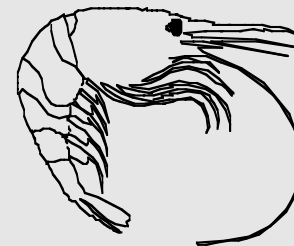




~15TH~  
**Annual Pink Shrimp Review**

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**TO: OREGON SHRIMP INDUSTRY**  
**FROM: Bob Hannah and Steve Jones**  
**Subject: Opening of 2004 Commercial Fishery**  
**Date: 16 February 2004**

The 2004 shrimp season will begin 1 April and extend through 31 October. This newsletter includes a traditional summary of the 2003 season for your review, including catch, effort, market sample information, and possible indicators for the 2004 season. Bycatch reduction device (BRD) use trends are also highlighted.

**SPECIAL NOTICES!**

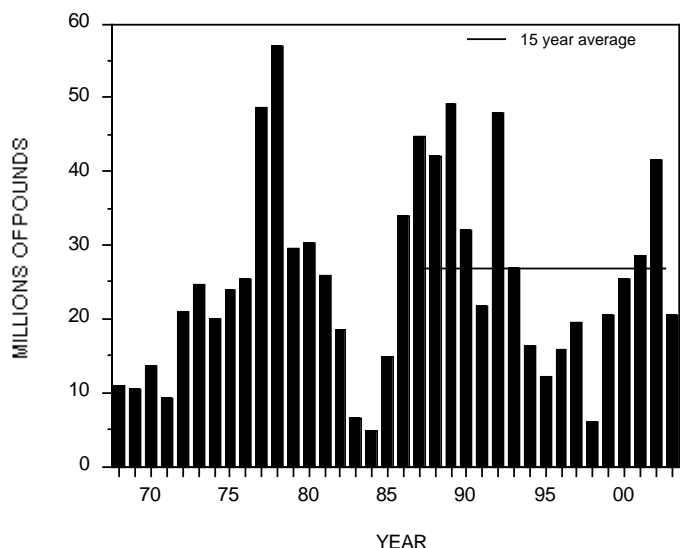
1. Approved BRD'S (grates and soft-panels) are now permanently required in the pink shrimp fishery for the entire season. See page 4, BRD use.
2. As of 1 January 2004, the National Marine Fisheries Service (NMFS) requires all open access vessels using trawl gear (including shrimpers) to file a declaration report before fishing in any Rockfish Conservation Area (RCA). See page 4, Regulation Changes.
3. Oregon shrimpers are now required to have observers aboard upon request as a condition of maintaining a Oregon boat license. See page 4, Regulation Changes.
4. See page 4 for groundfish limits and prohibited species.

**2003 Season Summary**

The 2003 shrimp season started slowly due primarily to very low ex-vessel opening prices. Only a handful of boats fished during the first half of April, with most of the fleet waiting until late in the month to start. Many vessels operated on processor-imposed trip limits for the first two months, with most of the product headed to fresh shrimp markets.

The 2003 Oregon shrimp landing total was about 20.5 million pounds, about half of the 41.5 million pounds landed in 2002 (Figure 1). Comparatively, the 15 year average landing total is about 27.0 million pounds. The relatively

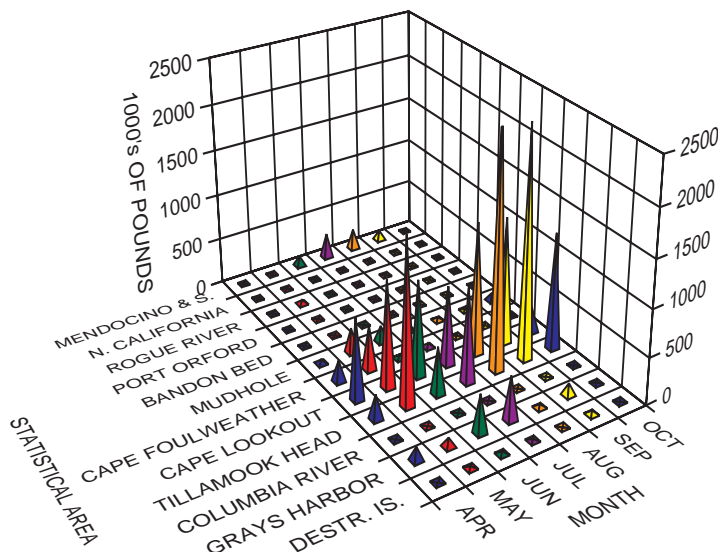
low landing total seems to have resulted from a variety of factors culminating in overall low effort, including low ex-vessel price, low vessel participation, opportunities in the albacore fishery and processor-imposed harvest restrictions.



