



PLENARY 04

*26th Meeting of the
International Scientific Committee for Tuna
and Tuna-Like Species in the North Pacific Ocean
Taipei City, Chinese Taipei
22-29 June 2026*

NATIONAL REPORT OF CANADA (CANADIAN TUNA AND TUNA-LIKE FISHERIES IN THE NORTH PACIFIC OCEAN IN 2025)¹

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¹ Prepared for the 26th Meeting of the International Scientific committee on Tuna and Tuna-like Species in the North Pacific Ocean (ISC) held June 22-29, 2026, in Taipei City, Chinese Taipei. Document should not be cited without permission of the authors.

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SUMMARY

Canada has one commercial fishery for highly migratory species in the Pacific Ocean, a troll fishery targeting juvenile north Pacific albacore tuna (*Thunnus alalunga*). This report summarizes Category I, II, and III data for the 2025 fishing season, including catch and effort, spatial distribution, biological sampling, bycatch, and ongoing research initiatives. In 2025, the Canadian fleet comprised 99 vessels and operated primarily in the eastern Pacific Ocean, with activity occurring predominantly within the Canadian exclusive economic zone (EEZ). Fishing access to the United States EEZ was unavailable in 2025 due to the absence of a bilateral fishing regime, and only limited effort and catch occurred in adjacent high seas waters, with one vessel briefly operating in the central and western Pacific Ocean. The provisional 2025 estimates of total catch and effort in the eastern Pacific Ocean are 1,726 metric tonnes (t) and 3,222 vessel-days (v-d), respectively, representing a 40% decrease in catch and a 3% decrease in effort relative to 2024. Within the Canadian EEZ, catch decreased in 2025 by 24% while the effort increased by 21%, relative to 2024. The remaining catch and effort occurred in adjacent high seas waters, which increased slightly by 104 tonnes and 239 v-d, respectively, relative to 2024. The overall catch rate (or catch per unit effort; CPUE) decreased to 0.49 t/v-d in 2025, the lowest overall rate for the fleet since 2017. The highest CPUE for the fleet in 2025 was seen in July in the Canadian EEZ. Fishing activity remained highly seasonal and predominantly coastal, with most effort and catch occurring between July and September. Spatial patterns followed historical trends, with limited activity in June, peak distribution of effort and catch in August, and contraction into September and October. Approximately 87% of the albacore catch occurred in the favourable water temperature band of 16-19 °C in 2025, highlighting the influence of environmental conditions on fish availability and distribution. Forty (40) vessels measured 11,221 fork lengths in 2025 for a sampling rate of 4.1% of the overall reported catch. Fork lengths ranged from 42 to 93 cm, with a mode at approximately 68 cm, indicating dominance of 2-year old fish. Mean length was 68.4 cm, which is similar to previous years and suggests continued reliance of the fishery on younger age classes. Reported bycatch levels were low overall, consisting of 164 fish and two seabirds. Retained bycatch included yellowtail amberjack, Pacific bluefin tuna, yellowfin tuna, and skipjack tuna. Notably, Pacific bluefin tuna bycatch increased substantially in 2025 relative to previous years, though individuals were primarily small in size, suggesting interactions with younger age classes. Data collection continued through logbooks, hail records, and sales slips, supported by an onboard biological sampling program. Canada is advancing the implementation of a fleet-wide vessel monitoring system (VMS), which is expected to improve spatial resolution of fishing activity, support compliance, and enhance analytical capacity for stock assessment. Monitoring of a small but developing recreational albacore fishery is ongoing, with preliminary indications that its impact remains minor.

1.0 INTRODUCTION

The Canadian fishery for highly migratory species in the Pacific Ocean uses troll gear with jigs to target juvenile north Pacific albacore tuna (*Thunnus alalunga*) in the surface waters. The majority of catch and effort by the Canadian fleet occurs within the exclusive economic zones (EEZ) of Canada. In the past, a portion of Canadian-flagged vessels had access to fishing in the United States EEZ through a bilateral Treaty. In 2025, however, the Canadian fleet did not have access to fish in the United States EEZ due to the absence of agreement on a fishing regime under the bilateral tuna treaty between the countries. Some of the larger Canadian vessels will follow albacore tuna into offshore international waters and occasionally fish in the high seas of the central and western Pacific Ocean. The most recent management regulations for Canadian vessels fishing albacore tuna, covering one year period from 01 April 2025 to 31 March 2026, are documented in the Albacore Tuna Integrated Fisheries Management Plan (IFMP; <https://waves-vagues.dfo-mpo.gc.ca/library-bibliotheque/41284215.pdf>). Historically, most of the Canadian fleet effort and catch for north Pacific albacore has occurred between early July and October.

The fleet consists predominantly of small- to medium-sized vessels using troll gear, which is characterized by relatively low bycatch and minimal habitat impact. Landings are primarily destined for domestic and export markets, and the fishery continues to represent an important component of Canada's west coast pelagic fisheries.

This report summarizes Category I (annual catch and effort), Category II (monthly 1° x 1° catch and effort), and Category III (bycatch, catch size composition) data for vessels active in the Canadian north Pacific albacore tuna troll fishery in 2025. It also highlights ongoing research and data collection initiatives aimed at improving understanding of albacore distribution, fishery dynamics, and the influence of environmental variability on the fishery.

2.0 DATA SOURCES

Data on albacore tuna catch and effort from 1995 through to the present are compiled from hail records, logbooks, and sales slips and stored in the Canadian Albacore Tuna Catch and Effort Relational Database (Stocker et al. 2007). This database contains the best available estimates of annual catch and effort by geographic zone (Canadian, US, and high seas waters) for the Canadian fishery. All Canadian fishing vessels are required to hail (call) a third party service provider when they intend to start fishing and stop fishing. Canadian vessels must also carry logbooks in which daily position, catch and effort (latitude, longitude, number of fish, estimated weight) are recorded for albacore tuna and non-target species. These data have the highest temporal and spatial resolution and are obtained when logbooks are returned in November after the fishing season is completed. The third data source, sales slips, record the weight of albacore tuna landed and bought by domestic buyers and provide the most accurate estimates of albacore tuna catch in weight since these data are the basis for payment to harvesters (Stocker et al. 2007). Logbooks and sales slips from domestic buyers (plus trans-shipment slips if applicable) have also been forwarded for entry into the albacore tuna catch database in the past (Stocker et al. 2007).

Fork length data are collected through an on-board sampling program initiated in 2009, with a sampling goal of 1% of the reported catch. Harvesters record the lengths of the first 10 Albacore landed daily to randomize measurements. Size composition data were collected by port samplers from a portion of the Canadian catch landed in US ports between 1981 and 2008. Size data reported by Canada since 2009 are from the domestic on-board sampling program only.

The fishery data provided in this report were taken from Canadian tuna database version 26.04.09. Figures up to and including 2024 are considered definitive and are derived from a reconciliation of logbook data (best estimates of effort, catch in pieces, and geographic location) and sales slip (best estimate of catch weight) data (Stocker et al. 2007). The 2025 data are preliminary at this time.

