

LIMITED  
ENTRY  
ATTRITION  
RATES  
GOU. STUDY  
GROUP

Age of Gear License Holders

The median age of all commercial gear license holders in 1971 was 39. At present, we do not have sufficient data to enable us to determine age trends. The only accurate numbers available are for the years 1970 and 1971, broken into extremely broad age groups. In 1971, when the total number of gear license holders showed a 0.4% drop from the previous year, the two middle age groups showed the least decline.

Age Groups	1-17	18-39	40-64	65 & Up
1970	806	4420	4622	492
1971	787.	4421	4579	471
Number Change	-19	+1	-43	-21
Percent Change	-2.4%	no % change	-0.1%	-4.3%

Age vs. Type of Gear License

The relationship between age of license holder and type of gear is explored in the following two tables.

The first table shows how the population of gear license holders is distributed according to age.

(Table reads across the page)

Age Distribution of Gear License Holders, 1971

Gear Type	Total Pop.		1 to 17	18 to 39	40 to 64	65 & Up
	Numbers	%				
All Gears	10258 <sup>a/</sup>	100	7.7%	43.1%	44.6%	4.6%
Purse Seined	1319	100	.4	45.9	50.4	3.3
Drift Net	4737	100	4.3	45.6	47.1	3.1
Set Net	3056	100	17.6	42.0	36.1	4.2
Troll	2409	100	3.0	39.6	49.7	7.6

a/ The numbers in this column add to more than the total because some people held more than one type of gear license.

The data is grouped so broadly that it is not possible to work out a median age for each gear. Still, one can see that the ages of set netters average considerably younger than the ages of drift netters. Possibly the set net fishery is partly worked by kids who grow up to be drift netters.

A higher percentage of trollers are over 65 than is true for any other group.

The second table shows the gear preferences of each age group. Sixty five per cent of the youngest group have set gillnet licenses.

Gear Preferences by Age Group, 1971

Age Groups	Total Population		Gear Types			
	Numbers	%	Purse Seine	Drift Net	Set Net	Troll
All Ages	10258	100%	11.4%	41.1%	26.5	20.9%
1 to 17	787	100	0.6	24.7	65.9%	8.8
18 to 39	4421	100	12.1	43.1	25.7	19.1
40 to 64	4579	100	12.8	42.9	21.2	23.0
65 & Up	471	100	8.6	29.1	25.7	36.7

## Turnover Rates

Turnover rates of commercial salmon gear license holders are surprisingly high. Twenty nine percent of gear license holders in 1969 failed to buy licenses in 1970, and 30.6% of 1970 license holders failed to renew in 1971. These rates are based on a count of persons, not on a count of licenses. Hence of all the persons who held licenses of any kind or quantity in 1970, 30.6% failed to buy any license at all in 1971.

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### Turnover Rates, 1969 to 1970 and 1970 to 1971

All types of Salmon Gear Licenses  
(Table reads across)

	Total Licenses	Dropped	Attrition Rate	Added	Accession Rate	Total Licenses
1969	9870	2863	29.0%	3295	33.4%	10302 '70
1970	10302	3156	30.6%	3112	30.2%	10258 '71

It can be expected that the drop-out rate of a particular group of license holders will decline in succeeding years. For example, the 1969 group of license holders will not lose members at the rate of twenty nine or thirty percent a year. Two factors will operate here:

- 1) Some of the '69ers who dropped out in 1970 will come back in later on.
- 2) A group of persistent license holders will appear from whom attrition is smaller in the third and fourth years than it was in the second year.

At present the only statistics available for a several-year span are for 1969 licenses matched against the 1971 list.

If the 1969 group had continued to lose members at the same rate each year, we would have expected only 4975 of them remaining in 1971 for a total attrition of 50% over a three-year period. Instead, 6147 remained, for an attrition of 37.4% in three years.

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Turnover Rates, 1969 to 1971

All Types of Gear Licenses

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Total Licenses 1969	Dropped	Attrition Rate	Added	Accession Rate	Total License 1971
9870	3696	37.4%	4084	41.4%	10,258

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The subject of long-term attrition rates, and the question of intermittent license holders deserve further computer analysis.

Along the same lines, it would be useful to know the total number of different individuals who have held gear licenses in the last three, five or ten years. And out of that total, how many bought licenses in two or more years? This would give us an idea of the population of persons who could establish a history of past participation in the fishery.

We might also try to identify a population of highly persistent fishermen who appear nearly every year.

Analysis of Gear License Turnover Rates  
by Age Groups<sup>1/</sup>

Turnover rates are much higher among younger people. We believe that the turnover rates for age groups shown by our computer program are somewhat inflated. However, the direction of the trend can safely be accepted.

The computer analysis shows among residents under 18, 65% of 1970 licenses were not renewed in 1971. Non-renewal dropped to 32% among residents age 18 to 39, to 22% among those age 40 to 64, and to 26% among those 65 and older.

Among non-residents, 63% of those age 17 or younger holding licenses in 1970 did not renew them in 1971. Non-renewal dropped to 39% among those age 18 to 39, to 25% among those age 40 to 64, and to 36% among those 65 and older.

Over a three-year span, 1969 to 1971, non-renewal rates by age group look like this:

Age Group	1 to 17	18 to 39	40 to 64	65 & Up
Res.	60%	40%	30%	32%
Non-Res.	90%	41%	29%	35%
All	81%	40%	30%	32%

1/ The age categories used in this analysis - 1 to 17, 18 to 39, 40 to 64 and 65 and up are extremely broad. Re-programming of the data should allow an analysis by finer age groups.

#### Turnover Rates in Different Types of Gear

The lowest turnover rates are found among holders of purse seine licenses. This is probably due in part to the relatively large investment required by this type of boat and gear. Another factor is that very few people under 18 hold purse seine licenses. People under 18 years of age are the most volatile in regard to turnover rates, but only nine people in that age group held seine licenses in 1970.

The highest turnover rates are among set netters and trollers, with drift gillnetters falling somewhere in between.

Again a caveat is required in regard to the turnover rates we received from the computer. In the table below, for instance, the numbers of ~~set~~ licenses shown for 1970 are not quite correct. However, it appears that the turnover rates shown for gears do not seriously deviate from the actual.

#### Turnover Rates, 1970 to 1971

by Type of Gear<sup>1/</sup>

Gear	Total Licenses 1970	Dropped	Attrition Rate	Added	Accession Rate	Total Licenses 1971
<u>Purse Seine</u>						
Res.	944	172	18.2%	182	19.3%	954
Non-Res.	386	80	20.7	59	15.3	365
All	1330	252	18.9	241	18.1	1319
<u>Drift Net</u>						
Res.	3193	733	23.0%	867	27.2%	3327
Non-Res.	1399	348	28.9	359	25.7	1410
All	4592	1081	23.5	1226	26.7	4737
<u>Set Net</u>						
Res.	2703	844	31.2%	921	34.1%	2760
Non-Res.	311	151	48.6	116	37.3	276
All	3014	995	33.0	1037	34.4	3056
<u>Troll</u>						
Res.	2265	809	35.7%	655	28.9%	2111
Non-Res.	381	196	51.4	113	29.7	298
All	2646	1005	38.0	768	29.0	2409

1/ Fishwheel permits are omitted from this analysis. Their numbers are few and their contribution to the commercial catch is even smaller.