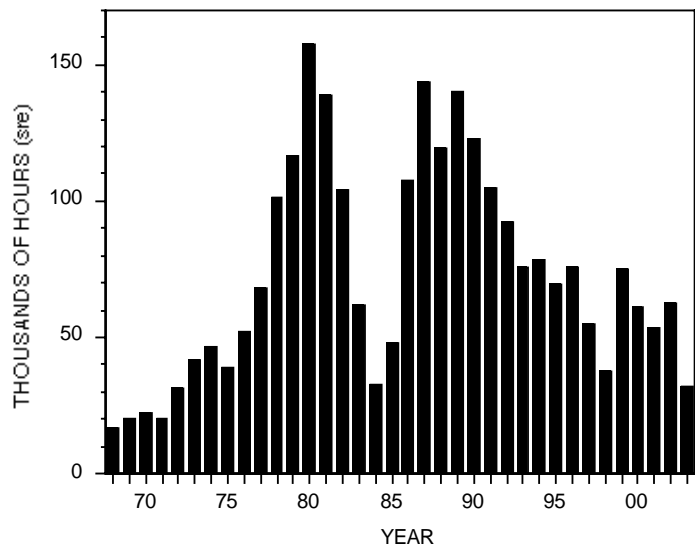
**Figure 1. Oregon pink shrimp commercial landings (millions of lb) 1968-2003. Includes all shrimp landed into Oregon ports.**

The bulk of the 2003 harvest occurred off the northern part of the state, from the Tillamook Head and Cape Lookout beds (Figure 2). Ten million pounds (about half of the season total) was harvested from the Tillamook Head bed alone. Progressing south, Oregon landings from beds below the Cape Lookout bed to Cape Mendocino declined sharply to extremely low levels. About 700,000 pounds was harvested south of Cape Mendocino however. Catches north of the Columbia River generally were low.

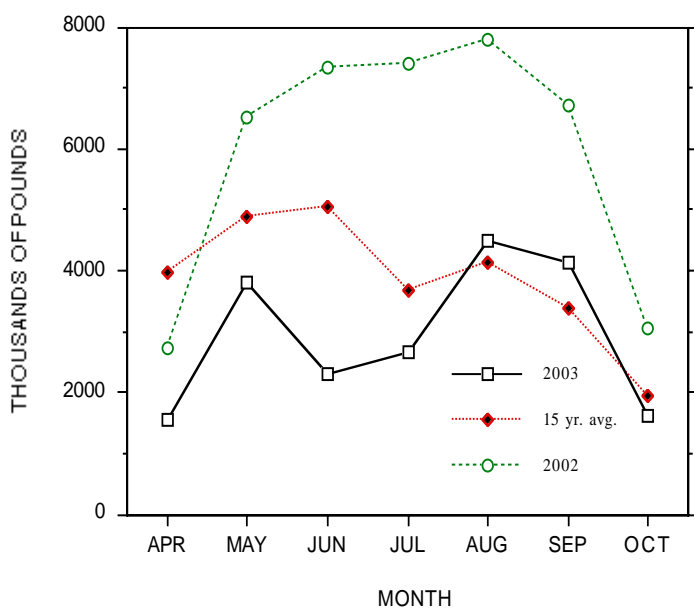
Monthly harvest was lowest during April and highest during August (Figure 3), with pounds per month strongly correlating with hours fished throughout the season. Low landings in April reflected reduced effort due to low price and trip limits. The relatively low landings in June and July were due in large part to some processors not buying shrimp during hake season, and to vessels turning to albacore fishing as an economically viable alternative. The low October landing total can probably be attributed to poor weather and low ex-vessel price.