3.0 AGGREGATED CATCH AND EFFORT DATA

3.1 Catch

The preliminary estimate of the Canadian albacore tuna catch in the eastern Pacific Ocean, in 2025 was 1,726 metric tons (t), which represents a 40% decrease in catch relative to 2024 (Table 1; Figure 1). The total catch by the Canadian troll fishery has ranged from 1,151 t in 2023 to 7,857 t in 2004 and averaged 4,141 t (sd \pm 1,888 t) since 2003, the period when the annual logbook coverage consistently exceeded 90% of all vessels participating in this fishery. Over the past decade, 2015-2024, the average catch has decreased to 2,666 t (sd \pm 1,146 t). In 2025, the Canadian catch primarily occurred in Canadian coastal waters (92.9%) and the total catch in the Canadian EEZ decreased by 24% relative to 2024. No fishing occurred by the Canadian fleet in the US EEZ, in 2025. The remaining small proportion (7.1%) of the Canadian catch occurred in adjacent high seas waters. One vessel from the Canadian albacore troll fleet reported a small amount of catch in the western or central Pacific Ocean in 2025.

The Canadian fleet started to record the number of released small (one year old) albacore in 2013. In 2025, the Canadian fleet caught 262 north Pacific albacore that were released as they were below marketable size (\sim 3.18 kg) (Table 2). The weight of released fish is not accounted for in Table 1, which records retained catch only.

3.2 Effort

The Canadian albacore tuna troll fleet consisted of 99 unique vessels in 2025, which is below the average participation over the last decade (Table 1). The total fishing effort for the Canadian fleet was 3,520 vessel-days (v-d), a 3% decrease relative to 2024 and slightly below the average over the last decade (4,047 v-d). (Table 1; Figure 1). Fishing effort in 2025 primarily occurred in Canadian coastal waters (92%) and the effort in the Canadian EEZ increased by 21%, relative to 2024. A small proportion (8%) of the Canadian fleet effort was reported in adjacent high seas waters in 2025. One Canadian vessels from the albacore tuna fleet operated briefly in the western or central Pacific Ocean or the south Pacific Ocean in 2025.

3.3 Catch Rate

Catch rate or catch per unit effort (CPUE) is calculated by dividing the catch in metric tons by the number of vessel days. These CPUE trends should be interpreted cautiously because they

are derived from commercial catch and effort data rather than an independent survey and have not been standardized to account for complex fleet dynamics. Commercial CPUE trends can provide supporting information about tuna abundance, but cannot be interpreted as a direct or unbiased index of population size without careful standardization and context.

In the mid-1990s, the Canadian troll CPUE was relatively low but increased steadily, with a peak in the late 1990s followed by a decline (Figure 1) reflecting early variability that may relate as much to fleet behavior as to fish availability. From roughly 2000 to 2010, CPUE generally increased and remained at comparatively high levels, suggesting improved availability and/or favorable fishing conditions; however, this period also coincides with potential changes in fishing power and targeting that could inflate CPUE independently of abundance. During the early to mid-2010s, CPUE became highly variable, with a sharp decline in 2012 followed by a strong rebound to the highest value in the series in 2014 followed by a pronounced drop, a pattern consistent with episodic changes in availability, aggregation, or fishing strategy rather than purely biological signals. CPUE recovered from a low in 2017 and remained moderate, around 0.66 t/v-d on average between 2018 and 2021. In 2022 there was a notable peak at 0.89 t/v-d, but continued to fluctuate and declined again in 2025 (Figure 1).

The CPUE in the Canadian EEZ decreased to 0.5 t/v-d in 2025, from 0.8 t/v-d in 2024, and in the high seas the CPUE increased slightly from 0.32 t/v-d in 2024 to 0.41 t/v-d in 2025. The peak of the catch rates varied by area and month in 2025 (Figure 2). The peak CPUE occurred in Canadian waters in July at 0.59 t/v-d and in the high seas the peak CPUE was observed in August in 2025.

4.0 SPATIAL DISTRIBUTION OF CATCH AND EFFORT DATA

In 2025, the Canadian troll fleet operated primarily within the Inter-American Tropical Tuna Commission (IATTC) convention area east of 150°W and north of the equator, with approximately 93% of the fishing effort and catch occurring within the Canadian EEZ. The effort and catch in the adjacent north Pacific high seas increased in 2025 and was more widely distributed than in previous years, with one vessel fishing briefly in the Western and Central Pacific Fisheries Commission (WCPFC) Convention Area.

Only a small amount of catch and effort occurred in June 2025 within the Canadian EEZ. In July, the catch and effort were largely distributed in the southern portion of the Canadian EEZ with limited extension westward across the adjacent high seas. In August, catch and effort increased substantially in magnitude and spatial extent, with the majority occurred throughout the Canadian EEZ and a small amount extending into the adjacent high seas. In September, the catch and effort remained relatively high but began to decline slightly and contract spatially, with the majority still occurring within the Canadian EEZ and only limited activity in the adjacent high seas during this month. By October, the catch and effort dropped sharply in both intensity and extent, leaving only a small, localized area of moderately low catch and effort in the Canadian EEZ (Figures 3 and 4).

Albacore were caught in waters with sea surface temperatures ranging from 11.6 to 23.3 °C in 2024 (Figure 5). The proportion of fish caught in waters within the favourable 16-19 °C temperature band was 87% in 2025, similar to the proportion seen in previous years.

5.0 BIOLOGICAL DATA

5.1 By-Catch

In 2025, the reported by-catch consisted of 164 fish and 2 seabirds (Table 3). One hundred and fifty-seven fish caught as by-catch were retained, including 78 Yellowtail Amberjacks (*Seriola lalandi*), 74 Pacific Bluefin Tuna (*Thunnus orientalis*), one Skipjack Tuna (*Katsuwonus pelamis*), and four Yellowfin Tuna (*Thunnus albacares*). By-catch species that were released included two Yellowtail Amberjacks, five Pacific Bluefin Tuna, and two seabirds of unknown species.

Historical trends in Pacific Bluefin Tuna bycatch indicate that annual bycatch levels have generally remained low, typically fewer than 10 individuals per year, with occasional moderate increases (e.g., 21 recorded in 2021). However, in 2025 there was a substantial increase in Pacific Bluefin Tuna bycatch relative to previous years (Figure 6). In 2025 the Pacific Bluefin Tuna ranged in size from 7 to 13 lbs and the estimated weight-frequency distribution shows that most individuals were concentrated within a relatively narrow weight range, with a peak at approximately 10-12 lbs and a mean weight of 13.2 lbs. The distribution is slightly right-skewed, with a small number of larger individuals extending to higher weights (above 20 lbs), indicating that the majority of bycatch have been smaller-sized fish with only occasional larger fish present (Figure 7).

