

## **The Hawaii and California-based Pelagic Longline Vessels Annual Report for 1 January-31 December 2021**

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This annual report for the 1 January-31 December 2021 period contains summary data of fishing effort and catch statistics as reported on longline log sheets for Hawaii and California-based pelagic longline vessels. Data in this report originate from the PIFSC Information Management System (Oracle) table LLDS\_RPT\_STATS\_HC20220201\_RFMO, representing preliminary data received as of 1 February 2022. Catch and effort statistics are based on date of longline haul. When a statistic (number of vessels, trips) involves dates of haul in two summary periods (i.e., years, semi-annual, quarters), the item is counted in both summary periods. Thus, a trip total is for “partial and completed” trips. As such, these statistics are not additive (i.e., sum of four quarters is not the total for the year).

The following tables show fishery statistics for the stated time period, area, and set type, and include effort (number of vessels, trips, sets, and hooks set). For each listed species, organized by pelagic management unit species (PMUS) groups of billfish, shark, tuna, and other, the table includes the number of fish caught, kept, and released, and the catch per unit effort (CPUE), measured as the number of fish caught per 1000 hooks.

Additional figures show catch numbers, effort, and spatial distributions for important species for important species for the stated time period, area, and set type, for years 2000-2021.

Catch and effort summaries in this report were based on RFMO standards and business rules. Longline catch and effort statistics in this report consists of U.S. longline fisheries in the North Pacific Ocean, attributions from CNMI, Guam and American Samoa in the North Pacific Ocean. Longline vessels operating from California were also included in this report to satisfy RFMO data reporting and NOAA confidentiality standards. Some vessels operating in California had Hawaii limited-entry permits.

### References:

Pacific Islands Fisheries Science Center, 2022: Hawaii Longline Logbook,  
<https://www.fisheries.noaa.gov/inport/item/2721>

Southwest Fisheries Science Center, 2022: California Pelagic Longline Fishery,  
<https://www.fisheries.noaa.gov/inport/item/12906>

**Table 1.** Hawaii and California-based pelagic longline vessels annual statistics for all fishing areas and all fishing categories (set types), including effort (number of vessels, trips, sets, and hooks set). For each listed species, organized by pelagic management unit species (PMUS) groups of billfish, shark, tuna, and other, the table includes the number of fish caught, kept, and released, and the catch per unit effort (CPUE, number per 1000 hooks, calculated as the sum of fish caught divided by the sum of hooks set). Data Source: PIFSC Information Management System, Longline Logbook Data.

**Report Coverage**

Time Period 1 January-31 December 2021  
Set Types All sets  
Fishing Area All Areas

Number of vessels active	146
Number of trips (partial or completed)	1,734
Number of sets	22,739
Number of hooks set	63,533,231

Pelagic Management Unit Species (PMUS)	Number Caught	Number Kept	Number Released	CPUE Number Caught per 1000 Hooks
<b>PMUS</b>				
<b>Billfish PMUS</b>				
Blue marlin	6,028	5,960	68	0.09
Striped marlin	9,750	9,637	113	0.15
Shortbill spearfish	11,209	10,947	262	0.18
Swordfish	9,870	9,594	276	0.16
Other billfishes	662	651	11	0.01
<b>Total</b>	<b>37,519</b>	<b>36,789</b>	<b>730</b>	<b>0.59</b>
<b>Shark PMUS</b>				
Blue shark	102,078	0	102,078	1.61
Mako sharks	3,658	52	3,606	0.06
Thresher sharks	9,818	29	9,789	0.15
Oceanic whitetip shark	475	0	475	0.01
Silky shark	270	0	270	0.00
<b>Total</b>	<b>116,299</b>	<b>81</b>	<b>116,218</b>	<b>1.83</b>
<b>Tuna PMUS</b>				
Albacore	12,274	11,952	322	0.19
Bigeye tuna	187,045	183,572	3,473	2.94
Yellowfin tuna	78,341	75,955	2,386	1.23
Bluefin tuna	9	9	0	0.00
Skipjack tuna	17,866	17,688	178	0.28
Other tunas	1	1	0	0.00
<b>Total</b>	<b>295,536</b>	<b>289,177</b>	<b>6,359</b>	<b>4.65</b>
<b>Other PMUS</b>				
Mahimahi	30,471	30,220	251	0.48
Moonfish	7,802	7,774	28	0.12
Wahoo	31,641	31,518	123	0.50
Oilfish	9,421	7,274	2,147	0.15
Pomfret	33,191	32,768	423	0.52
<b>Total</b>	<b>112,526</b>	<b>109,554</b>	<b>2,972</b>	<b>1.77</b>
<b>Total PMUS</b>	<b>561,880</b>	<b>435,601</b>	<b>126,279</b>	<b>8.84</b>
Non-PMUS Sharks	198	0	198	0.00
<b>Total Non-PMUS</b>	<b>9,417</b>	<b>283</b>	<b>9,134</b>	<b>0.15</b>
<b>Total All Species</b>	<b>571,297</b>	<b>435,884</b>	<b>135,413</b>	<b>8.99</b>

**Table 2.** Hawaii and California-based pelagic longline vessels annual statistics for fishing within the U.S. EEZ (main Hawaiian Islands, Northwestern Hawaiian Islands, or the Pacific Remote Islands, and with all fishing categories (set types), including effort (number of vessels, trips, sets, and hooks set). For each listed species, organized by pelagic management unit species (PMUS) groups of billfish, shark, tuna, and other, the table includes the number of fish caught, kept, and released, and the catch per unit effort (CPUE, number per 1000 hooks, calculated as the sum of fish caught divided by the sum of hooks set). Data Source: PIFSC Information Management System, Longline Logbook Data.

**Report Coverage**

Time Period 1 January-31 December 2021  
Set Types All sets  
Fishing Area Inside U.S. EEZ

Number of vessels active	137
Number of trips (partial or completed)	1,067
Number of sets	8,252
Number of hooks set	22,867,376

Pelagic Management Unit Species (PMUS)	Number Caught	Number Kept	Number Released	CPUE Number Caught per 1000 Hooks
<b>PMUS</b>				
<b>Billfish PMUS</b>				
Blue marlin	2,392	2,367	25	0.10
Striped marlin	4,077	4,046	31	0.18
Shortbill spearfish	4,876	4,856	20	0.21
Swordfish	1,649	1,623	26	0.07
Other billfishes	219	219	0	0.01
<b>Total</b>	<b>13,213</b>	<b>13,111</b>	<b>102</b>	<b>0.58</b>
<b>Shark PMUS</b>				
Blue shark	33,364	0	33,364	1.46
Mako sharks	909	0	909	0.04
Thresher sharks	2,154	5	2,149	0.09
Oceanic whitetip shark	203	0	203	0.01
Silky shark	72	0	72	0.00
<b>Total</b>	<b>36,702</b>	<b>5</b>	<b>36,697</b>	<b>1.60</b>
<b>Tuna PMUS</b>				
Albacore	511	506	5	0.02
Bigeye tuna	58,642	57,500	1,142	2.56
Yellowfin tuna	25,249	24,525	724	1.10
Bluefin tuna	1	1	0	0.00
Skipjack tuna	6,520	6,478	42	0.29
Other tunas	0	0	0	0.00
<b>Total</b>	<b>90,923</b>	<b>89,010</b>	<b>1,913</b>	<b>3.98</b>
<b>Other PMUS</b>				
Mahimahi	6,205	6,157	48	0.27
Moonfish	755	754	1	0.03
Wahoo	10,748	10,729	19	0.47
Oilfish	3,122	2,496	626	0.14
Pomfret	9,176	9,069	107	0.40
<b>Total</b>	<b>30,006</b>	<b>29,205</b>	<b>801</b>	<b>1.31</b>
<b>Total PMUS</b>	<b>170,844</b>	<b>131,331</b>	<b>39,513</b>	<b>7.47</b>
Non-PMUS Sharks	56	0	56	0.00
<b>Total Non-PMUS</b>	<b>2,076</b>	<b>130</b>	<b>1,946</b>	<b>0.09</b>
<b>Total All Species</b>	<b>172,920</b>	<b>131,461</b>	<b>41,459</b>	<b>7.56</b>

**Table 3.** Hawaii and California-based pelagic longline vessels annual statistics for fishing outside the U.S. EEZ and with all fishing categories (set types), including effort (number of vessels, trips, sets, and hooks set). For each listed species, organized by pelagic management unit species (PMUS) groups of billfish, shark, tuna, and other, the table includes the number of fish caught, kept, and released, and the catch per unit effort (CPUE, number per 1000 hooks, calculated as the sum of fish caught divided by the sum of hooks set). Data Source: PIFSC Information Management System, Longline Logbook Data.