**Figure 2. Total 2003 Oregon pink shrimp landings (1000's of pounds) by month and statistical area.**

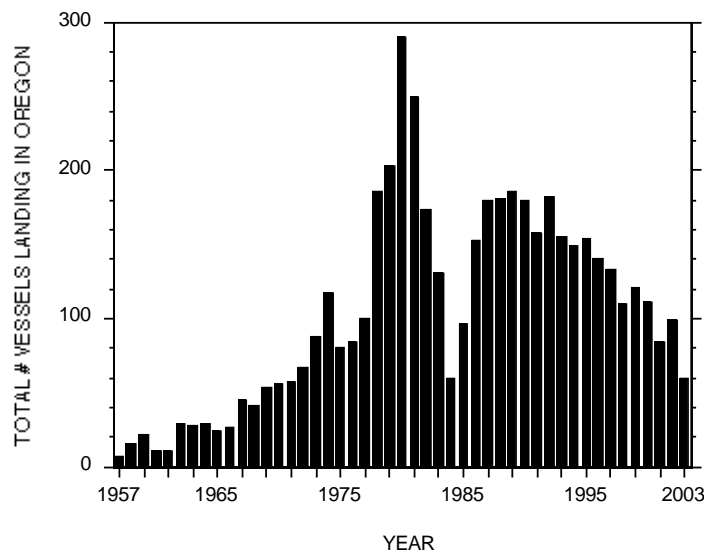


**Figure 4. Fishing effort (1000's of single-rig equivalent hours) for pink shrimp landed in Oregon, 1968-2003.**



**Figure 3. Oregon pink shrimp landings by month during 2002, 2003 and the 15 yr average (1988-2002).**

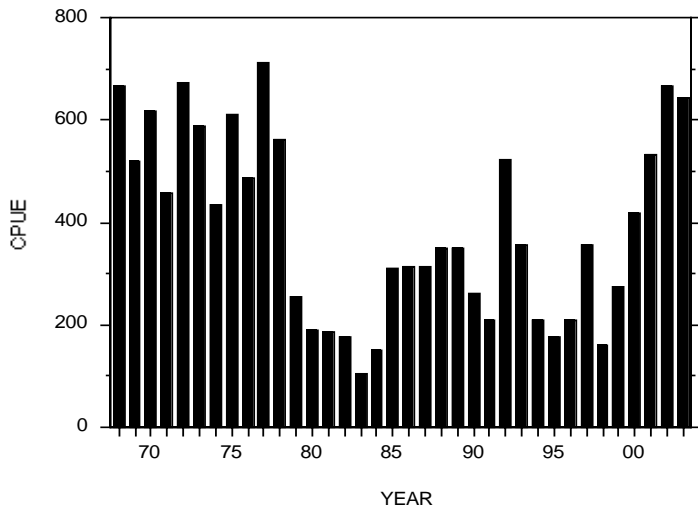
Fishing effort during 2003 was extremely low both in terms of hours fished (Figure 4) and in the number of vessels making Oregon landings (Figure 5). Only 59 vessels landed shrimp into Oregon ports during 2003, the lowest number since 1984. The 59 vessels fished 31,883 hours (sre), the lowest number since 1972. A low price structure probably kept many vessels from fishing shrimp and there were vessels unable to secure a market. Low price combined with the long distance to productive shrimp grounds probably reduced effort from some vessels with home ports on the south coast.