5.2 Biological Sampling

Forty (40) Canadian troll vessels measured 11,221 fork lengths in 2025 for a sampling rate of 4.1% of the overall reported catch. Fork lengths ranged from 42 to 93 cm, similar to what has been seen in previous years. The dominant mode in these data corresponds to 2-year old fish at 67-68 cm and very few 3/4-year old fish (Figure 8). The overall mean length of albacore caught in 2025 was 68.4 cm, which is only slightly larger than the mean in 2024 at 67.2 cm. Similar to previous years, the monthly mean length of fish in 2025 increased slightly from June (68.1 cm) to September (68.6 cm; Figure 9). Albacore caught in the Canadian EEZ had a smaller mean length (68.3 cm) than those caught in the high seas (68.8 cm; Figure 10).

6.0 RESEARCH

Canada continues to advance the development and implementation of a fleet-wide vessel monitoring system (VMS) for the albacore fishery, with full deployment anticipated in the coming years. The implementation of VMS is expected to significantly improve the ability to monitor, control, and enforce safe, responsible, and sustainable fishing practices. In addition to compliance benefits, VMS data will provide high-resolution spatial information that will enhance analytical work conducted by the ISC, including efforts to refine stock assessments and evaluate the influence of environmental variability and climate-driven shifts in fishing activity. At present, spatial information on catch locations is derived primarily from logbooks, which lack independent verification and sufficient spatial precision to fully support fine-scale analyses of stock distribution and fishing dynamics.

Canada is also continuing to monitor a small but developing recreational fishery targeting albacore tuna in Canadian waters. This fishery, consisting of both charter and private vessels, occurs seasonally between June and September and overlaps temporally with the commercial

fishery. Data collection has been conducted at a limited scale through regional recreational catch reporting surveys, and methodological work is ongoing to develop and validate expansion approaches. Preliminary estimates suggest that total removals from the recreational sector remain low; however, continued research is required to improve the accuracy and reliability of these estimates and to ensure that this sector is appropriately accounted for in stock assessments.

Recent research has also focused on characterizing the size composition of albacore caught in Canadian waters (Figure 11). Annual length-frequency distributions indicate that the fishery is consistently dominated by individuals in the ~60–75 cm fork length range, corresponding largely to younger age classes (approximately age-2 and age-3 fish). While the overall distribution is generally unimodal, interannual variability in both the central tendency and spread suggests potential changes in cohort strength, recruitment, or availability within Canadian waters. Ongoing work aims to further investigate temporal trends in size structure and their relationship with oceanographic conditions, migration patterns, and fishery dynamics.

7.0 DISCUSSION

The 2025 fishing season was characterized by a notable decline in total catch and CPUE relative to 2024, despite only a modest reduction in overall fishing effort. This pattern potentially suggests reduced availability and/or accessibility of albacore in Canadian waters during the 2025 season. While commercial CPUE should be interpreted cautiously, the observed decrease falls within the range of historical interannual variability, where fluctuations likely reflect a combination of environmental conditions, fish distribution, and fleet dynamics rather than changes in stock abundance alone. Spatially, the fishery remained predominantly coastal, with most catch and effort occurring within the Canadian EEZ. The seasonal progression observed in 2025, with low activity in June, a peak in August, and a contraction in September and October, follows established patterns in the fishery and potentially reflects the timing of albacore migration into and through Canadian waters. The strong association between catch and sea surface temperature, with the majority of catches occurring within the 16-19 °C range, highlights the importance of environmental drivers in shaping albacore distribution and availability.

Biological data indicate that the Canadian fishery continues to be dominated by younger age classes, particularly age-2 fish, as reflected by the consistent mode near 67-68 cm fork length. This pattern has been stable over time and suggests ongoing reliance on juvenile cohorts migrating into Canadian waters. Limited representation of older age classes potentially reflects broader population structure or spatial segregation of larger individuals. Bycatch levels in 2025 were generally low; however, the marked increase in Pacific Bluefin Tuna bycatch represents a notable deviation from historical patterns. The predominance of smaller sized Pacific Bluefin Tuna individuals suggests that interactions are primarily occurring with younger fish, potentially reflecting changes in distribution or overlap between species. Continued monitoring will be important to determine whether this increase represents an anomalous event or part of an emerging trend.

Ongoing improvements in data collection, including the anticipated implementation of a VMS and continued development of recreational fishery estimates, are expected to enhance the resolution and reliability of fishery data. These advancements will support more refined analyses of spatial dynamics, environmental influences, and stock assessments. In particular, high-resolution VMS data will provide improved understanding of fleet behaviour and may potentially enable a robust standardization of CPUE.

8.0 LITERATURE CITED

Stocker, M., H. Stiff, W. Shaw, and A.W. Argue. 2007. The Canadian albacore tuna catch and effort relational database. Canadian Technical Report of Fisheries and Aquatic Sciences 2701: vi+76 p.

Table 1. Fishery statistics from the Canadian troll fishery for north Pacific Albacore Tuna, 1995-2025. Catch and effort data are expanded or raised to account for vessels that do not report logbook data. The level of expansion can be determined by the logbook coverage figures.

Year	Total Catch (t)	Effort (vessel-days)	Total Vessels	Logbook Coverage (%)
1995	1,761	5,923	287	18%
1996	3,321	8,164	295	24%
1997	2,166	4,320	200	30%
1998	4,177	6,018	214	50%
1999	2,734	6,970	238	71%
2000	4,531	8,769	243	68%
2001	5,249	10,021	248	81%
2002	5,379	8,323	232	74%
2003	6,847	8,428	193	96%
2004	7,857	9,942	221	92%
2005	4,829	8,564	213	94%
2006	5,833	6,243	174	95%
2007	6,040	6,902	207	92%
2008	5,464	5,774	137	93%
2009	5,693	6,540	138	97%
2010	6,527	7,294	161	96%
2011	5,385	8,556	176	99%
2012	2,484	5,974	174	100%
2013	5,088	6,465	183	99%
2014	4,780	4,745	160	100%
2015	4,391	5,244	164	99%
2016	2,842	5,359	152	100%
2017	1,830	4,978	121	100%
2018	2,717	4,196	121	100%
2019	2,402	3,882	122	100%
2020	2,376	3,302	104	100%
2021	2,419	3,687	113	100%
2022	3,639	4,073	118	100%
2023	1,151	2,117	80	100%
2024	2,894	3,633	101	99%
2025 ²	1,726	3,520	99	100%

² 2025 data are preliminary based on Ver. 26.04.09 of the *Canadian Albacore Tuna Catch and Effort Relational Database*. See Stocker et al. (2007) for a description of the database.

Table 2. Releases of Albacore below marketable size (3.18 kg) reported by the Canadian Albacore fishery in 2013-2025.