**Report Coverage**

Time Period 1 January-31 December 2021  
Set Types All sets  
Fishing Area Outside U.S. EEZ

Number of vessels active	146
Number of trips (partial or completed)	1,386
Number of sets	14,487
Number of hooks set	40,665,855

Pelagic Management Unit Species (PMUS)	Number Caught	Number Kept	Number Released	CPUE Number Caught per 1000 Hooks
<b>PMUS</b>				
<b>Billfish PMUS</b>				
Blue marlin	3,636	3,593	43	0.09
Striped marlin	5,673	5,591	82	0.14
Shortbill spearfish	6,333	6,091	242	0.16
Swordfish	8,221	7,971	250	0.20
Other billfishes	443	432	11	0.01
<b>Total</b>	<b>24,306</b>	<b>23,678</b>	<b>628</b>	<b>0.60</b>
<b>Shark PMUS</b>				
Blue shark	68,714	0	68,714	1.69
Mako sharks	2,749	52	2,697	0.07
Thresher sharks	7,664	24	7,640	0.19
Oceanic whitetip shark	272	0	272	0.01
Silky shark	198	0	198	0.00
<b>Total</b>	<b>79,597</b>	<b>76</b>	<b>79,521</b>	<b>1.96</b>
<b>Tuna PMUS</b>				
Albacore	11,763	11,446	317	0.29
Bigeye tuna	128,403	126,072	2,331	3.16
Yellowfin tuna	53,092	51,430	1,662	1.31
Bluefin tuna	8	8	0	0.00
Skipjack tuna	11,346	11,210	136	0.28
Other tunas	1	1	0	0.00
<b>Total</b>	<b>204,613</b>	<b>200,167</b>	<b>4,446</b>	<b>5.03</b>
<b>Other PMUS</b>				
Mahimahi	24,266	24,063	203	0.60
Moonfish	7,047	7,020	27	0.17
Wahoo	20,893	20,789	104	0.51
Oilfish	6,299	4,778	1,521	0.15
Pomfret	24,015	23,699	316	0.59
<b>Total</b>	<b>82,520</b>	<b>80,349</b>	<b>2,171</b>	<b>2.03</b>
<b>Total PMUS</b>	<b>391,036</b>	<b>304,270</b>	<b>86,766</b>	<b>9.62</b>
Non-PMUS Sharks	142	0	142	0.00
<b>Total Non-PMUS</b>	<b>7,341</b>	<b>153</b>	<b>7,188</b>	<b>0.18</b>
<b>Total All Species</b>	<b>398,377</b>	<b>304,423</b>	<b>93,954</b>	<b>9.80</b>

**Table 4.** Hawaii and California-based pelagic longline vessels annual statistics for all fishing areas and with shallow set type, including effort (number of vessels, trips, sets, and hooks set). For each listed species, organized by pelagic management unit species (PMUS) groups of billfish, shark, tuna, and other, the table includes the number of fish caught, kept, and released, and the catch per unit effort (CPUE, number per 1000 hooks, calculated as the sum of fish caught divided by the sum of hooks set). Data Source: PIFSC Information Management System, Longline Logbook Data.

**Report Coverage**

Time Period 1 January-31 December 2021  
Set Types Shallow sets  
Fishing Area All Areas

Number of vessels active	18
Number of trips (partial or completed)	55
Number of sets	665
Number of hooks set	827,636

Pelagic Management Unit Species (PMUS)	Number Caught	Number Kept	Number Released	CPUE Number Caught per 1000 Hooks
<b>PMUS</b>				
<b>Billfish PMUS</b>				
Blue marlin	91	85	6	0.11
Striped marlin	191	184	7	0.23
Shortbill spearfish	102	100	2	0.12
Swordfish	5,902	5,705	197	7.13
Other billfishes	4	4	0	0.00
<b>Total</b>	<b>6,290</b>	<b>6,078</b>	<b>212</b>	<b>7.60</b>
<b>Shark PMUS</b>				
Blue shark	4,570	0	4,570	5.52
Mako sharks	581	26	555	0.70
Thresher sharks	24	2	22	0.03
Oceanic whitetip shark	9	0	9	0.01
Silky shark	3	0	3	0.00
<b>Total</b>	<b>5,187</b>	<b>28</b>	<b>5,159</b>	<b>6.27</b>
<b>Tuna PMUS</b>				
Albacore	448	426	22	0.54
Bigeye tuna	955	916	39	1.15
Yellowfin tuna	1,121	1,095	26	1.35
Bluefin tuna	2	2	0	0.00
Skipjack tuna	47	46	1	0.06
Other tunas	0	0	0	0.00
<b>Total</b>	<b>2,573</b>	<b>2,485</b>	<b>88</b>	<b>3.11</b>
<b>Other PMUS</b>				
Mahimahi	1,249	1,240	9	1.51
Moonfish	21	20	1	0.03
Wahoo	61	61	0	0.07
Oilfish	184	134	50	0.22
Pomfret	37	33	4	0.04
<b>Total</b>	<b>1,552</b>	<b>1,488</b>	<b>64</b>	<b>1.88</b>
<b>Total PMUS</b>	<b>15,602</b>	<b>10,079</b>	<b>5,523</b>	<b>18.85</b>
Non-PMUS Sharks	5	0	5	0.01
<b>Total Non-PMUS</b>	<b>6</b>	<b>0</b>	<b>6</b>	<b>0.01</b>
<b>Total All Species</b>	<b>15,608</b>	<b>10,079</b>	<b>5,529</b>	<b>18.86</b>

**Table 5.** Hawaii and California-based pelagic longline vessels annual statistics for all fishing areas and with deep set type, including effort (number of vessels, trips, sets, and hooks set). For each listed species, organized by pelagic management unit species (PMUS) groups of billfish, shark, tuna, and other, the table includes the number of fish caught, kept, and released, and the catch per unit effort (CPUE, number per 1000 hooks, calculated as the sum of fish caught divided by the sum of hooks set). Data Source: PIFSC Information Management System, Longline Logbook Data.

**Report Coverage**

Time Period 1 January-31 December 2021  
Set Types Deep sets  
Fishing Area All Areas

Number of vessels active	146
Number of trips (partial or completed)	1,679
Number of sets	22,074
Number of hooks set	62,705,595

Pelagic Management Unit Species (PMUS)	Number Caught	Number Kept	Number Released	CPUE Number Caught per 1000 Hooks
<b>PMUS</b>				
<b>Billfish PMUS</b>				
Blue marlin	5,937	5,875	62	0.09
Striped marlin	9,559	9,453	106	0.15
Shortbill spearfish	11,107	10,847	260	0.18
Swordfish	3,968	3,889	79	0.06
Other billfishes	658	647	11	0.01
<b>Total</b>	<b>31,229</b>	<b>30,711</b>	<b>518</b>	<b>0.50</b>
<b>Shark PMUS</b>				
Blue shark	97,508	0	97,508	1.56
Mako sharks	3,077	26	3,051	0.05
Thresher sharks	9,794	27	9,767	0.16
Oceanic whitetip shark	466	0	466	0.01
Silky shark	267	0	267	0.00
<b>Total</b>	<b>111,112</b>	<b>53</b>	<b>111,059</b>	<b>1.77</b>
<b>Tuna PMUS</b>				
Albacore	11,826	11,526	300	0.19
Bigeye tuna	186,090	182,656	3,434	2.97
Yellowfin tuna	77,220	74,860	2,360	1.23
Bluefin tuna	7	7	0	0.00
Skipjack tuna	17,819	17,642	177	0.28
Other tunas	1	1	0	0.00
<b>Total</b>	<b>292,963</b>	<b>286,692</b>	<b>6,271</b>	<b>4.67</b>
<b>Other PMUS</b>				
Mahimahi	29,222	28,980	242	0.47
Moonfish	7,781	7,754	27	0.12
Wahoo	31,580	31,457	123	0.50
Oilfish	9,237	7,140	2,097	0.15
Pomfret	33,154	32,735	419	0.53
<b>Total</b>	<b>110,974</b>	<b>108,066</b>	<b>2,908</b>	<b>1.77</b>
<b>Total PMUS</b>	<b>546,278</b>	<b>425,522</b>	<b>120,756</b>	<b>8.71</b>
Non-PMUS Sharks	193	0	193	0.00
<b>Total Non-PMUS</b>	<b>9,411</b>	<b>283</b>	<b>9,128</b>	<b>0.15</b>
<b>Total All Species</b>	<b>555,689</b>	<b>425,805</b>	<b>129,884</b>	<b>8.86</b>

## Active Vessels

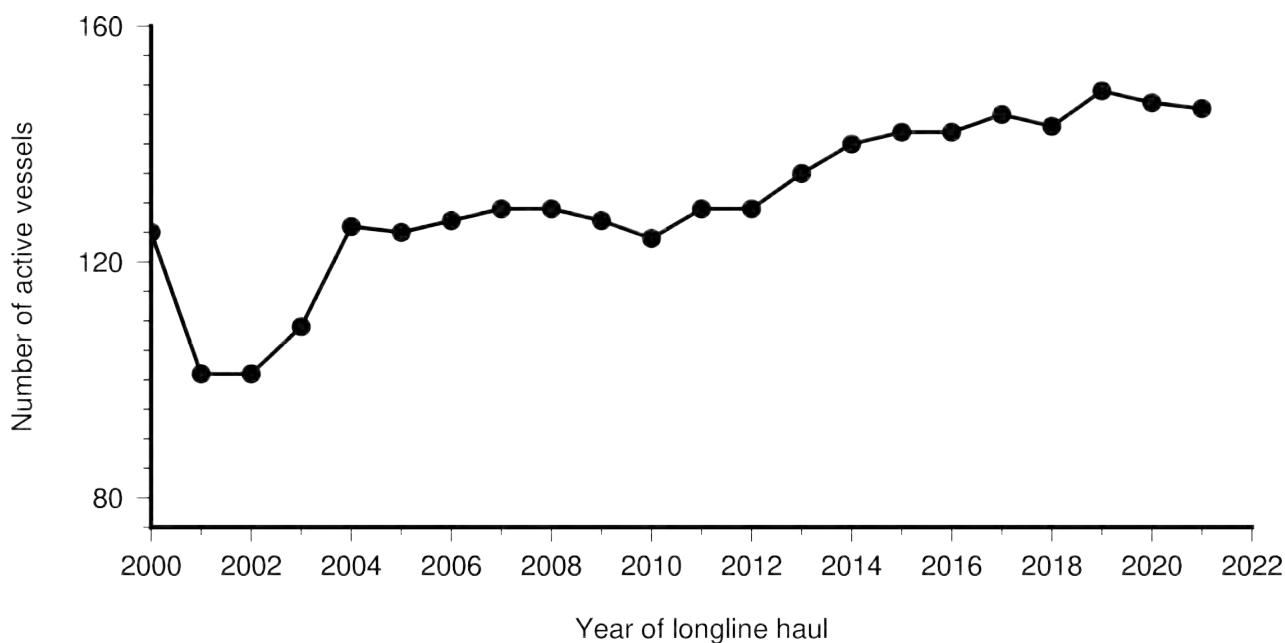


Figure 1: Number of active longline vessels based in Hawaii and California, by year for haul years 2000-2021.