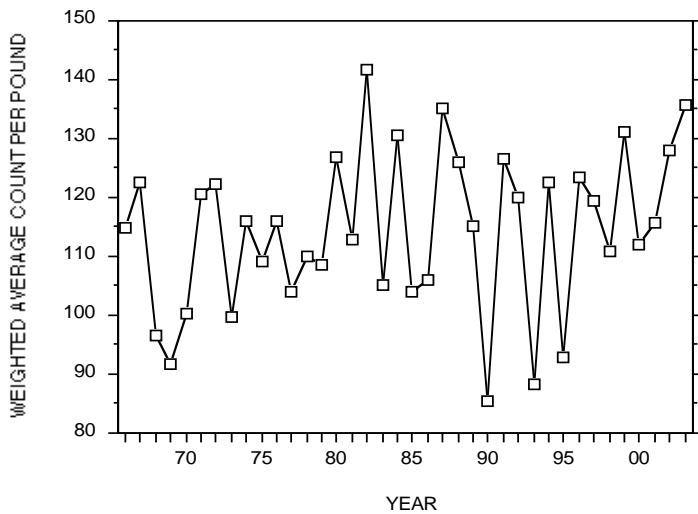
**Figure 5. Annual number of vessels landing pink shrimp into Oregon ports: 1975-2003.**

Even though effort and landings were down sharply in 2003, shrimpers had high catch rates per hour and landed more shrimp per trip than during the 2002 season. Overall catch per unit effort (CPUE = lb/hour) in 2003 was just below last years level, coming in at 644 lb/hour (sre) (Figure 6). Except for last year, we hadn't had a level this high since 1977. Monthly CPUE was high throughout the season, ranging from 775 lb/hour (sre) in April to 547 lb/hour (sre) in October.

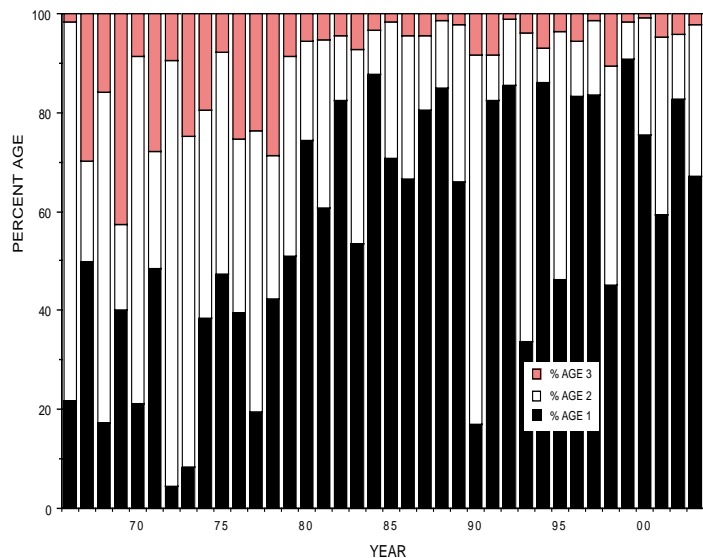
The overall average count per pound (count) was 136 whole shrimp per pound in 2003, up slightly from last years average of 128 shrimp/lb (Figure 7). Even though shrimpers harvested a higher percentage of age-2 shrimp in 2003 than in 2002 (Figure 8), the small size of age-1 shrimp landed actually increased the overall count. Shrimp growth rates



**Figure 6. Catch per unit of effort (CPUE=lbs/SREhr.) for vessels landing pink shrimp into Oregon, 1968-2003.**



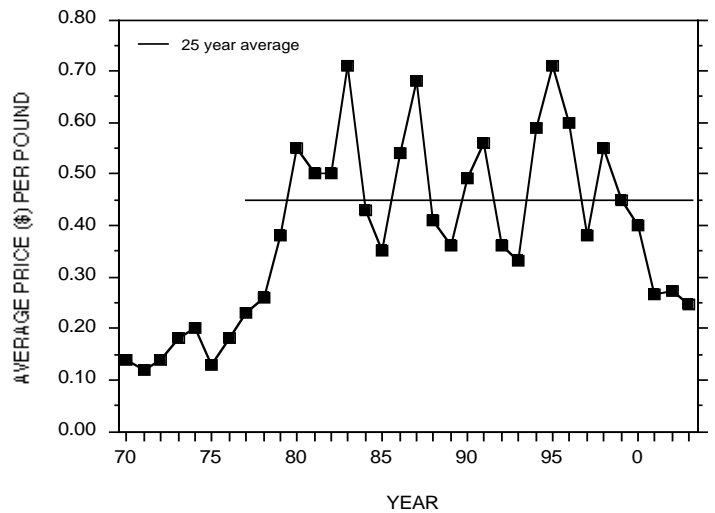
**Figure 7. Average (catch weighted) count per pound of pink shrimp landed into Oregon, 1966-2003.**



**Figure 8. Annual percent age composition of pink shrimp (#'s of shrimp) landed in Oregon, 1966-2003.**

were comparatively low in 2003, perhaps related to cold water on the continental shelf, the northerly distribution of most shrimp caught, and apparently high shrimp density where most shrimp were caught.