Year	Number of Fish	Total Weight (kg)
2013	289	918
2014	2,214	7,153
2015	4,295	14,271
2016	562	2,134
2017	545	1,660
2018	5,508	18,291
2019	4,093	12,929
2020	668	2,082
2021	6,624	21,709
2022	159	514
2023	2,686	9,279
2024	1,797	6,410
2025	262	951

Table 3. Reported catch of non-target species (by-catch) by the Canadian albacore tuna troll fishery in 2025.

Month	Common name	Scientific Name	Catch (in Numbers)	
			Retained	Released
July	Yellowtail Amberjack	<i>Seriola lalandi</i>	11	1
	Yellowfin Tuna	<i>Thunnus albacares</i>	2	
	Pacific Bluefin Tuna	<i>Thunnus thynnus</i>	54	
August	Yellowtail Amberjack	<i>Seriola lalandi</i>	53	
	Yellowfin Tuna	<i>Thunnus albacares</i>	2	
	Pacific Bluefin Tuna	<i>Thunnus thynnus</i>	18	5
	Seabird	<i>Unknown</i>		1
September	Yellowtail Amberjack	<i>Seriola lalandi</i>	9	1
	Pacific Bluefin Tuna	<i>Thunnus thynnus</i>	2	
	Skipjack Tuna	<i>Katsuwonus pelamis</i>	1	
	Seabird	<i>Unknown</i>		1
October	Yellowtail Amberjack	<i>Seriola lalandi</i>	5	
		TOTALS	157	9

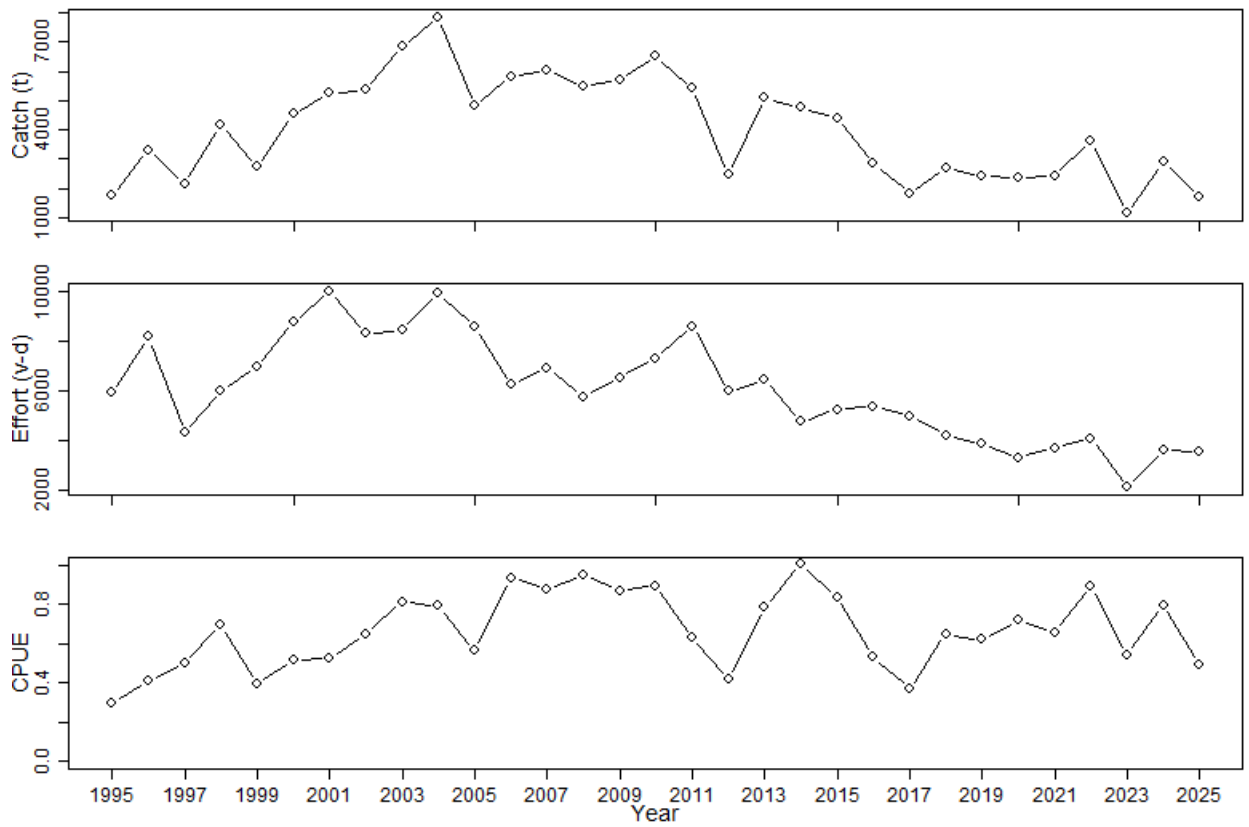


Figure 1. Historical trends in expanded catch (metric tonnes, t), effort (vessel-days, v-d) and catch per unit effort (CPUE, t/vessel-day) in the Canadian troll fishery for north Pacific Albacore Tuna from 1995 to 2025.

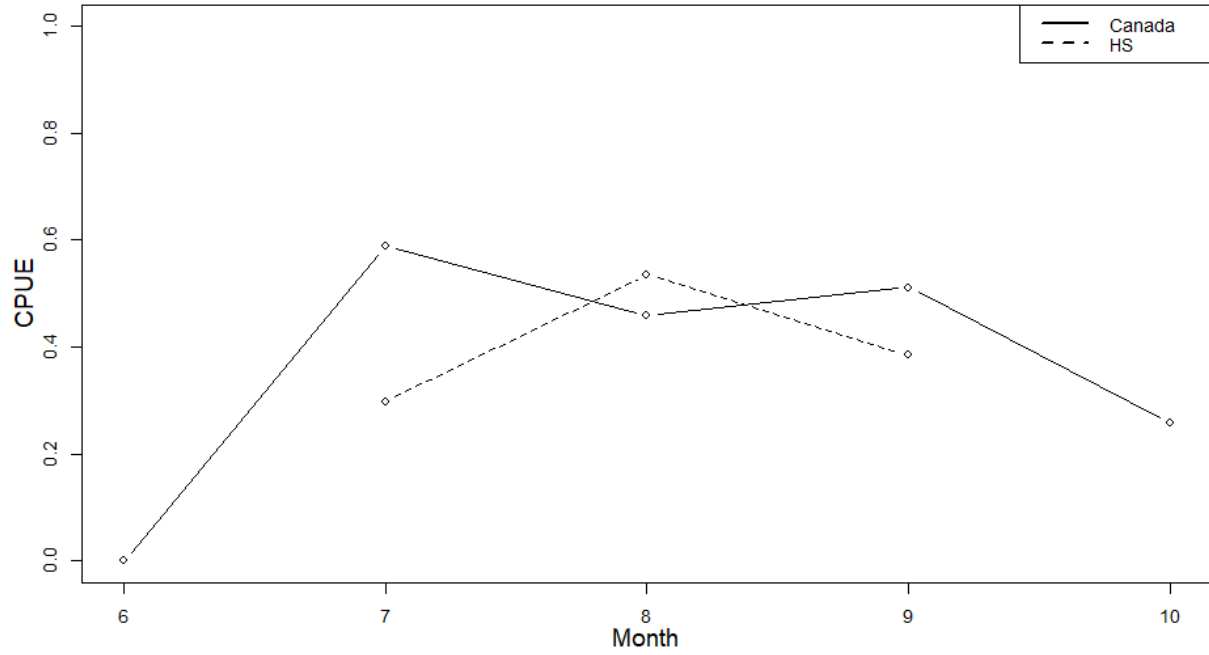


Figure 2. Monthly catch per unit effort (CPUE, t/vessel-day) in the Canadian and U.S. EEZs for Canadian Albacore Tuna troll fishery in 2025.