## Trips

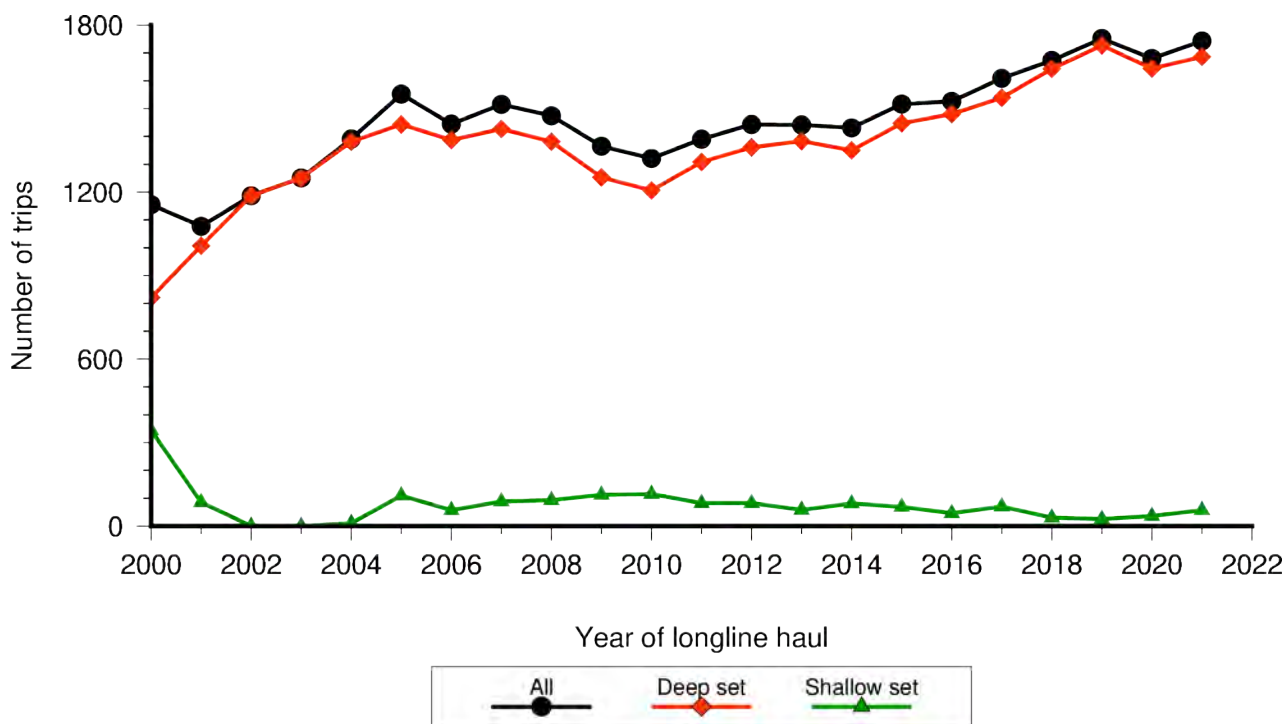


Figure 2: Number of longline trips based in Hawaii and California, by year for haul years 2000-2021.

## Sets

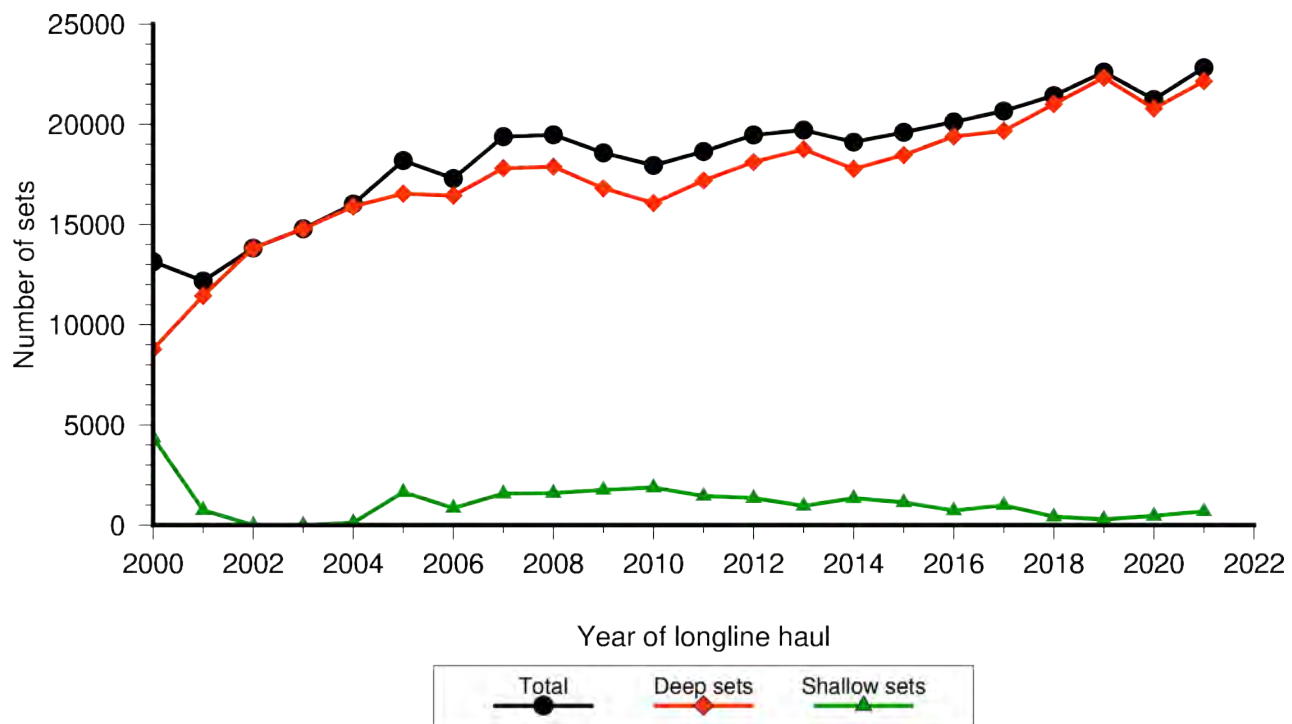


Figure 3: Number of fishing sets by vessels based in Hawaii and California, by year for haul years 2000-2021.

## Hooks Set

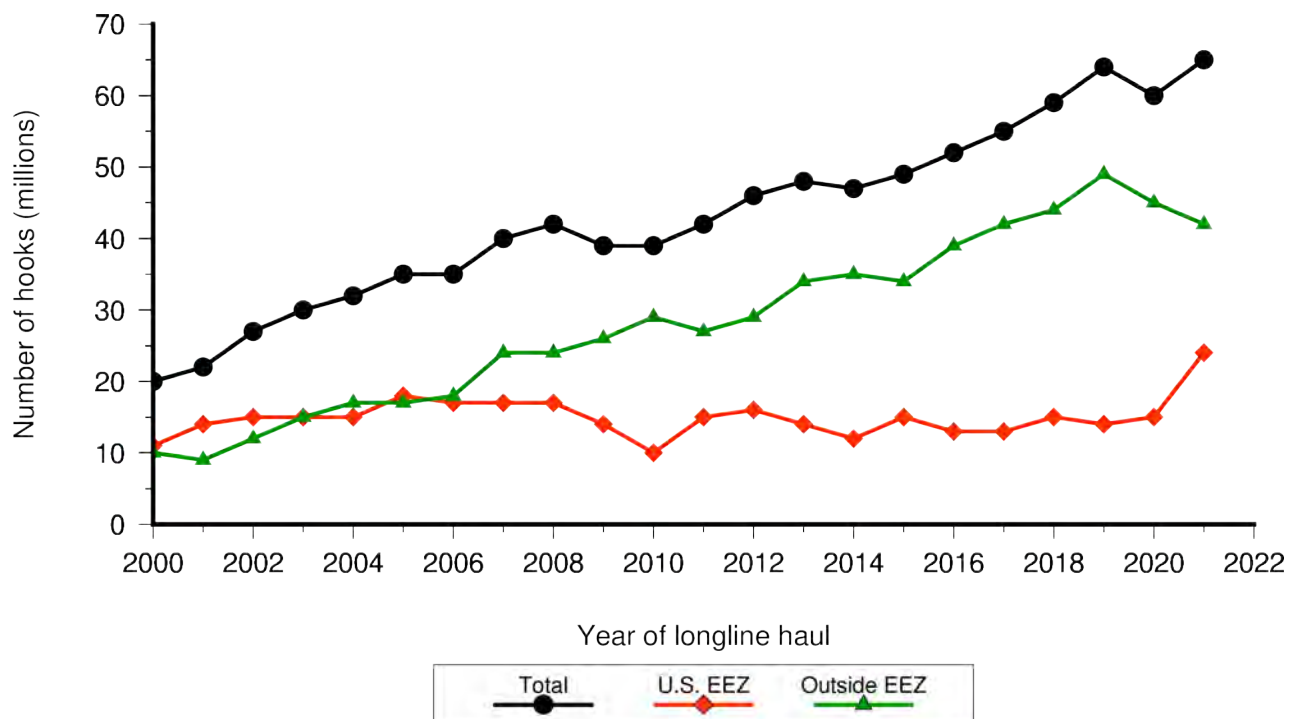


Figure 4: Number of hooks in millions, set by vessels based in Hawaii and California by year, 2000-2021.