The average ex-vessel shrimp price per pound during 2003 declined to 24.6¢/lb, the lowest level since 1977 (Figure 9). It was about 2.7¢/lb less than the average price in 2002. As in the last few years, the ex-vessel shrimp price framework in 2003 was usually a split price based on finished meat counts. Prices started low and were fairly stable until late September but increased somewhat for the last month. Processors generally didn't want high count shrimp that yielded over 500 meats/lb and generally paid 15¢ or less per pound for this grade. The price range for 350-500 count meats ranged from about 22-25¢/lb, while 250-350 count meats paid about 29-30¢/lb.



**Figure 9. Average ex-vessel price per pound paid for pink shrimp landed in Oregon, 1970-2003.**

### Indicators for 2004

It's hard to judge what shrimp production will be like in the 2004 season. Since CPUE remained high at the end of the 2003 season, it's reasonable to expect that holdover of 2003's age-1 shrimp will be relatively high north of Cape Lookout. A very low percentage of the Oregon catch came from beds south of Cascade Head, indicating that south coast holdover may be minimal.

None of the information we gathered this fall on the abundance of zero-age shrimp indicates that a large recruitment of age-1 shrimp will occur next year. Shrimpers from several ports reported that they just weren't seeing zero's in their catch during September and October. Shrimpers didn't spend much time fishing below Cascade Head during September and October, so observations from southern catches were scarce. Our fall market sample

coverage was scant except from the Tillamook Head bed, where shrimp from dock samples had an average of 1.5 percent zero-age shrimp. September samples from the Cape Lookout bed and the Mudhole contained no zero-age shrimp. Even though zero-age percentages in the commercial catch is a weak indicator, having sharply lower percentages this year over those in 2002 isn't encouraging.

After using our April sea level model to try and predict age-1 shrimp recruitment for many years, we finally got around to re-evaluating the model this year. What we found was not encouraging, so we are no longer including the prediction and April sea level graph in the shrimp newsletter. Over the years, the model did a fairly poor job of predicting shrimp recruitment. The linear relationship is still there, but the fit deteriorated some and more importantly, the model did not perform well at identifying year class failures and dominant (large) recruitment events, probably the two most useful types of predictions. What this means is that there still seems to be a general relationship between low April sea levels and good recruitment, however the factors that cause a year class to fail or survive extremely well are simply not reflected in sea level. Our current thinking is that sea level may have as much or more of an impact on shrimp distribution than on survival, with low sea levels retaining shrimp or shrimp larvae in Oregon waters and high sea levels transporting them farther north.

### Regulation Changes

#### State and Federal fisheries regulation changes;

1. As of 21 March 2003, approved BRD's (grates or soft-panels) were permanently required for trawlers fishing for pink shrimp (Oregon Administrative Rule 635-005-0190). The regulation was in place during the entire 2003 season and should be well known. However, if you've got questions about BRD specifications, please give Steve Jones or Bob Hannah a call at (541) 867-4741. The OAR and approved BRD specifications are also listed on the ODFW web site ([dfw.state.or.us/OARs/OARs.html#Fish](http://dfw.state.or.us/OARs/OARs.html#Fish)).

2. Oregon shrimpers should be prepared to accommodate observers in the near future, similar to efforts in the limited-entry groundfish fleet. During December 2003, the Oregon Fish and Wildlife Commission adopted a modified OAR (635-006-0140) concerning conditions for maintaining a boat license, which is required for any vessel taking food fish or shellfish for commercial purposes. The new OAR states that vessel owners or operators must cooperate with Federal or ODFW fishery observers and accommodate observers, when asked, or face potential boat license sanctions including loss of the boat license. Please check the ODFW web site for specific details ([dfw.state.or.us/OARs/OARs.html#Fish](http://dfw.state.or.us/OARs/OARs.html#Fish)).

