

FROM TOM PEARSON

See a separate Excel spreadsheet for a recent run on the landings of smelt, squid, and octopus in the GOA for 2002 to date. Although there are no at-sea discards for smelt and squid, I wouldn't expect them as fishermen wouldn't take the trouble to sort them out. I wouldn't expect any discards of octopus (except on trawlers) in the pot fishery as they're valuable.

Smelt (eulachon) - In comparison with other years the catch of smelt this year doesn't look that high overall, it's just that once in a while a relatively high amount is incidentally caught over a short period. In this case the pollock fishery in 620 this year. I can remember several instances of this in the past in different locations and times of year around Kodiak. So I don't think area closures would work well. It's likely to happen again in the future, but since it's such a random event nobody could predict when or where. I think the Oscar Dyson EIT survey this year in the GOA also found a big increase in the amount of smelt. Since most of smelt is incidentally caught in the pollock fisheries I compared the annual GOA pollock catch with the annual GOA smelt catch overall - it's usually under 1 % annually. Maybe raising the MRA for forage fish to 5 % would reduce the number of overages the Office of Enforcement has to deal with. Some of the pollock landings here were 30 to 40 % eulachon. Rob Swanson didn't see any landings with more than 5 % smelt, but Ken Hansen has the fish tickets to prove it. There's always some smelt taken in the pollock fishery in all areas throughout the year.

Squid- I'd favor moving squid into forage fish category in both the BSAI and GOA based on the position it occupies in the food chain. The large catch of squid in 2006 is another example of a highly localized, seasonal incidental catch in the pollock fishery in the Shelikof (Area 620) during the roe season. On average the annual catch of squid is less than 1 % of the annual pollock catch in the GOA, the exception being 2006. In 2006 some of the landings were as high as 15 %. So if squid were moved into the forage fish category a MRA of more than 2 % fish would seem appropriate. This year the incidental catch of squid was back down to average levels. There's always some squid taken in the pollock fishery in all areas throughout the year. See Scott Miller's figure of squid catch density in the GOA in his Evaluating Potential Fishery Effects of Changes to Other species Management.

Jon McCracken prepared a very interesting table for the arrowtooth MRA (Table 20 - attached) which showed the percentiles of incidental catch of groundfish in the arrowtooth fishery. I think a good way of setting an MRA for forage fish (and possibly squid and octopus) would be to prepare a similar table. We might use that to see what an appropriate MRA would be. I'd probably like to see a MRA high enough to cover 95 % of observed hauls.

Octopus- I've seen some octopus in bottom trawl tows well outside 3 nm in the EEZ but never more than a few animals, considerably below one percent of the total catch. Most octopus are taken in the Pacific cod fisheries by vessels using pot gear, so I've compared the annual catch of octopus in the GOA with the annual Pacific cod catch with pot gear (using the catch from both the State and Federal fisheries) in the GOA. Recently the overall catch in the pot cod fishery has been less than 1 %. That said there is some interest in a directed fishery for octopus so I'd be in favor of removing octopus from the FMPs and deferring management to the State of Alaska.

Table 20. Proportion of incidental catch of secondary species in observed trawl hauls targeting arrowtooth flounder in the Gulf of Alaska, 2003-2006

	Hauls with		Average	25th	50th	75th	90th	95th	100th
Species	species	Tons	Bycatch Rate	Percentile	Percentile	Percentile	Percentile	Percentile	Percentile
Arrowtooth Flounder	2536	11,004	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Flathead Sole	2229	876	7.96%	0.0163	0.0462	0.1440	0.3957	0.6318	0.9918
Pacific Cod	1937	843	7.66%	0.0267	0.0705	0.1819	0.4072	0.6024	0.9927
Rex Sole	2257	790	7.18%	0.0139	0.0560	0.1854	0.3998	0.5970	0.9960
Northern Rockfish	493	40	0.37%	0.0045	0.0081	0.0233	0.0755	0.1419	0.9298
Pacific Ocean Perch	911	217	1.97%	0.0053	0.0155	0.0619	0.2102	0.3744	0.9953
Shortraker/Rougheye Rockfish	792	84	0.77%	0.0063	0.0125	0.0348	0.1356	0.3605	0.9944
Thornyhead Rockfish	252	36	0.33%	0.0036	0.0203	0.1159	0.3847	0.6581	0.9712
Pollock	1013	220	2.00%	0.0083	0.0240	0.0752	0.2142	0.3713	0.9989
Sablefish	938	189	1.72%	0.0075	0.0188	0.0573	0.1945	0.3616	0.9841
Skates	499	155	1.41%	0.0214	0.0541	0.1253	0.2580	0.3807	0.9560
Shallow-water Flatfish	765	148	1.35%	0.0051	0.0138	0.1011	0.3823	0.6750	0.9979
Deep-water Flatfish	1152	107	0.98%	0.0062	0.0133	0.0333	0.0824	0.1434	0.9459
Other Species	398	69	0.62%	0.0117	0.0314	0.0993	0.2458	0.4756	0.9977
Forage Fish	78	26	0.23%	0.0314	0.0712	0.1281	0.2321	0.3591	0.5135
Atka Mackerel	188	14	0.13%	0.0054	0.0093	0.0213	0.0650	0.2118	0.7749

Source: NORPAC observer data

Note: The 100th percentile denotes the tow with the highest ratio of incidental species catch to arrowtooth flounder catch. For example, for pollock, the 100th percentile was 0.9989. That tow had 0.9989 pounds of pollock for every 1 pound of arrowtooth flounder, a nearly 1:1 ratio.