## Tuna Catch

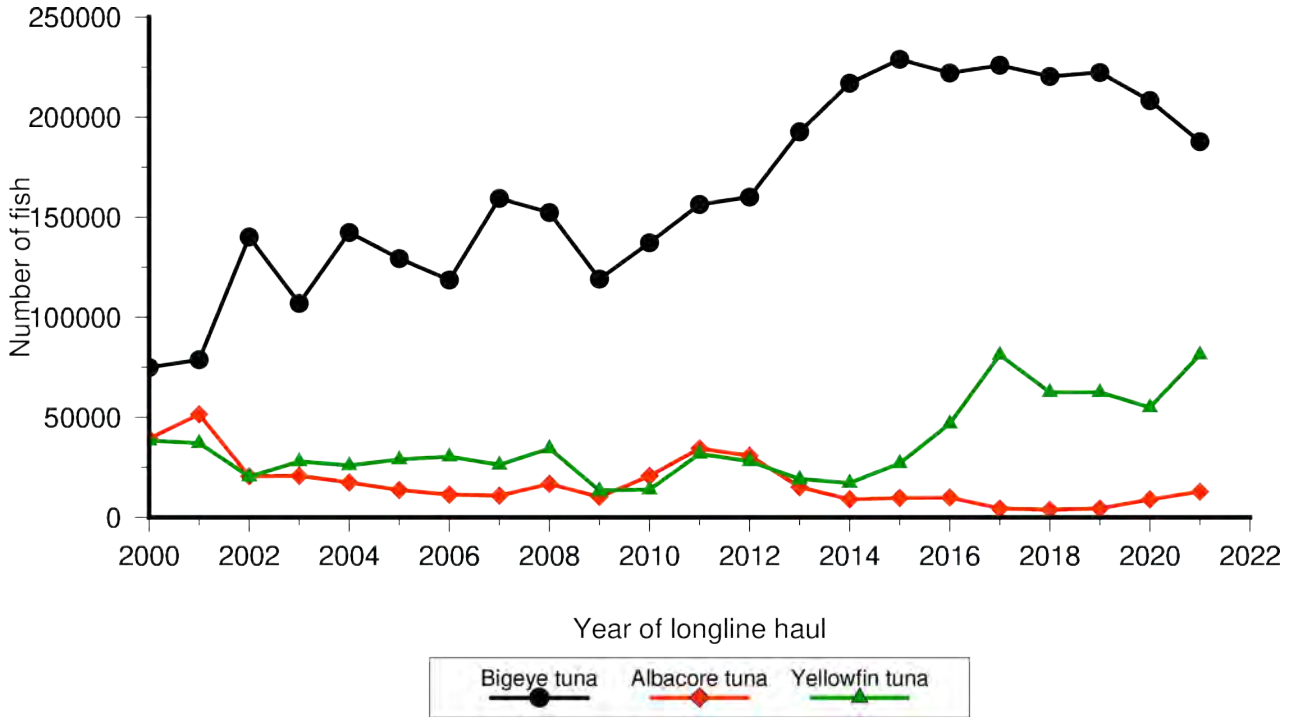


Figure 5: Annual catch (kept + released) of albacore tuna, bigeye tuna, and yellowfin tuna by longline vessels based in Hawaii and California by year, 2000-2021.

## Billfish Catch

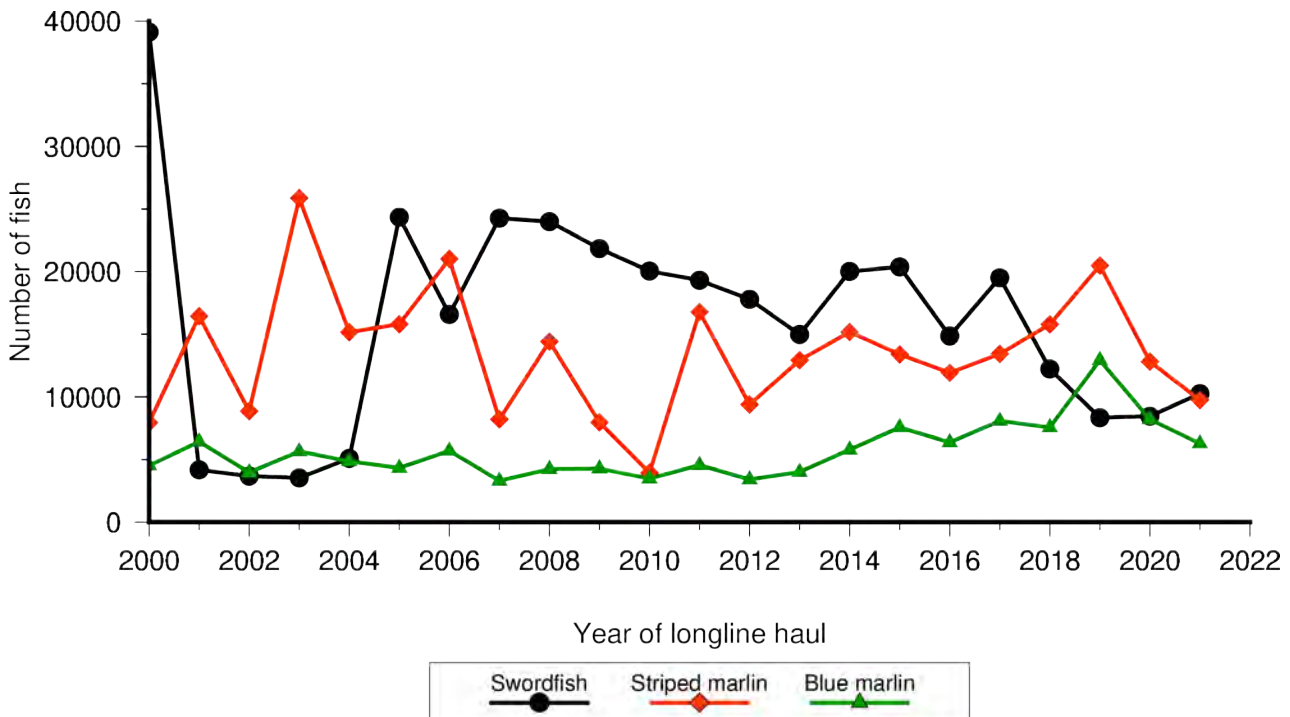


Figure 6: Annual catch (kept + released) of swordfish, striped marlin, and blue marlin by longline vessels based in Hawaii and California by year, 2000-2021.

## Shark Catch

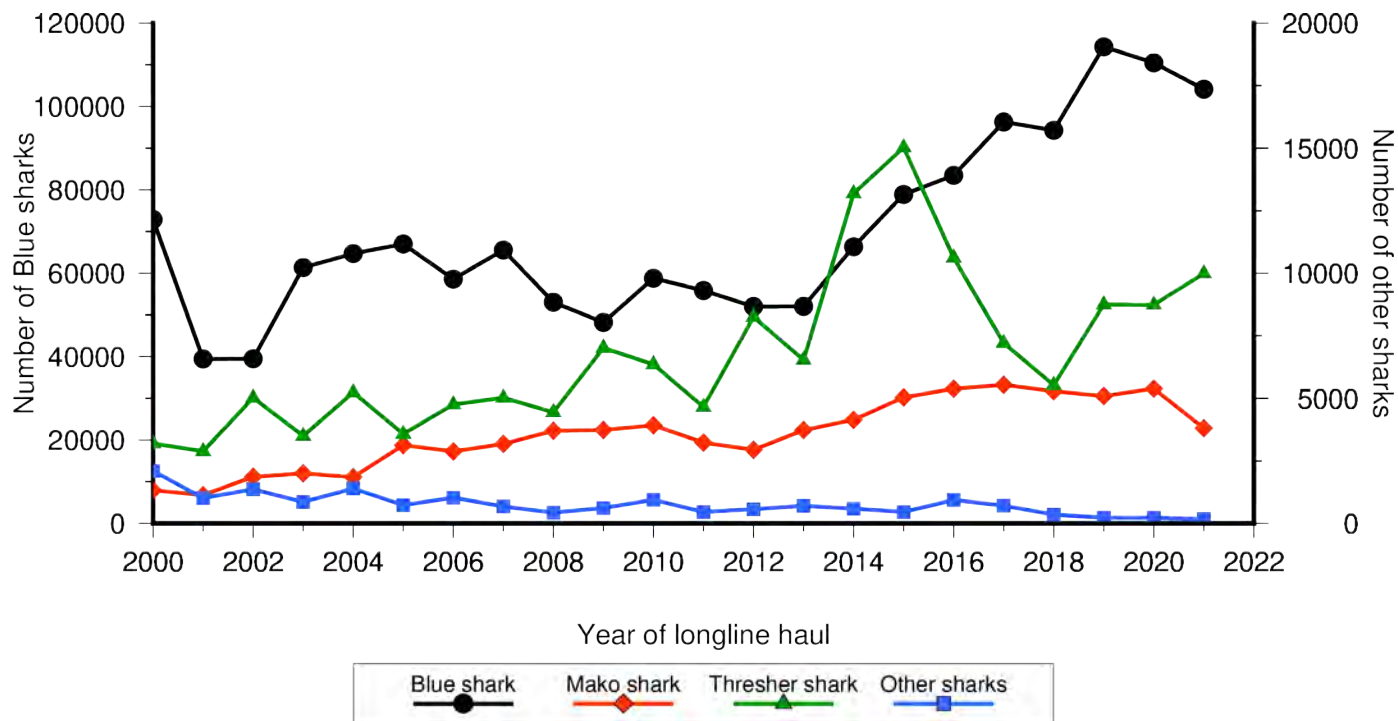


Figure 7: Annual catch (kept + released) of blue shark, mako shark, thresher shark, and other sharks by longline vessels based in Hawaii and California by year, 2000-2021.