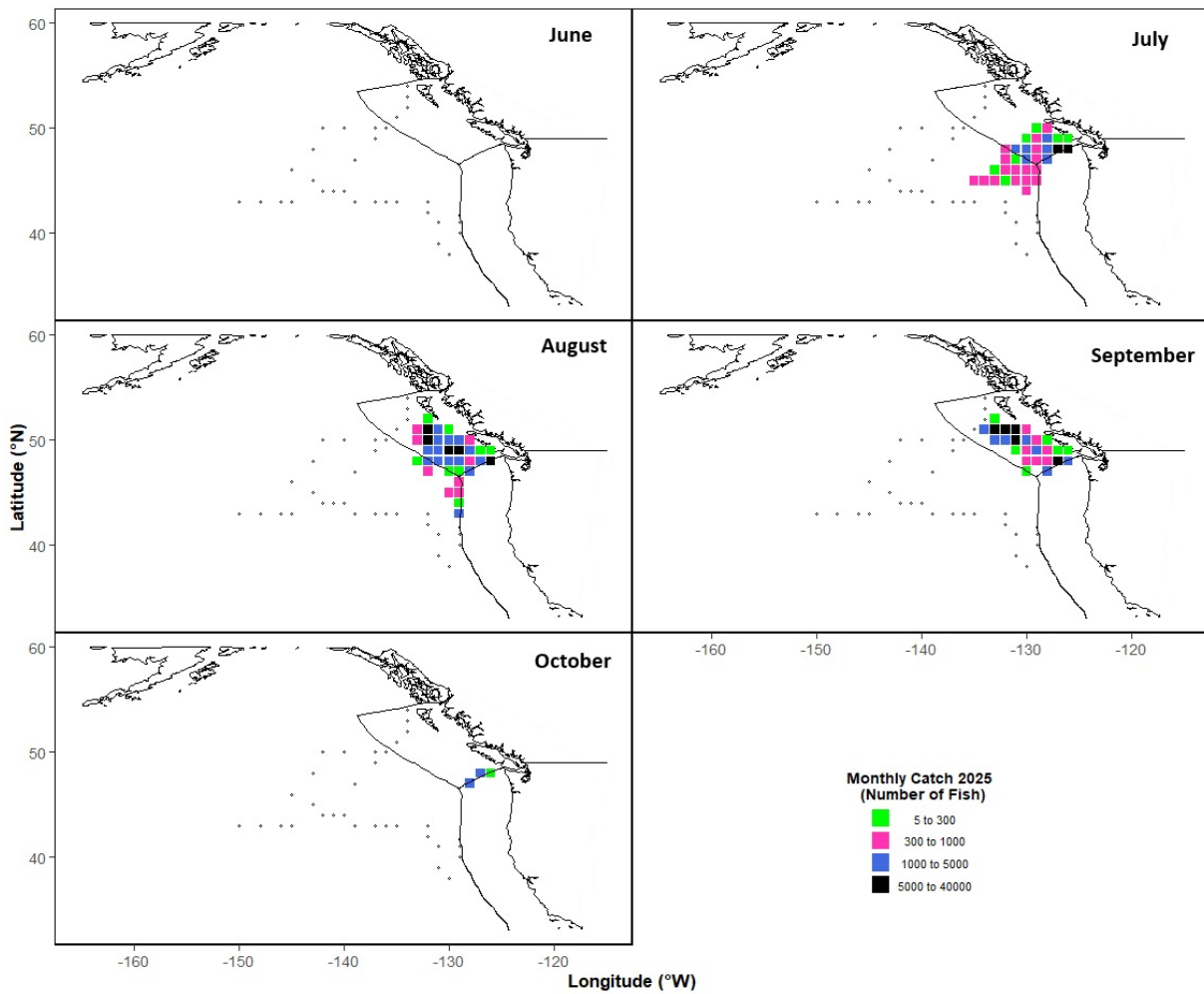


Figure 3. Monthly spatial distribution of reported catch in Canadian Albacore Tuna troll fishery in 2025. Data are plotted on a 1° x 1° strata with symbols located on the bottom-right corner. Data in locations with less than 3 unique vessels operating are excluded due to domestic privacy rules. Empty dots approximate the border of the annual operational area of the Canadian fishery in 2025.

