

Group Theme	Factor	Supporting Information	
Stock Status and Uncertainty	Biomass Stock Status	Overfished? Rebuilding?	Thorny is overfished, rebuilding period 2003-2028. Currently at ~5% of Bmsy proxy.
		Overfishing?	Formal stock status is no overfishing on any skate. 2023 assessment indicated winter and little skate had overfishing, but no overfishing in 2025 data update.
		SSB Relative to SSB-Target?	As of 2025 data update, barndoor and winter > Btarget; thorny < Bthreshold; others in-between Btarget and Bthreshold.
	Recruitment	Recent trends and how recruitment is accounted for in assessment	Unknown. Not accounted for in assessment, aging work could be done in a RTA. Stratified mean indices at length provided in 2025 data update; some cohort tracking for winter skate, difficult to determine for other species.
	Assessment Type and Uncertainty	Assessment model, type, terminal year	Index-based, skate method, no terminal year.
		Availability of biological data/missing years of data?	Spring 2023 survey missing; impacts little skate survey biomass index. Spring and fall 2020 data missing due to COVID-19 survey interruptions.
		Retrospective pattern?	n/a because index-based assessment.
		Major sources of assessment uncertainty	Species composition of the catch. Discard mortality is assumed for the majority of species and gear types. Some recent work has been done to provide estimates, e.g. winter skate discard mortality was reduced from 50% in trawl gear to 9%. The overfishing definitions are not based on fishing activity but solely on changes in trawl survey indices. Distribution shifts may influence trawl survey biomass. There are life history gaps for some species in the complex.
Climate and Ecosystem	Climate Vulnerability	Climate impacts and incorporation into assessment	Assessment based on species' presence in trawl survey; no explicit environmental variable. Hare et al (2016) indicated all skates have high climate exposure; biological sensitivity is high (thorny), moderate (barndoor, smooth, rosette), and low (clearnose, little, winter). Directional effects of climate change are expected to be neutral (clearnose, rosette) to negative (smooth, thorny, barndoor, little, winter).
		Trophic interactions	Trophic work could be done in a RTA. Skates are important meso-consumers on the northeast continental shelf. They prey on numerous species of demersal invertebrates and fish, and are prey for a variety of larger predatory fish (e.g., monkfish, sharks) and mammals (e.g., seals).
	Fish Condition	Trends in fish condition	Barndoor = good to poor; Clearnose = good to neutral; Little = good to poor; Rosette = neutral to below avg; Smooth = above average to poor; Thorny = good to poor; Winter = above average to poor.
		Commercial fishery trends (e.g. landings, revenue, LPUE, DAS usage, price)	Skate permits are open access. Landings in the bait fishery are relatively stable because this fishery is more directed and based on need/orders of bait companies. The wing landings are more variable. Total skate revenue has increased from \$5.9-7.3 million from FY 2022-2024. Trends in total revenues are mainly influenced by the changes in wing landings. *note: FY2024 data are preliminary.

Economic and Community Importance	Commercial Fishery Characterization	Management uncertainty in comm fishery	ACL is 90% of ABC. Effort in the skate fishery is variable and driven by changes in groundfish and monkfish DAS effort. Discards are decreasing but comperable to landings. Recreational catch is low but poorly characterized and highly uncertain. Recent 3-year avg. state landings deducted from ACL (not allocated). Research landings have been 0.1% of the ACL recently and are included within the buffer.
		Does the fishery rely on quota of another species?	Skate fishing is largely on groundfish and monkfish DAS, so dependent on the state of those fisheries.
		Vessels, permits, dealers, processors	Total active skate vessels (with federal skate permits) declined from 266 in 2022 to 242 in 2024, of which 9% were bait-only vessels, 13% were bait and wing, and 77% were wing only. Skates landed in broad range of fisheries, and skate dealers are active from Maine to North Carolina, with 86 federal dealers active in 2024 (slight decline from 88 dealers in FY2022). Skate wings are landed and processed primarily in Chatham, New Bedford and Point Judith. *note: FY2024 data are preliminary.
		Commercial fishing communities	There are 8 primary ports in the skate fishery and 20 secondary ports from Massachusetts to North Carolina, with over 480 communities that have skate landings or are a homeport for active skate vessels since 2012. Chatham, Point Judith, and New Bedford have the highest average annual skate landings.
	Recreational Fishery Characterization	Recreational fishery trends (e.g. catch, angler trips)	Rec catch is small, 1-1.7% of the ACL from FY 2020-2023, mostly from private/ for-hire vessels. Increased to 7.5% in FY2024. Most rec catch occurs <u>May - October</u> .
		Management uncertainty in rec fishery	Rec catch is not allocated; recent 3-year avg. deducted from ACT.
		Recreational fishing communities	Rec skate catch from ME to VA. NJ has the largest rec catch over time. For most states, catch is largely occurring nearshore (within 3 mi) or inland waters (<u>bays/estuaries/sounds</u>).
	Other Economic/Social Considerations		Wing TAL 42-45% landed FY21-23, 71% in FY24. Bait TAL 45-54% landed FY21-23, 62% in FY24. AP cites multiple logistical reasons for low TAL use. Wing TAL is 66.5% of the total TAL, Bait TAL is <u>33.5%</u> .
Additional Information	Reference Points	OFLs	AMs
	Overfished = If 3-year moving average of survey biomass index < B _{threshold} Overfishing = If % change in 3-year moving average of survey biomass index > average coefficient of variation of the survey time series.	Unknown	In-season: if TALs exceeded >5%, in-season possession limit trigger point (85% wing fishery; bait fishery: 90% in seasons 1 & 2, 80% in season 3) is decreased proportional to the overage. Year-end: if ACL exceeded, buffer between ACL and ACT is increased proportional to the overage for the following year. AMs have not been triggered in <u>FY2018 present</u> .
	Harvest Control Rule	ABCs	Significant source of catch outside the directed federal fishery?
	Long-term median catch of each species adjusted by ratio of its short-term (3-year) over long-term survey biomass, summed across the complex.	FY2023-25 ABC = 32,155 mt	Discards are primarily from scallop dredge and otter trawl gear. Discards are 26-42% of ACL, 38-52% of catch since FY2018. Recreational catch was 7.5% of ACL in FY 2024.