3. As of 1 January 2004, the NMFS requires all

open access vessels using trawl gear to file a declaration report before the vessel is used to fish in any Rockfish Conservation Area (RCA) or a Cowcod Conservation Area (CCA). Shrimpers need to remember to declare before leaving for their first shrimp trip. Apparently, only one declaration is necessary unless the vessel engages in another fishery. For details and declaration procedures, NMFS recommends contacting Bill Robinson at (206) 526-6140, Svein Fougner at (562) 9804000, or visit the Northwest Region website (<http://www.nwr.noaa.gov/1sustfish/gdfsh01.htm>).

#### Groundfish Retention Limits for Shrimpers;

The NMFS has issued groundfish trip limits for shrimpers effective 1 April through 31 October 2004. Please note that these limits may change mid-season and shrimpers are urged to check for regulation changes frequently.

Shrimpers may retain up to 500 pounds of groundfish per day, multiplied by the number of days in the trip, up to a maximum of 1,500 pounds per trip. Please note these specific limits:

1. Canary rockfish, yelloweye rockfish and thornyheads are PROHIBITED.
2. The lingcod limit is 300 pounds per calendar month (minimum 24 inch size limit).
3. The sablefish limit is 2000 pounds per calendar month. (no minimum size limit)
4. All other groundfish species fall under the 1,500 lb/trip limit.
5. The amount of groundfish landed may not exceed the amount of pink shrimp landed.

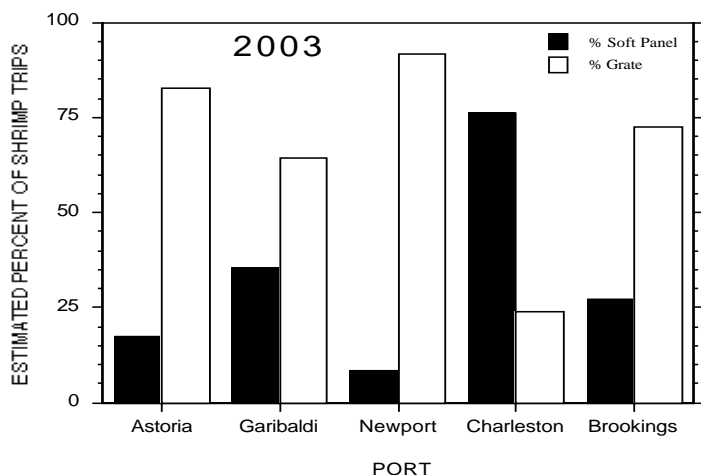
### BRD News

#### BRD Use;

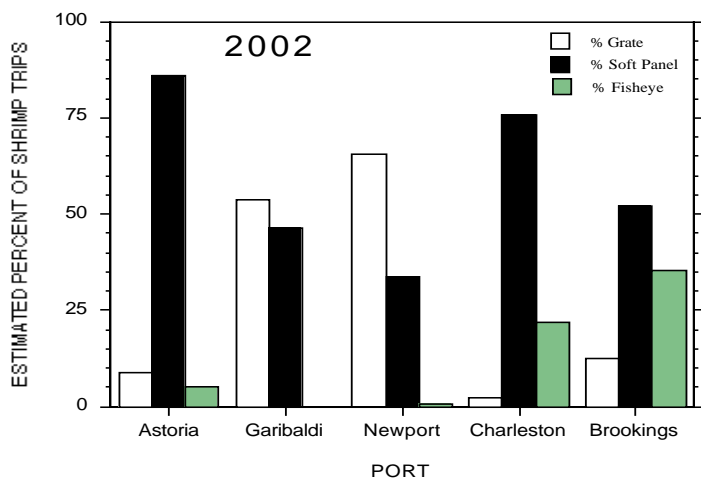
As of 24 March 2003, BRD's were permanently required for the first time in the Oregon pink shrimp fishery. Only approved grates and soft panels were allowed. Compliance was excellent, with no observed or reported violations in Oregon. The partial season requirements that we had during the 2001 and 2002 seasons made for a smooth transition to the permanent requirement. Shrimpers seem to be accepting the need for clean fishing in today's world, and are realizing benefits from using BRD's.