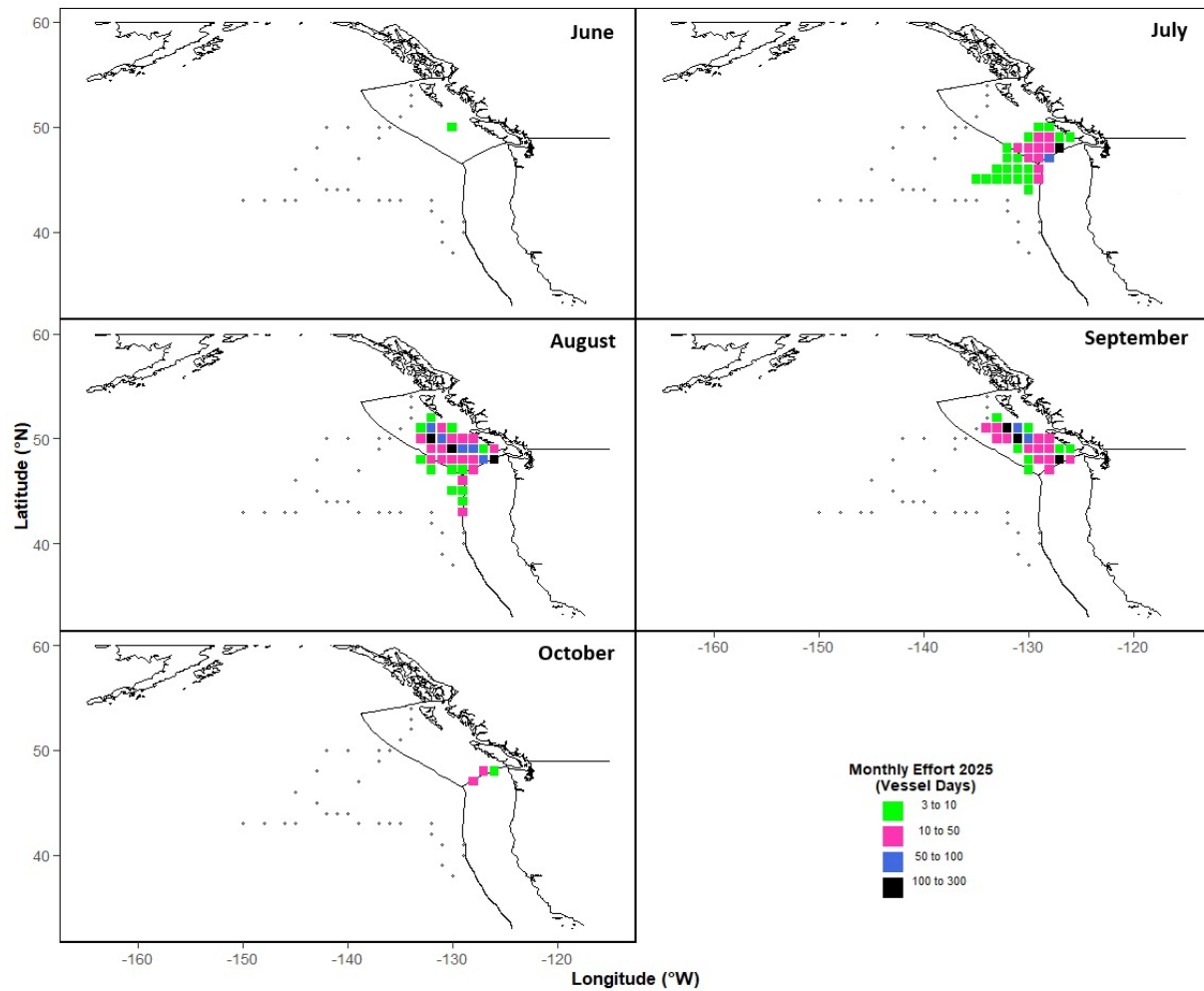


Figure 4. Monthly spatial distribution of effort by the Canadian Albacore Tuna troll fishery in 2025. Data are plotted on 1° x 1° strata with symbols located on the bottom-right corner. Data in locations with less than 3 unique vessels operating are excluded due to domestic privacy rules. Empty dots approximate the border of the annual operational area of the Canadian fishery in 2025.

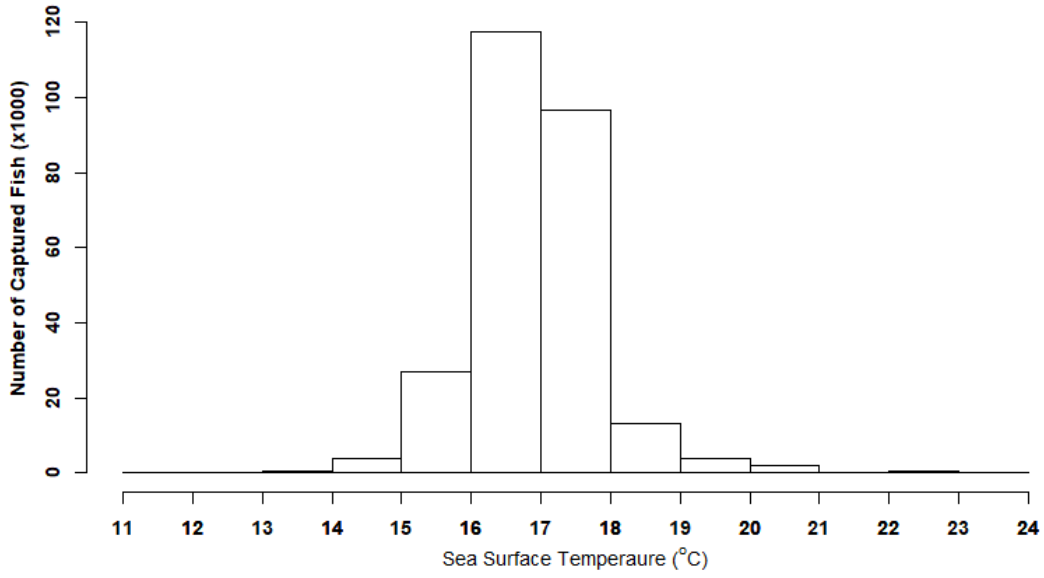


Figure 5. Number of north Pacific Albacore Tuna caught by the Canadian troll fishery in 2025 at various sea surface temperatures.

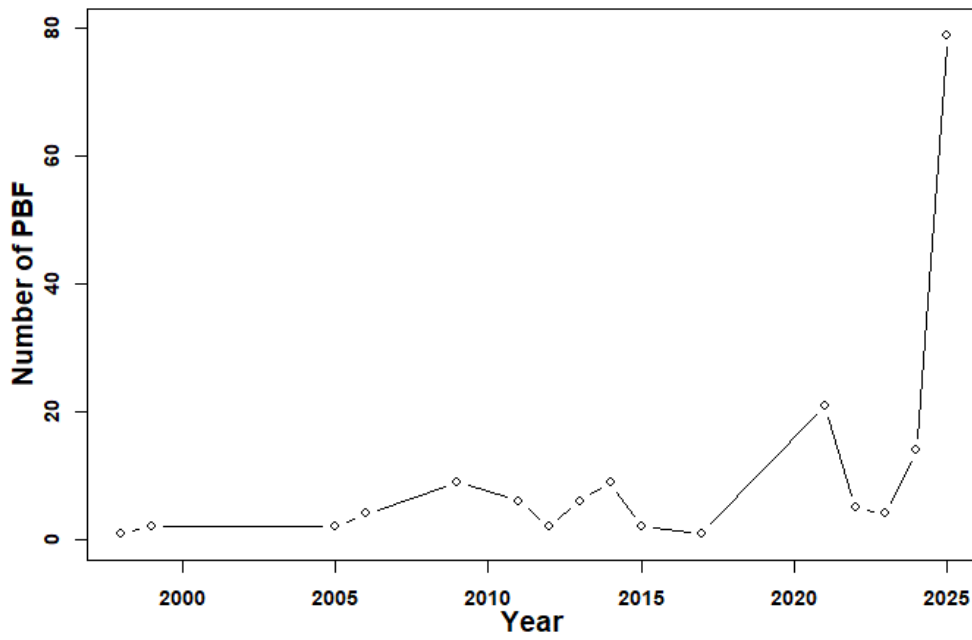


Figure 6. Annual Pacific Bluefin Tuna (PBF) bycatch (number of fish) in the Canadian albacore fishery from 1998–2025.