## Other PMUS Catch

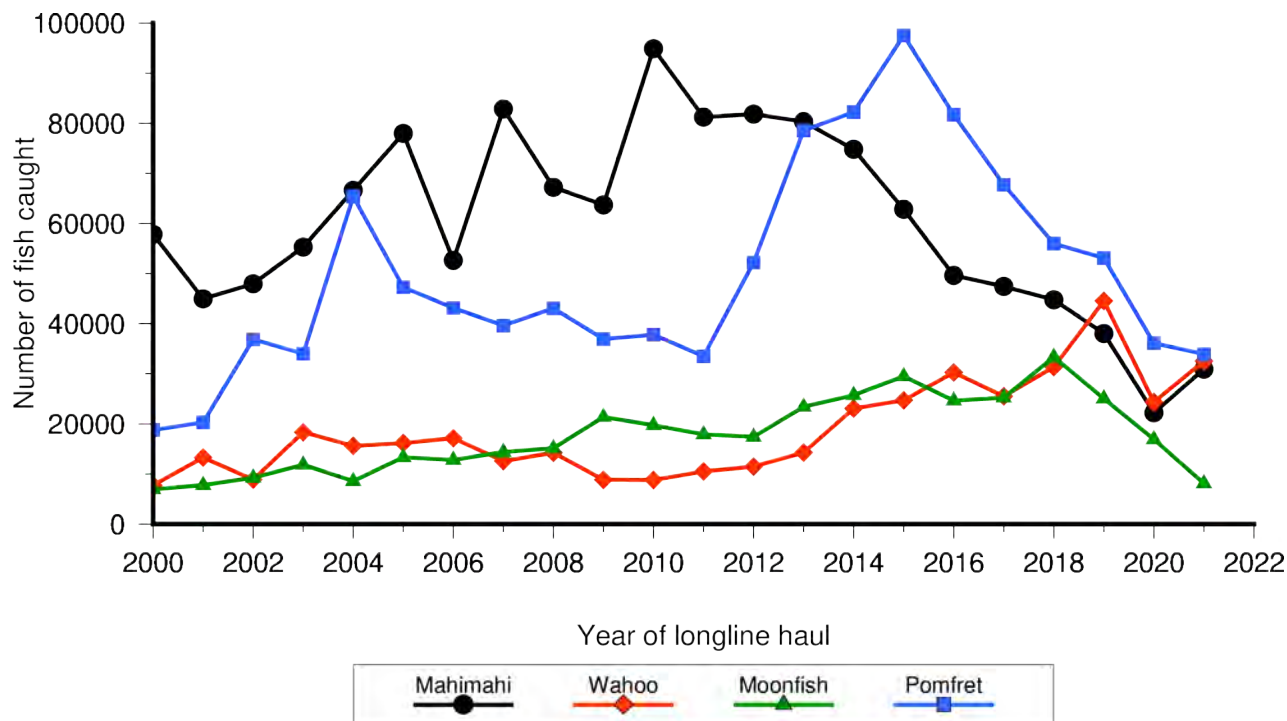


Figure 8: Annual catch (kept + released) of mahimahi, wahoo, moonfish, and pomfret by longline vessels based in Hawaii and California by year 2000-2021.

# Sets

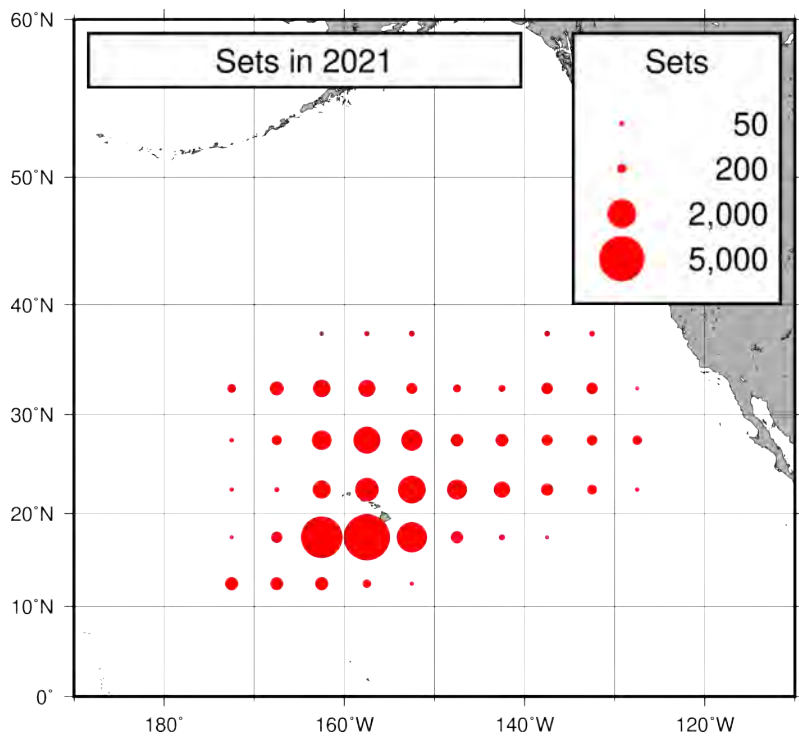


Figure 9: Spatial distribution of the total number of sets by longline vessels based in Hawaii and California fishing within the North Pacific Ocean, 2021 (provisional data).

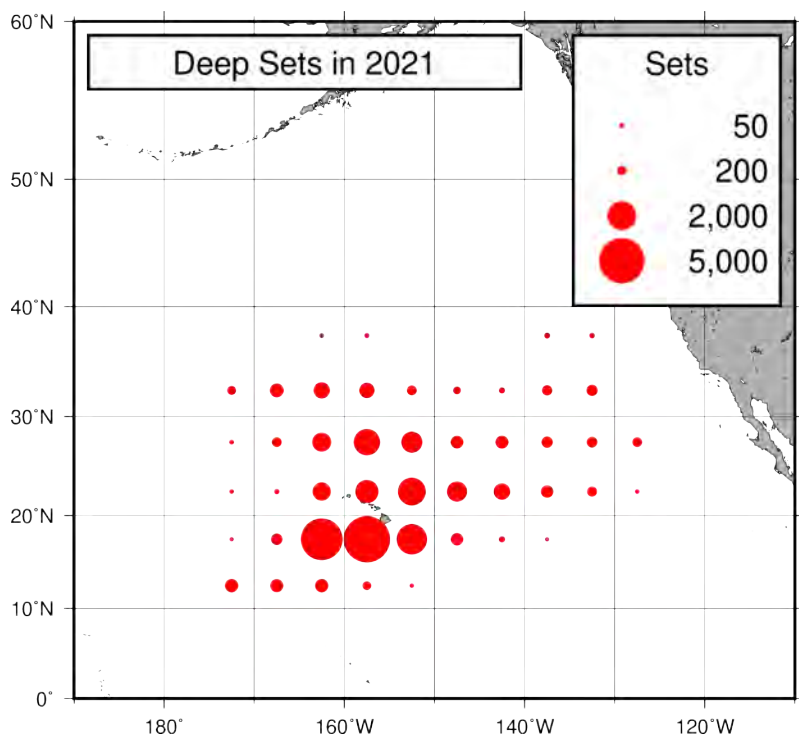


Figure 10: Spatial distribution of the number of deep-set sets by longline vessels based in Hawaii and California fishing within the North Pacific Ocean, 2021 (provisional data).

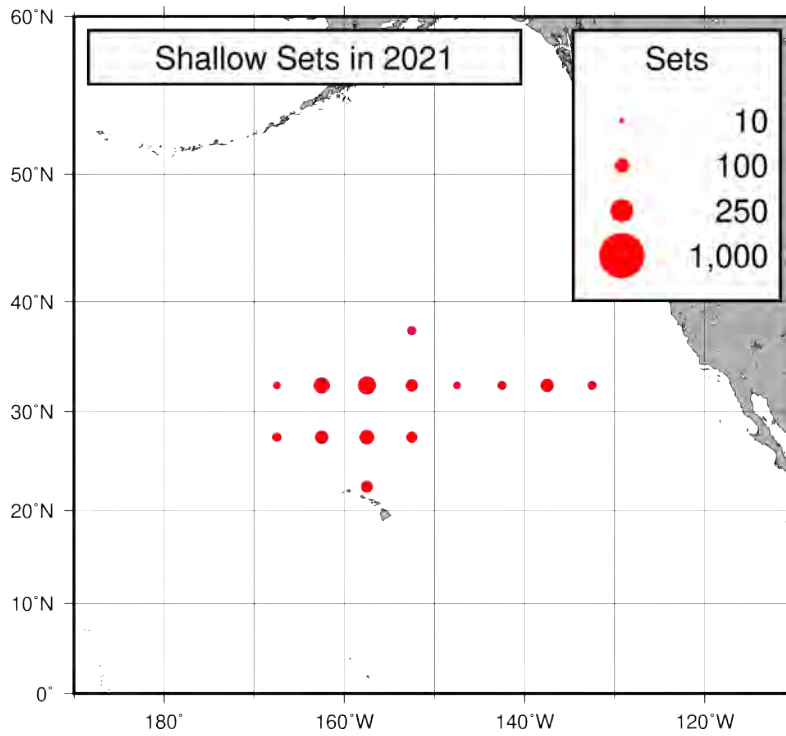


Figure 11: Spatial distribution of the number of shallow-set sets by longline vessels based in Hawaii and California fishing within the North Pacific Ocean, 2021 (provisional data).

## Total Effort

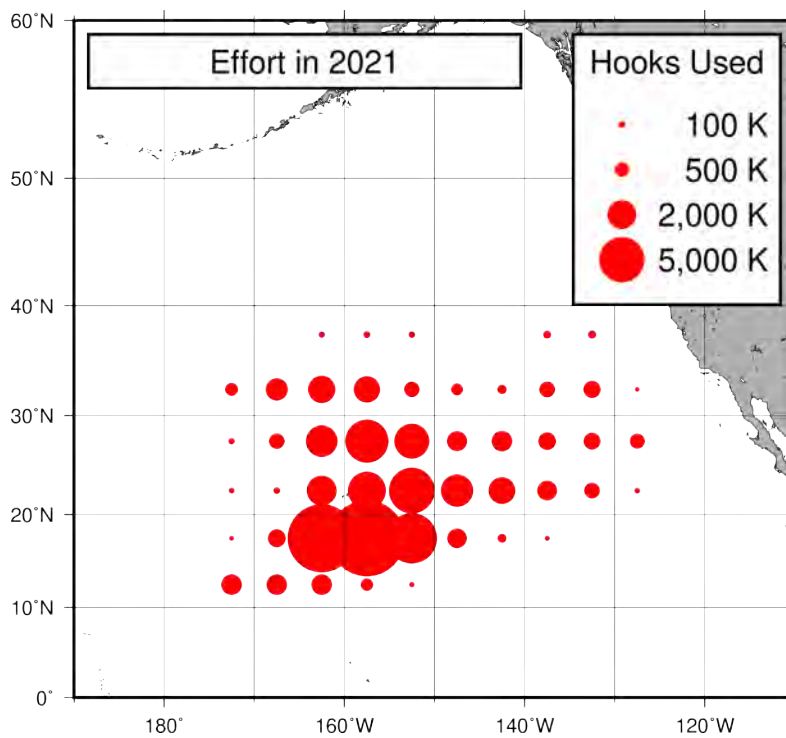


Figure 12: Spatial distribution of the total number of hooks set by longline vessels based in Hawaii and California fishing within the North Pacific Ocean, 2021 (provisional data).