Use patterns of BRD's changed dramatically from 2002 through 2003. To start with, fisheyes were not allowed in 2003 as they were in prior years, so shrimpers using a fisheye in 2002 were required to choose another approved BRD in 2003. Overall, the use of grates in 2003 showed a sharp upward trend in most Oregon ports, over what occurred in 2002. During 2003, grates were used on over 64 percent of trips landed into Astoria, Garibaldi, Newport and

Brookings (Figure 10). Of these ports, Astoria and Newport had most of the landings and had 82-91 percent grate use. Charleston lagged behind with similar numbers of trips but only 24 percent grate use. Levels of grate use were much lower in all ports during 2002 (Figure 11).



**Figure 10. The estimated percentage of shrimp trips landing into Oregon ports that used grates or soft-panel BRD's during the 2003 pink shrimp season.**



**Figure 11. The estimated percentage of shrimp trips landing into Oregon ports that used grates, soft-panel or fisheye BRD's during the 2002 pink shrimp season.**

As grate usage increases, shrimpers also appear to be steadily changing to grates with narrower bar spacing. Approved grates may have bar spacings of up to 2.0 inches, but the average spacing in 2003 was about 1.3 inches. Spacings recorded in trawl logs ranged from 1.0 to 2.0 inches. In general, shrimpers we talked to that were using narrower spacings didn't feel that they were losing shrimp. Our video work and catch experiments also support this observation. Narrower bar spacing probably has the added benefit of excluding small rockfish (and other small fish),

which could help with the Marine Stewardship Council certification process (see related section page 7). Mesh size of soft-panels used in 2003 was about 5.4 inches, with most vessels using the maximum approved size of 5.5 inches.

Although most Oregon shrimpers have switched to grates, ODFW would like to see all vessels use them. Both single-rig vessels and double-rig vessels with stern reels have used hinged grates successfully in 2003, and we hope the word spreads. The bottom line is, soft-panels are not as efficient at excluding small rockfish. As time goes on, juvenile rockfish (such as darkblotched) catch may become a volatile issue like canary rockfish was for the last few years. Observers likely will be required on selected shrimpers in the near future, which would document any rockfish catch and make the data available to the public. As many shrimpers are realizing, the time is ripe for cleaning up the fishery to the maximum extent possible with available technology. Oregon shrimpers have transitioned well to recent BRD requirements and have developed grates that work and handle well, as well as footropes that fish cleaner than tickler chain gear. Please strongly consider switching to grates if you're not already using one. It's in your best interest to make the Oregon shrimp fishery a model for shrimp fisheries throughout the world.

#### Popular Grate Styles;

The "Oregon Grate" has been on the scene now for about three years. Grate use has expanded rapidly and shrimpers have been very innovative in developing variations that work best in their particular net(s) and can be readily handled with their deck gear. The following five photographs are examples of variations that were used successfully during the 2003 season. Grates were used on "conventional" double-rig shrimp vessels, double-rig vessels with stern reels and single-rig vessels alike.



**Photo 1. A single-ring Oregon Grate (1.25" bar spacing) mounted in a net of a double-rig Oregon shrimp vessel.**





**Photo 2. A double-ring Oregon Grate (1.25" bar spacing) with a removable grate panel used on an Oregon double-rig shrimp vessel. The removable panel makes it possible to switch to a panel with a different bar spacing without removing the entire BRD. Shrimpers report mixed opinions about whether a double-ring is necessary.**



**Photo 4. A shrimp net and folding Oregon Grate being reeled onto a double-rig Oregon shrimp vessel. The intermediate, body and footrope gear can be guided toward the center of the reel to relieve stress on the grate. Here again, stout construction can help reduce grate distortion. Also, a BRD may be loosely, but securely, tied into the net on the sides to reduce pull on the web as the BRD folds. However, any slack created between the net and grate must not allow a 110 mm (5.5") ball to pass through in any configuration.**



