

North Pacific Fisheries Commission

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Bycatch Summary Sablefish Fishery

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Fishery Description

The Canadian high seas Sablefish (*Anoplopoma fimbria*) fishery typically operates at 1-4 seamounts in the commission area (Cobb, Eickleberg, Warwick and Brown Bear seamounts; Figure 1). Historically other seamounts have been fished for sablefish both inside and outside Canada's EEZ.

Gear types

Fishing is currently conducted with longlined traps (Figure 2). Historically, longline hooks have also been used. Since 2014 a maximum of 3 vessels per year have been allowed to fish in NPFC waters. Historically the number of fishing vessels has averaged <3 per year (since 2008). The number of fishing days is the number of unique calendar days during which gear was set. The number of fishing days has averaged from about 25 to greater than 100, but in most years has averaged between 50 and 75. No Canadian vessels have chosen to fish for Sablefish in the Convention Area since 2020.

Target species

The fishery targets primarily Sablefish, but at times also targets rockfishes, particularly blackspotted and rougheye rockfishes. The regulations allow for 34 mt of Sablefish to be landed each month for the 6 months of the fishing season (April to September). It allows for 2.3 mt of combined rougheye and blackspotted rockfish to be landed each month for the 6 months of the fishing season. Other rockfishes and flatfishes can also be retained for sale, although the amount cannot exceed 1 mt each month for the 6 months of the fishing season.

Data compilation methods

The data were extracted from the commercial fisheries database for seamounts in the NPFC Convention Area. Data since 1996 were used in the analysis. For some species and gear types the weight of the catch was not recorded, but instead the count of individuals was recorded. For these cases, the counts of the catch were multiplied by the historical average individual weight in trap and longline fisheries to produce an estimated total weight of catch if it was available. If no historical data from the fishery was available, a historical average individual weight in fisheries independent surveys conducted on the continental shelf and slope of British Columbia.

Historical bycatch - Fishes

Historical bycatch in the sablefish fishery has been dominated by crabs and rockfishes. Catch rates per day were generally low (< 1 kg/fishing day) with the exception of grenadiers, tanner crabs and unidentified crabs (Figure 3). Rougheye and blackspotted rockfishes were the most numerous bycatch species across all years (Figure 4). This is likely because they are targeted somewhat by the fishery as there is a market for them and they can be captured efficiently using pot gear. The second most abundant fish group in the bycatch was

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rockfishes. Sixteen different species of rockfish were captured (plus unidentified rockfishes) over the years (Figure 5). The most common species of rockfish were thornyheads. Other fishes included common deepsea fishes like grenadiers, skilfish and snailfishes (Figure 6). Dover sole, deepsea sole and Pacific halibut were common species of flatfish captured as bycatch. Very few sharks or skates were captured in bycatch on the seamounts, and the most common species was Pacific sleeper sharks (Figure 7).

Historical bycatch - Invertebrates

Historical bycatch of invertebrates in the sablefish fishery was dominated by crabs. Most crabs were unidentified (Figure 8), but those that were identified were either king crabs or tanner crabs (Figure 9). The catch of other types of invertebrates was low (typically less than 3 kg per year) and the most frequent catch was of octopus (Figure 10). Squat lobster (Reptantia) were also captured in some years. VME indicator taxa (corals and sponges were only captured in 1998 (Figure 11).

Conclusions

- Bycatch was low in the pot and longline fisheries since 1996
- Rockfishes (including targeted rockfishes) were the dominant bycatch
- Crabs dominated the invertebrate by catch (king crabs and tanner crabs)
- Only two instances of VME indicator taxa were observed in the bycatch data
- Canada should continue to monitor impacts of its fisheries ot species belonging to the same ecosystem as sablefish



Figure 1: Map of seamounts in the NE Pacific.



Figure 2: Trap gear used in the sablefish fishery on the Cobb Seamount chain.



Figure 3: Catch per day by species averaged for 1996-2024.



Figure 4: By catch of fishes by taxonomic group in the Cobb Seamount chain in the sable fish fishery by year $(1996\mathchar`-2020).$



Figure 5: Bycatch of rockfishes by taxonomic group in the CObb Seamount chain in the sablefish fishery by year (1996-2020).



Figure 6: Proportion of other fish taxa in the catch by year (1996-2020).

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Figure 7: Proportion of flatfishes taxa in the catch by year (1996-2020).

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Figure 8: Bycatch of invertebrate taxa groups in the catch by year (1996-2020).



Figure 9: Proportion of crab taxa in the catch by year (1996-2020).

10



Figure 10: Proportion of other invertebrate taxa groups in the catch by year (1996-2020).



Figure 11: Proportion of VME indicator taxa in the catch by year (1996-2020).

12