## Deep Effort

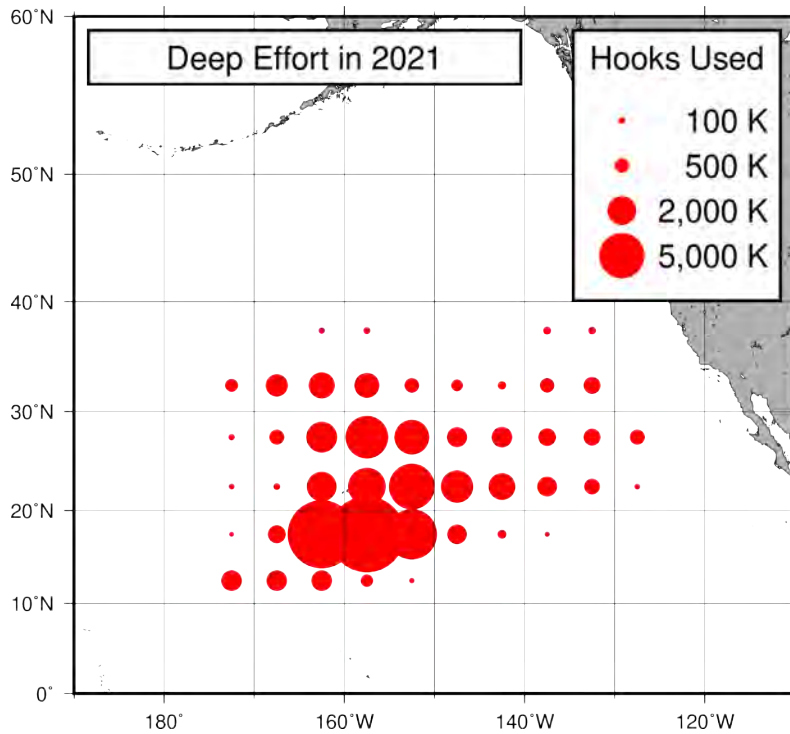


Figure 13: Spatial distribution of the number of deep-set hooks set by longline vessels based in Hawaii and California fishing within the North Pacific Ocean, 2021 (provisional data).

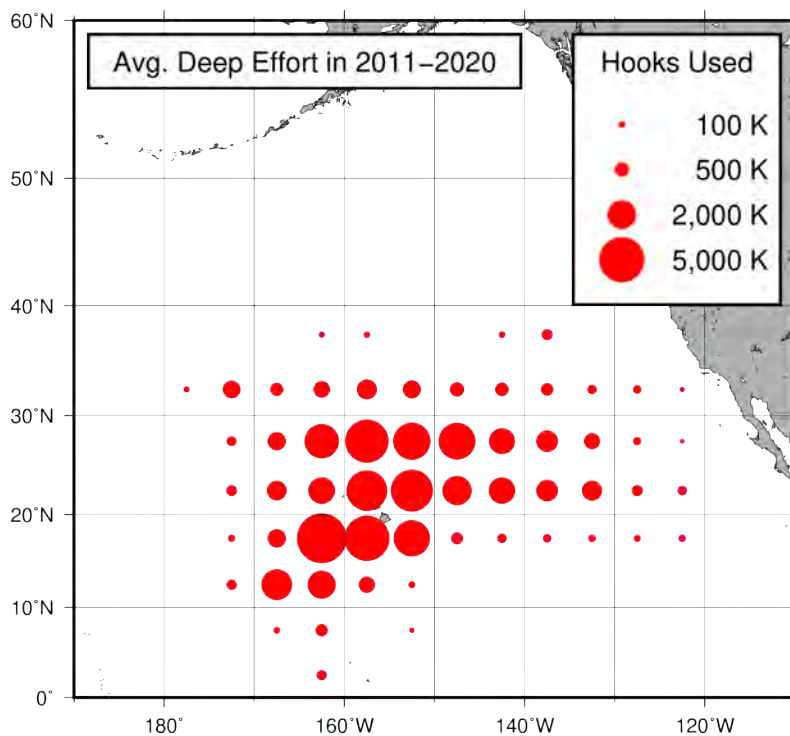


Figure 14: Spatial distribution of the average number of deep-set hooks set by longline vessels based in Hawaii and California fishing within the North Pacific Ocean, 2011–2020 .

# Shallow Effort

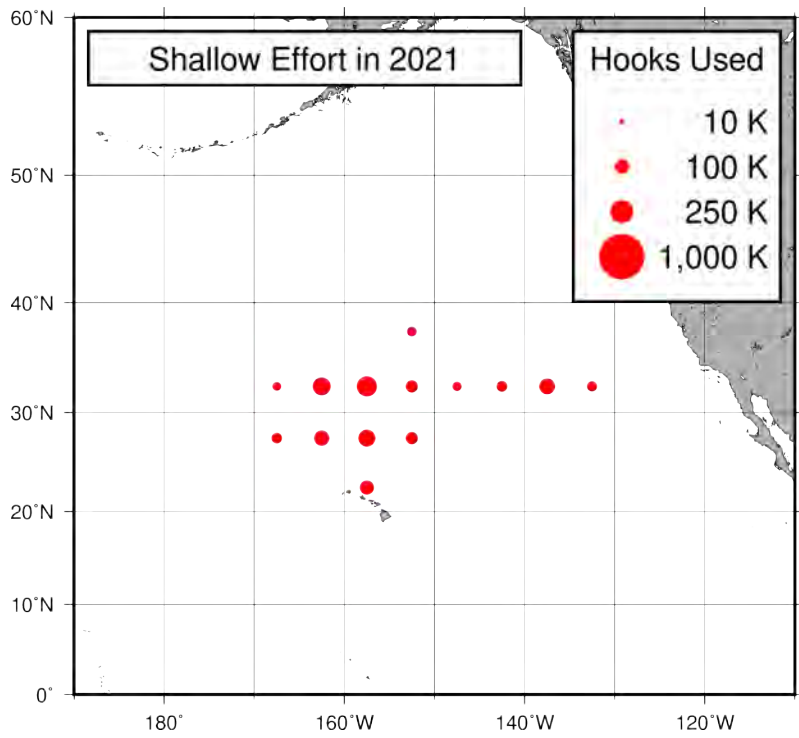


Figure 15: Spatial distribution of the number of shallow-set hooks set by longline vessels based in Hawaii and California fishing within the North Pacific Ocean, 2021 (provisional data).

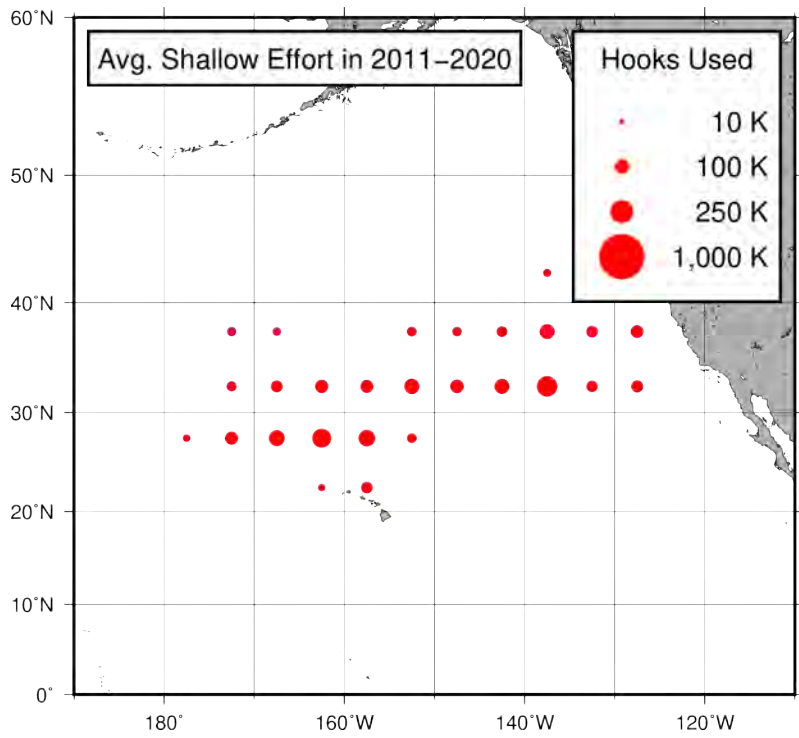


Figure 16: Spatial distribution of the average number of shallow-set hooks set by longline vessels based in Hawaii and California fishing within the North Pacific Ocean, 2011-2020 .

## Bigeye Catch

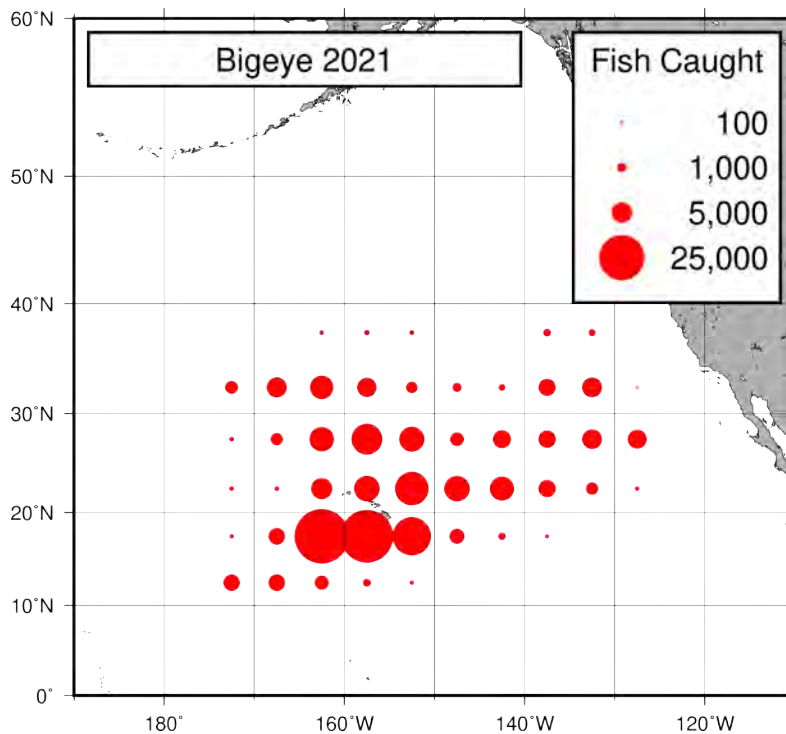


Figure 17: Spatial distribution of the total number of bigeye tuna caught by longline vessels based in Hawaii and California fishing within the North Pacific Ocean, 2021 (provisional data).

