence of multiple cohorts of longfin squid, with some outside of the traditional Northeast shelf stock area, and provides evidence of year-round spawning in the stock.







In the 2025 Mid-Atlantic EAFM Risk Assessment Update, longfin squid scored moderate-high risk in the following elements:

Natural mortality

- Moderate-high risk to the stock due to:
 - Potential relationships between natural mortality and longfin inshore squid differ by age and size for low observed fishing effort.
 - High potential for low observed fishing effort to shift.
- Moderate-high risk to the commercial fishery due to:
 - dependent on accurate age and life cycle estimates. It is likely that multiple natural mortality approximations will need to be developed to match lifespan hypotheses.
 - Risk of not achieving optimum yield due to interactions with non-Council managed species
 - Intraspecific predation impacts natural mortality in longfin squid, but methods are not currently available to directly quantify
 - Occasional recent changes in regulations; moderate (3-4) recreational regulation differences across states
 - Regular discards and incidental catch but managed; moderate discard mortality

Key Points from the Mid-Atlantic Risk Assessment



Indicator Units	Status In 2024	Implications	Time Series
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Please contact nefsc.esp.leads@noaa.gov with any questions or comments.