**Photo 3. Mr. Brad Pettinger (F.V. Alex) and Mr. Gerald Gunnari (F.V. Coast Pride) holding stoutly built hinged aluminum grates (1.25" bar spacing). The grates are designed for rolling onto the stern reel of double- or single-rig shrimp vessels. The heavy construction helps reduce bending of the BRD when the net is reeled on top of it. A folding grate can be constructed to fold either forward or backward, depending on how a vessel reels it's net(s) aboard.**



**Photo 5. A second view of a folding Oregon Grate as it's reeled onto the stern reel of a double-rig Oregon shrimp vessel.**

### **Information on BRD Observations;**

Our information report, "Observations of Fish and Shrimp Behavior in Ocean Shrimp (*Pandalus jordani*) trawls", is now available to interested parties. The report includes information gathered using underwater video in Oregon shrimp trawls that we've acquired over the last decade. Observed shrimp and fish behavior is discussed in relation to several BRD styles. Discussion of BRD and net observations provides insight into why a particular BRD may not perform as desired.

### **Issues of Interest**

#### **Marine Stewardship Council;**

The Oregon Trawl Commission (OTC) has applied to the Marine Stewardship Council (MSC) for a preassessment review that could lead to future sustainable fishing certification of the pink shrimp fishery. The MSC is an international organization that promotes fisheries that are deemed sustainable under their criteria. Here are some quotes from their web page to give an idea of what they're about (quotes from <http://www.msc.org/>):

"The MSC is an independent, global, non-profit organisation which was set up to find a solution to the problem of overfishing."

"We spent two years developing our environmental standard for sustainable and well-managed fisheries. This standard was put together following worldwide consultation with scientists, fisheries experts, environmental organisations and other people with a strong interest in preserving fish stocks for the future."

"We reward environmentally responsible fisheries management and practices with our distinctive blue product label"

The hope is that MSC certification would allow Oregon shrimpers to ultimately secure a higher price for their product from new and existing markets that value the MSC "blue product label". The OTC has hired approved contractors to do the preassessment review, and they'll determine the suitability of the application. There are hurdles to overcome, such as lack of a season quota, but shrimper's progress toward the full use of effective grates may be a strong plus.

#### **Groundfish Vessel Buy-Back;**

Forty Oregon shrimp permits were relinquished in the groundfish vessel buy-back, about 22 percent of the total of 175 in 2003. Only thirteen of the selected vessels actually landed shrimp into Oregon during 2003. Technically, the State of Oregon now owns the relinquished permits and the total number of permits remains at 175. By statute, no new permits can be issued until the total number of permits falls below 150.

### **Count per pound Issues**

The Oregon State police reported no count per pound violations in 2003. At least one load on the North coast was evaluated closely, but was found to be legal. Although age-1 shrimp were smaller than average this year, the shrimp price structure and processor desire for larger shrimp probably helped reduce potential count problems. Counts higher than about 145 shrimp/lb generally received far less per pound than lower counts, often only selling for .10-.15¢/lb. Good hold-over of shrimp from the 2002 season probably also helped alleviate count problems early in the season.

### **Reports Available**

Hannah, R.W. and S. A. Jones. 2000. Bycatch Reduction In An Ocean Shrimp (*Pandalus jordani*) Trawl From a Simple Modification to the Trawl Footrope. *J. North. At. Fish. Sci.* 27: 227-223.

Hannah, R.W. and S. A. Jones. (2002). Measuring the Height of The Fishing Line and Its Effect On shrimp Catch and Bycatch In an Ocean shrimp (*Pandalus jordani*) Trawl. *Fish. Res.* 60: 427-430.

Hannah, R.W., S.A. Jones and K.M. Matteson. 2003. Observations of Fish and Shrimp Behavior in Ocean Shrimp (*Pandalus jordani*) Trawls. Oregon Dept. Fish Wildl., Information Rept. Ser., Fish. No. 2003-03. 27pp.

### **Acknowledgments**

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**Good Luck Shrimping in 2004!**

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