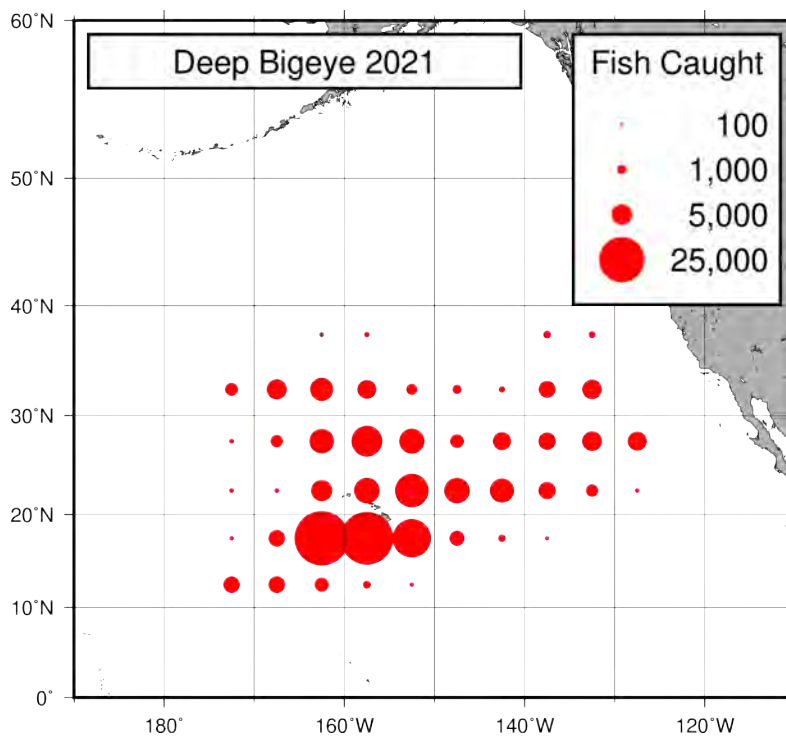


Figure 18: Spatial distribution of the number of deep-set bigeye tuna caught by longline vessels based in Hawaii and California fishing within the North Pacific Ocean, 2021 (provisional data).

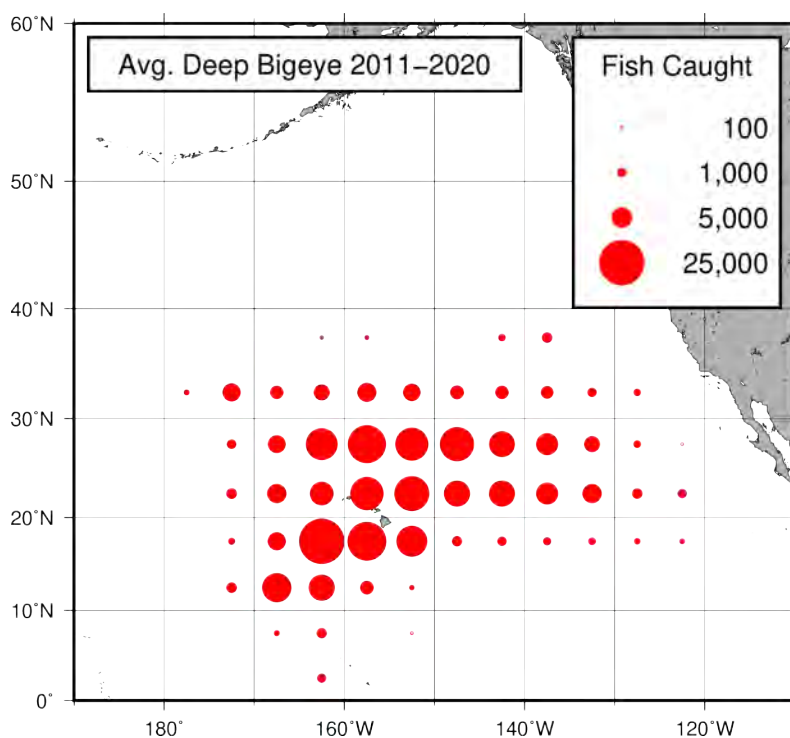


Figure 19: Spatial distribution of the average number of deep-set bigeye tuna caught by longline vessels based in Hawaii and California fishing within the North Pacific Ocean, 2011-2020.

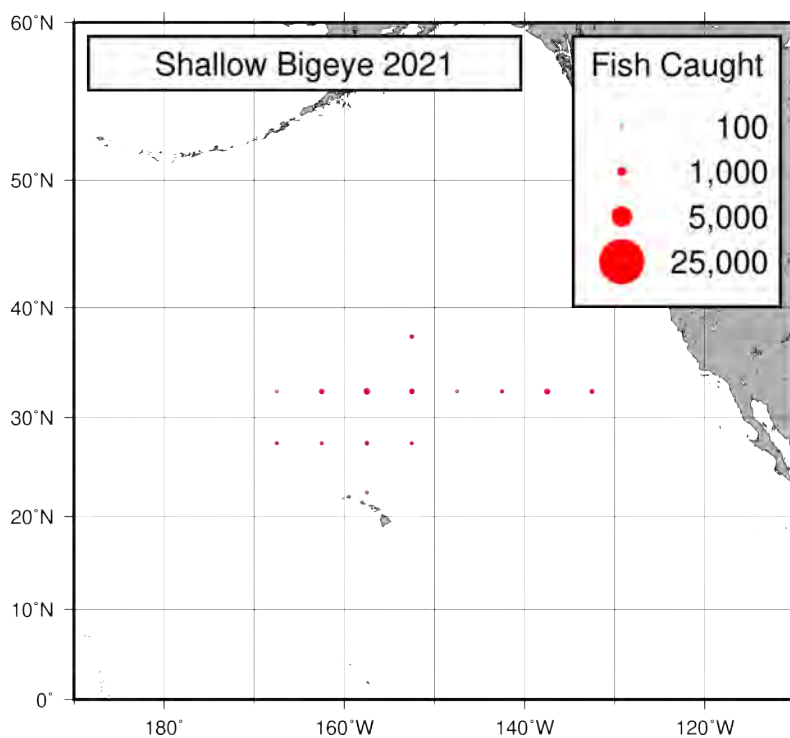


Figure 20: Spatial distribution of the number of shallow-set bigeye tuna caught by longline vessels based in Hawaii and California fishing within the North Pacific Ocean, 2021 (provisional data).



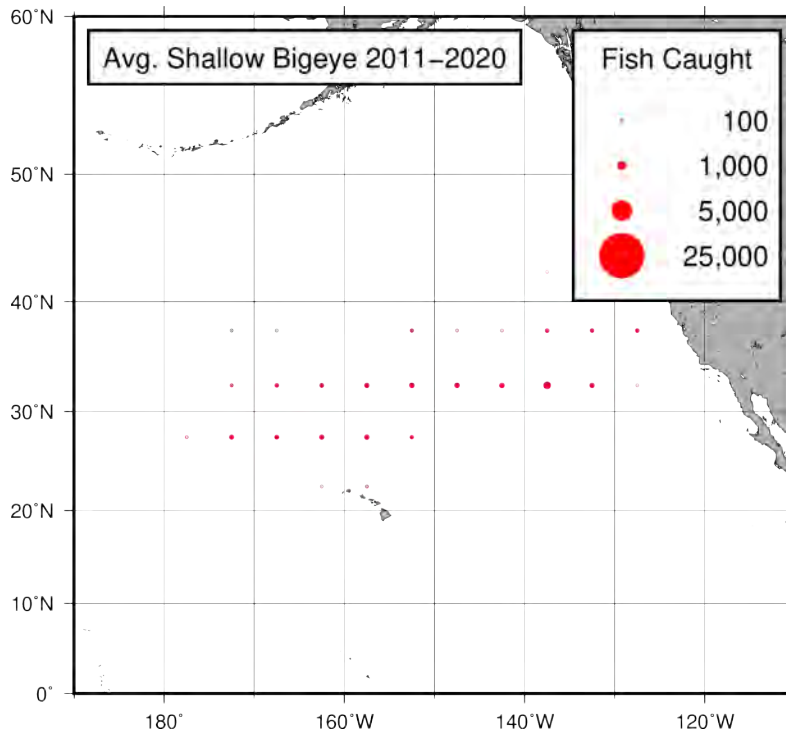


Figure 21: Spatial distribution of the average number of shallow-set bigeye tuna caught by longline vessels based in Hawaii and California fishing within the North Pacific Ocean, 2011-2020.