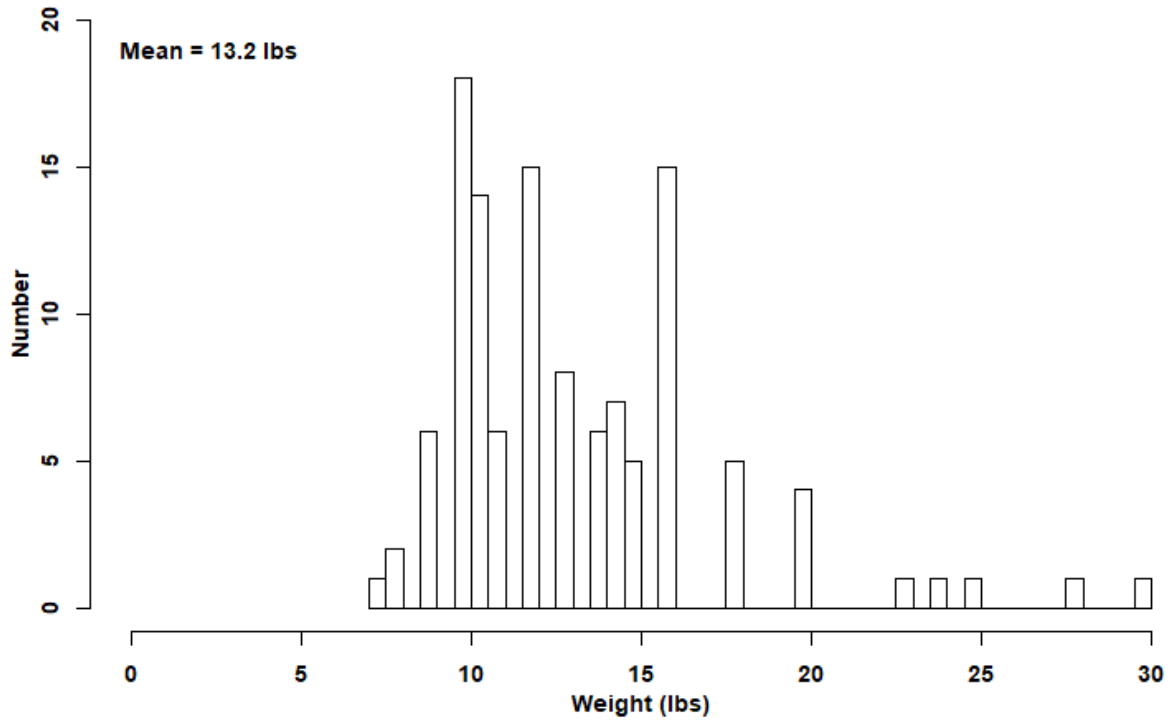


Figure 7. Estimated weight-frequency distribution of Pacific Bluefin Tuna bycatch observed in the Canadian albacore fishery from 1998–2025.

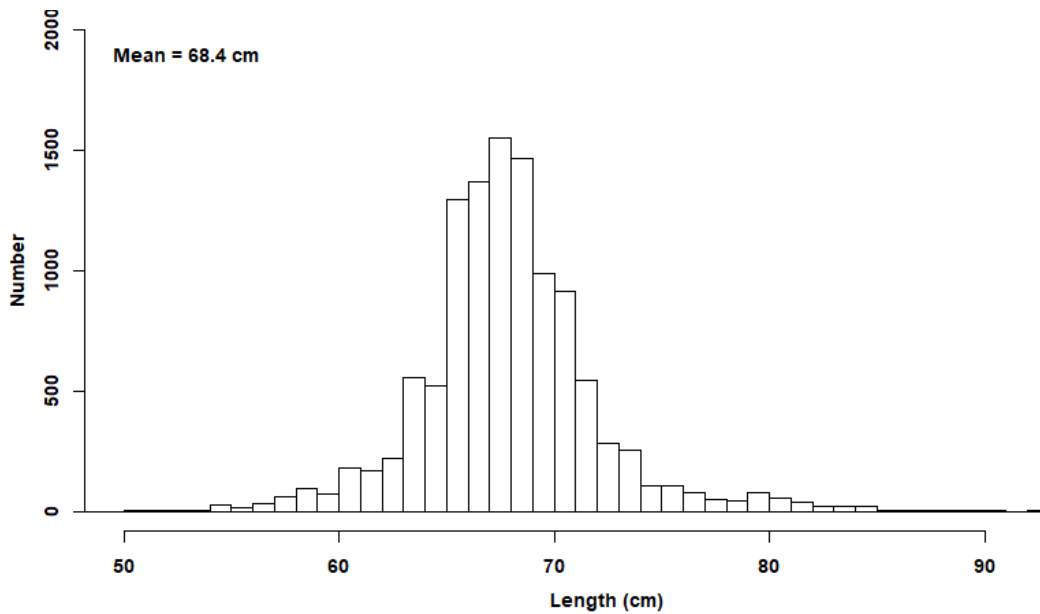


Figure 8. Distributions of fork lengths (cm) of north Pacific Albacore Tuna harvested by the Canadian troll fishery in 2025.

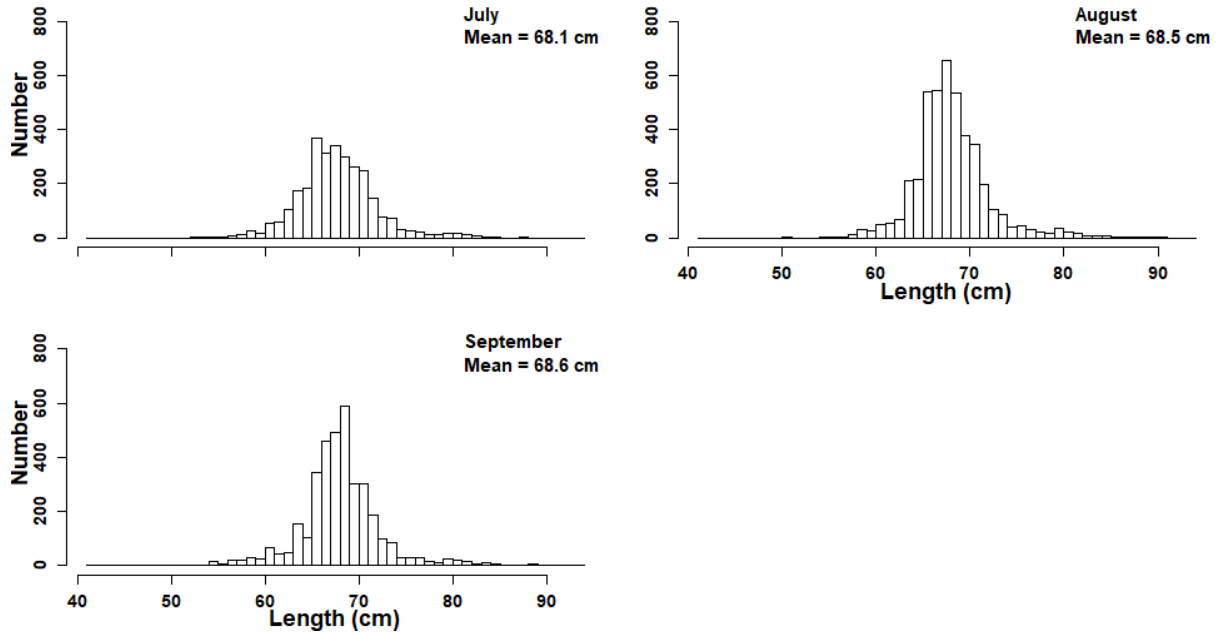


Figure 9. Monthly fork length (cm) distributions of north Pacific Albacore Tuna harvested by the Canadian troll fishery in 2025.

