

This analysis uses nationally collected landings data for the for the Western Pacific (Hawai'i) region, downloaded from the NOAA FOSS site <https://foss.nmfs.noaa.gov/apexfoss/f?p=215:200:::>.

```
## [[1]]
## [1] "When back calculated, Q_{i,t} did not equal V_{i,t}/PI_{i,t}"
##
## [[2]]
## [1] "When back calculated, Q_{i,t} did not equal V_{i,t}/PI_{i,t}"
##
## [[3]]
## [1] "When back calculated, Q_{i,t} did not equal V_{i,t}/PI_{i,t}"
##
## [[4]]
## [1] "When back calculated, Q_t did not equal V_t/PI_t"
##
## [[5]]
## [1] "When back calculated, ln(Q_t/Q_{t-1}) = did not equal sum( ( frac{R_{i, t} - R_{i, t-1}}{2}) *
##
## [[6]]
## [1] "Out of 51 columns, 0 of species V columns are completely empty, 0 of species Q columns are comp
```

Species in Each category by Common Name

```
## $Shellfish
## [1] "LIMPETS **" "SQUIDS **" "SQUID, JUMBO "
## [6] "CRABS **" "SHRIMP, DENDROBRANCHIATA **" "SHRIMP, MARINE, OTHER **"
## [11] "LOBSTER, SLIPPER **" "URCHINS, SEA **" "SEA CUCUMBER, UNCLASSIFIED **"
##
## $Other
## [1] "SEAWEEDS, OTHER **" "CORALS **" "FINFISH **" "TARPON, HAWAIIAN " "MARLIN, BLA
##
## $Finfish
## [1] "SHARKS, UNCLASSIFIED **" "SHARKS, THRESHER **" "SHARK, MAKOS **" "SHARK, OCE
## [6] "RAYS **" "EELS **" "HERRINGS **" "HERRING, R
## [11] "FLYINGFISHES **" "ALFONSIN " "SQUIRRELFISHES **" "OPAH "
## [16] "GROUPERS **" "SPOTTED CABRILLA " "SEA BASS, GIANT " "GLASSEYE S
## [21] "JACK, BLACK " "SCAD, BIGEYE " "AMBERJACK **" "JACK, ALMA
## [26] "RUNNER, RAINBOW " "DOLPHIN GENUS **" "SNAPPERS **" "SNAPPER, R
## [31] "EMPERORS **" "GOATFISHES **" "SEA CHUBS **" "BUTTERFLYF
## [36] "POMFRETS, UNCLASSIFIED **" "MULLETS **" "MULLET, STRIPED (LIZA) " "BARRACUDAS
## [41] "PARROTFISHES **" "SURGEONFISHES **" "SNAKE MACKEREL " "BONEFISH "
## [46] "TUNA, SKIPJACK " "TUNA, LITTLE TUNNY " "TUNA, KAWAKAWA " "MACKEREL, (
## [51] "TUNA, ALBACORE " "TUNA, BLUEFIN PACIFIC " "TUNA, YELLOWFIN " "TUNA, BIGE
## [56] "MACKEREL, FRIGATE " "SWORDFISH " "BILLFISHES **" "SAILFISH "
## [61] "SPEARFISHES **" "LEATHERJACKETS **" "PUFFER GENUS **" "OCEAN SUNF
## [66] "LARGEMOUTHED LEATHERSKIN "
```

Where are there negative values?

X	Tsn	Year	State	AFS.Name	Pounds	Dollars	Collection	Confidentiality	category.tax
51314	165647	2014	New Jersey	MUMMICHOG	-321	-4494	Commercial	Public	Actinopteryg
72470	168791	2014	Connecticut	DOLPHINFISH	-1	-2	Commercial	Public	Actinopteryg

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X	Tsn	Year	State	AFS.Name	Pounds	Dollars	Collection	Confidentiality
429	11272	2017	Rhode Island	SEAWEED, KELP **	-1	7390	Commercial	Public
6543	79916	2015	New York	MUSSEL, SLIPPERSHELL	-1	NA	Commercial	Public
8386	81495	2010	Maryland	CLAM, QUAHOG **	-29	1506	Commercial	Public
25465	160502	2009	Virginia	SHARK, BONNETHEAD	-5	1011	Commercial	Public
28827	161030	2007	New Jersey	FINFISH **	-8	NA	Commercial	Public
51314	165647	2014	New Jersey	MUMMICHOG	-321	-4494	Commercial	Public
72470	168791	2014	Connecticut	DOLPHINFISH	-1	-2	Commercial	Public
92811	172412	2014	Connecticut	MACKEREL, CHUB	-1	NA	Commercial	Public
111150	551570	2017	Connecticut	SHRIMP, BROWN	-1	229	Commercial	Public