## Swordfish

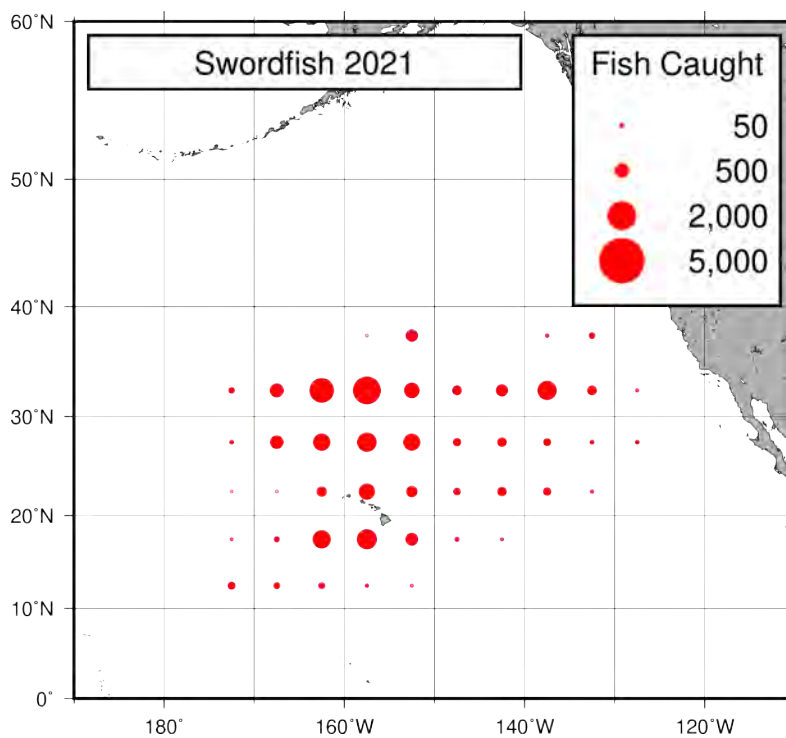


Figure 22: Spatial distribution of the total number of swordfish caught, by longline vessels based in Hawaii and California fishing within the North Pacific Ocean, 2021 (provisional data).

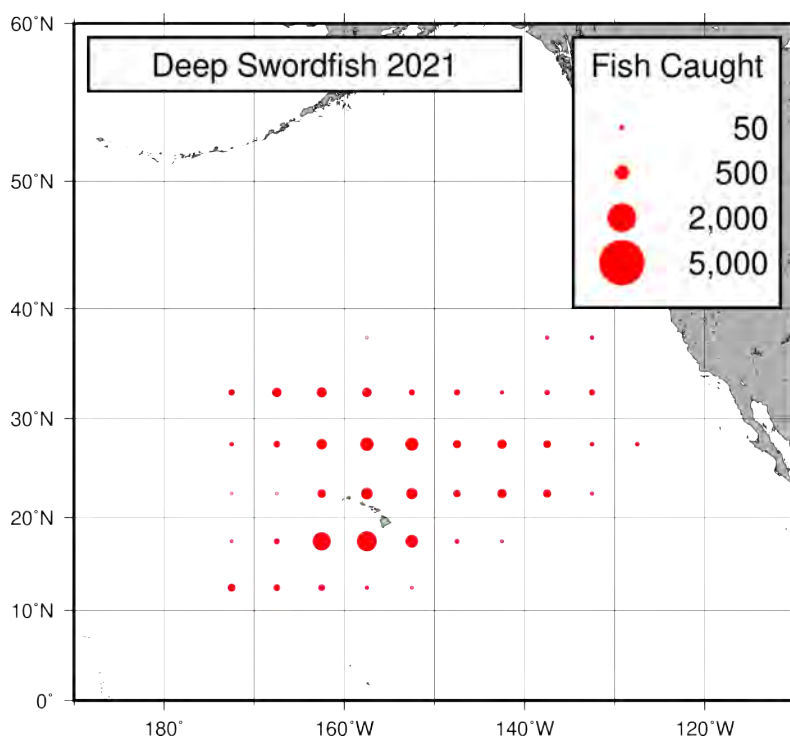


Figure 23: Spatial distribution of the number of deep-set swordfish caught, by longline vessels based in Hawaii and California fishing within the North Pacific Ocean, 2021 (provisional data).

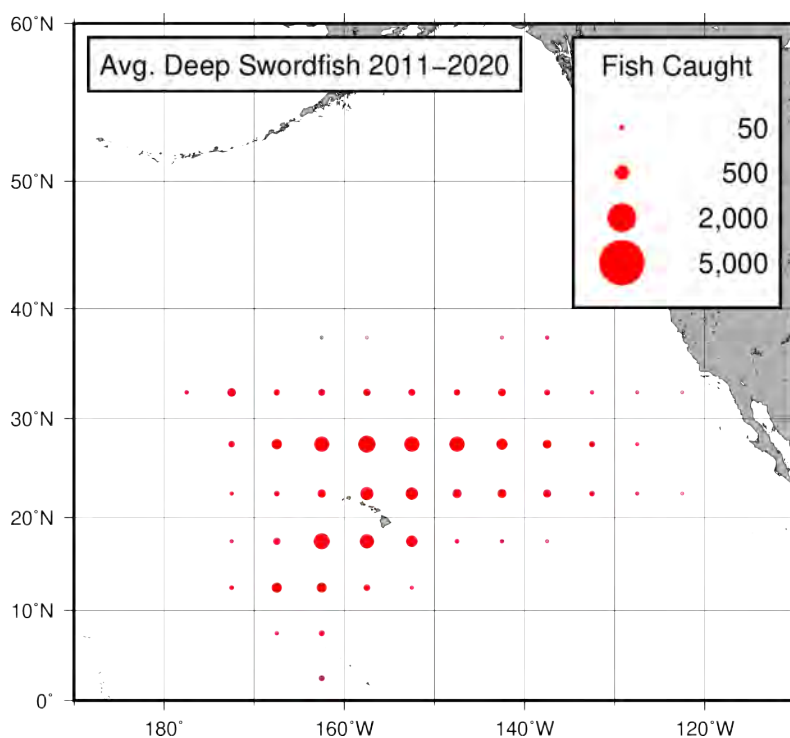


Figure 24: Spatial distribution of the average number of deep-set swordfish caught, by longline vessels based in Hawaii and California fishing within the North Pacific Ocean, 2011-2020.

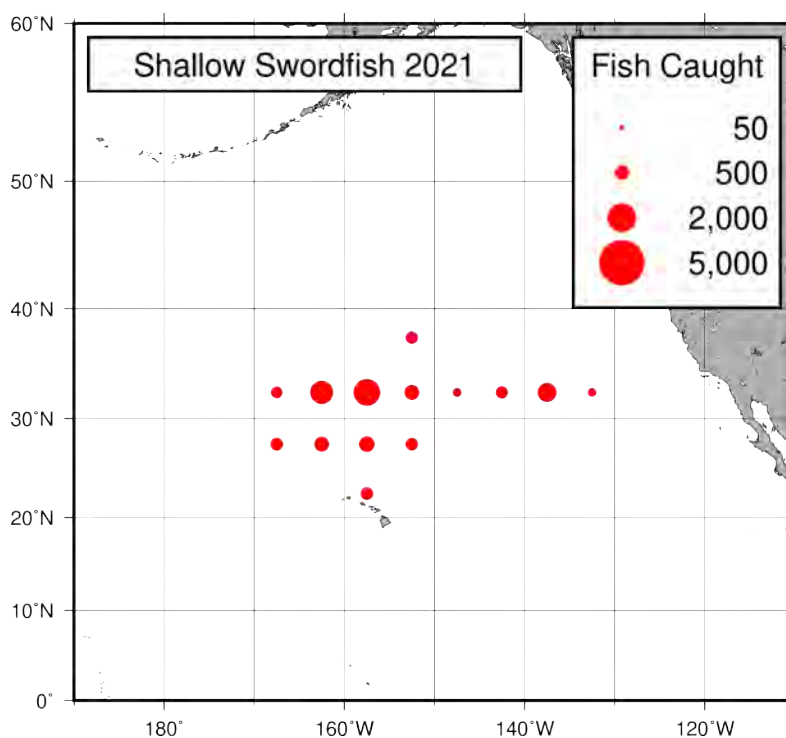


Figure 25: Spatial distribution of the number of shallow-set swordfish caught, by longline vessels based in Hawaii and California fishing within the North Pacific Ocean, 2021 (provisional data).

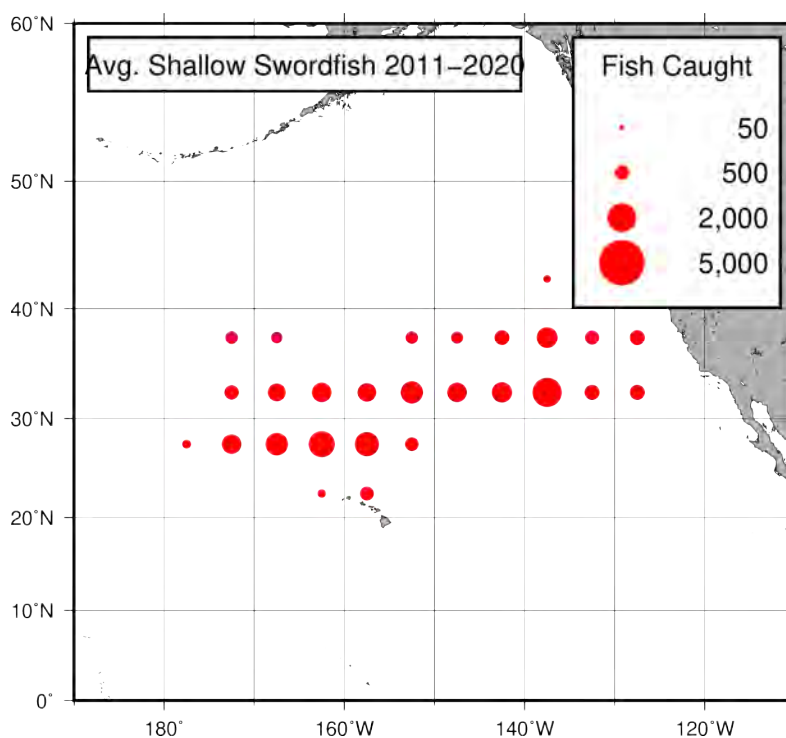


Figure 26: Spatial distribution of the average number of shallow-set swordfish caught, by longline vessels based in Hawaii and California fishing within the North Pacific Ocean, 2011-2020.