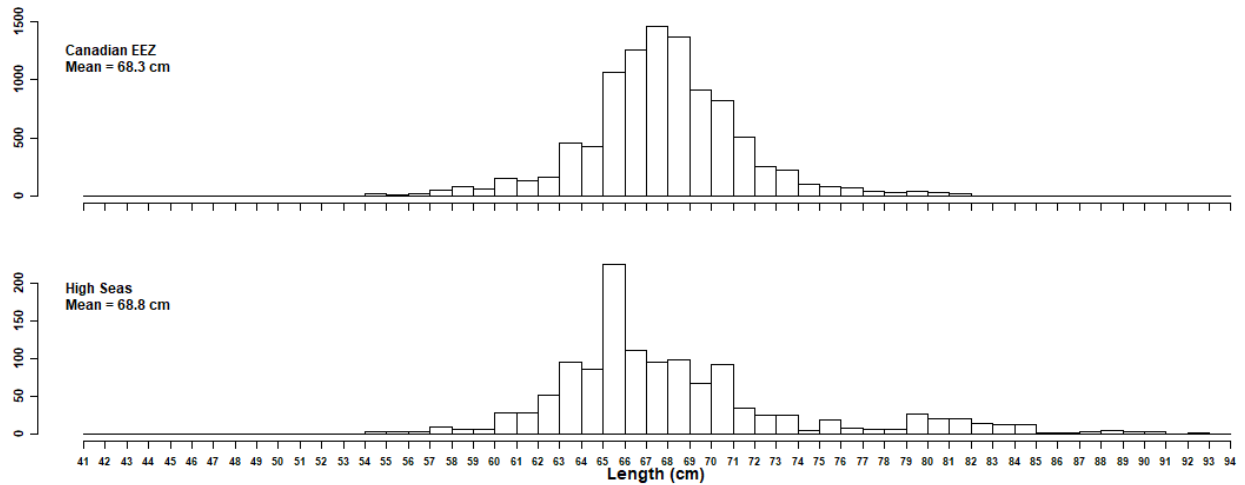


Figure 10. Distributions of fork lengths (cm) of north Pacific Albacore Tuna harvested by the Canadian troll fishery in 2025 in Canadian EEZ, USA EEZ and High Seas. Note: No fishing occurred by the Canadian fleet in the USA EEZ in 2025.

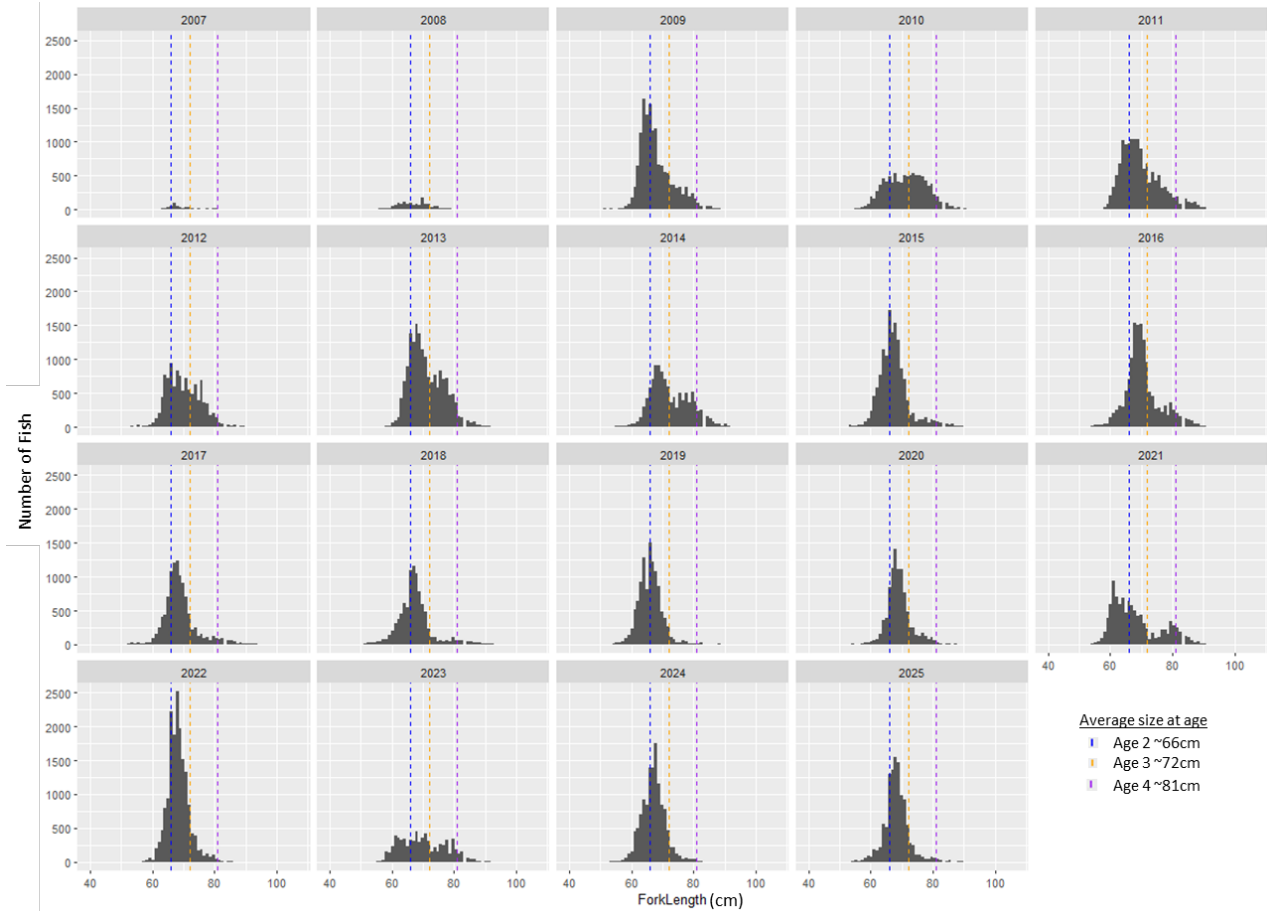


Figure 11. Annual length-frequency distributions (fork length, cm) of albacore tuna sampled in the Canadian fishery from 2007–2025. Dashed vertical lines indicate the approximate average lengths at age of North Pacific Albacore Tuna (blue: age 2 ~66 cm, yellow: age 3 ~72 cm, purple: age 4 ~81 cm).