

Skates are harvested in two very different fisheries, one for lobster bait and one for wings for human consumption. The fishery for lobster bait is a more traditional and directed skate fishery that lands skates in whole form. The bait fishery involves vessels, primarily from ports in southern New England that target a combination of little skates (estimated to be  $\leq 90$  percent of landings) and, to a much lesser extent, juvenile winter skates ( $> 10$  percent of landings). Juvenile winter skates and little skates are difficult to differentiate due to their nearly identical appearance. The fishery for skate wings evolved in the 1990s as skates were promoted as an underutilized species, and fishermen shifted effort from groundfish and other troubled fisheries to skates and dogfish. The wing fishery is a more incidental fishery that involves a larger number of vessels located throughout the region. Vessels tend to catch skates when targeting other species such as groundfish, monkfish, and scallops, and land them if the price is sufficient to warrant the labor associated with cutting the wings.

On January 15, 1999, NMFS requested information from the public on barndoor skate for possible inclusion on the list of candidate species under the Endangered Species Act (ESA). In March and April 1999, several petitions were received from conservation groups requesting that NMFS immediately list barndoor skate as an endangered or threatened species and designate Georges Bank and other appropriate areas as critical habitat. This provided the impetus to complete a benchmark stock assessment for the entire skate complex. NMFS identified the need to develop an FMP to end overfishing and rebuild the resources based on the conclusions presented in late 1999 at the 30th Stock Assessment Workshop (SAW 30).

In March 2000, NMFS informed the Council of its decision to designate it as the responsible body for the development and management of the seven species included in the NE skate complex. In November 2000, the Council's Skate Committee approved the scoping document for the FMP. During the development of the FMP, the Skate Plan Development Team (PDT) continued to update the status determinations for the skate species based on the biomass reference points used during SAW 30. Currently (through the autumn 2001 survey), only two species remain in an overfished condition: Barndoor and thorny skates. In January 2001, the Council published a Notice of Intent to Prepare an

Environmental Impact Statement (EIS) in the **Federal Register**, officially beginning the Council's FMP scoping process (66 FR 91).

On September 27, 2002, NMFS published its findings relative to the petitions to list barndoor skate as an endangered species as a notice of petition finding in the **Federal Register** at 68 FR 61005. After review of the best available scientific and commercial information, NMFS determined that listing the barndoor skate was not warranted at this time. The following factors all indicate a positive trend for barndoor skate populations: Recent increases in abundance of barndoor skate observed during trawl surveys; the expansion of known areas where barndoor skate have been encountered; increases in size range; and an increase in the number of small barndoor skates collected.

The Council held four public hearings on the draft FMP to provide an opportunity for public testimony by industry and other interested parties. During the public hearings, industry members expressed concerns about species identification problems in relation to the reporting requirements, as well as the species prohibitions (i.e., barndoor and thorny skates throughout their range, and smooth skates in the GOM RMA). Provincetown fishermen supported the lower trip limits, while New Bedford fishermen supported the higher trip limits. In terms of the proposed species prohibitions, many people were concerned about the potential for inadvertent retention of prohibited species that may result in violations, especially on high-volume trips. For this reason, some industry members did not support the prohibitions on possession and instead supported prohibitions on landing or sale. Overall, however, the proposed measures were generally well-supported and everyone who attended the public hearings and commented on the draft FMP agreed that it was important to collect more and better information on the skate resources.

Very little information is available about the individual skate species and the fisheries of which they are a component. Because skates have not been managed through a Federal FMP, few accurate and complete fishery data are available (e.g., landings and discards by species, amount of skate bait sold directly to lobster vessels, etc.). While developing the measures proposed in the FMP, the Council wrestled with difficult issues related to overfishing definition reference points and appropriate management measures to address individual skate species in need

of rebuilding. Moreover, effective plan monitoring and appropriate recommendations for management adjustments, especially for fisheries in which skates are caught incidentally, hinge on the availability of more comprehensive information about these species, which will come once the FMP is implemented.

The biological, economic, and social impacts of these measures and the cumulative impacts associated with other FMPs and regulations are discussed in the FMP and FEIS.

### Status of the Stock Complex

There are no direct estimates of biomass available for the seven individual skate species in the complex, so biomass indices from the Northeast Fisheries Science Center (NEFSC) trawl surveys have been used to characterize stock size. More specifically, for each species in the complex, information on the weight of the catch per tow (kg/tow) from the most representative trawl survey series over the longest possible time span was assembled. The data in the selected series were then used to characterize the distribution of biomass over the examined time period. Finally, candidate reference points were selected from the distribution so as to provide proxies for biomass targets that have a high probability of correctly characterizing the stock level that produces maximum sustainable yield (MSY).

For the aggregate skate complex, the NEFSC spring survey index of biomass was relatively constant from 1968 to 1980, then increased significantly to peak levels in the mid to late 1980s. The biomass of large-sized skates (barndoor, winter, and thorny) has declined steadily since the mid-1980s, while the recent increase in aggregate skate biomass has been attributed to an increase in little skates.

### Overfishing Definitions

This FMP proposes overfishing definitions for each of the seven skate species in the complex, in accordance with the national standards of the Magnuson-Stevens Act, as amended by the Sustainable Fisheries Act (SFA) of 1996. Determining the maximum fishing mortality rate (F) threshold for the skate species is problematic, given the current inability to directly estimate fishery exploitation rates. Therefore, the approach chosen by the Council was to use biomass levels indexed by the NEFSC trawl surveys as an indicator of exploitation. More specifically, a decline in the biomass of a species (for several years or based on a moving average), would indicate that current/