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Press Release  
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### **Test fishery Points to Success of Halibut Excluder Net modification results in 52% halibut bycatch reduction**

Recent test fishing of a halibut excluder device on trawl nets fishing for Pacific cod in the Gulf of Alaska points to a significant reduction of halibut bycatch. The test fishery was coordinated by the cooperative research program of the Marine Conservation Alliance Foundation (MCAF) in conjunction with Dr. Craig Rose of the National Oceanic and Atmospheric Administration's Alaska Fishery Science Center and the help of Kodiak fishermen.

“This shows what happens when fishermen, scientists, and industry put their heads together to tackle even the most difficult problems,” said John Gauvin, MCAF's cooperative research coordinator. “We produced a practical device that reduces halibut bycatch in the Gulf trawl fishery by over 50%. The test shows that the device also reduced the catch of cod by 20-30% but from our preliminary look at the cod size data, the cod that are escaping are mostly smaller fish that are less valuable in the market and best returned to the sea.”

Gauvin noted that these results are considered preliminary and more analysis of the data will occur over the coming weeks to identify important factors affecting halibut and cod escapement. This will include a more detailed examination of size gradients for cod escapement and a breakdown of the escapement rate for halibut of different sizes. The researchers are also interested in how tow-by-tow halibut escapement rates are affected by the cod catch rates for those tows. Once the analysis is complete, the draft report will be reviewed by the North Pacific Fishery Management Council's Scientific and Statistical Committee later this year.

The need for such a device was apparent because of an increase in halibut bycatch in the fall Gulf of Alaska cod fishery. This was due to an increase in halibut abundance around Kodiak and regulations intended to protect sea lions. While cod fishing is best in the winter and spring when the fish are tightly schooled, part of their season was shifted to the fall so it would not interfere with sea lion feeding. In the fall, however, the cod are dispersed, resulting in longer tows and increased bycatch rates of halibut.

These high bycatch rates resulted in premature closures for the fall trawl fishery in recent years resulting in less cod, sole and flounder across the dock. That's why the Kodiak-based Alaska Dragger's Association asked MCAF to work with them on a device that would exclude a significant amount of the halibut while retaining most of the cod. And since Gulf vessels have limited deck space, the device must be flexible enough to be wound about a net reel.

Gauvin enlisted the assistance of Dr. Craig Rose of the Alaska Fisheries Science Center who has used underwater video to study fish behavior in trawls. Based on his observations, Dr. Rose suggested that halibut might be able to escape through slots placed in the side of the trawl while market sized cod would still be retained.

A preliminary design used slot panels made from fiberglass rods, but fishermen thought these rods were too rigid to be wound on a net reel. Instead, they suggested using electrical cable known as "third wire" that is flexible enough to be wound around the net roller but would remain rigid under the tension of being towed.

John McCarthy, captain of the Kodiak trawler *Pacific Star*, and Mirek Lenda, a Kodiak net manufacturer came up with a way to utilize the scrap wire by lashing it into sturdy slotted panels. This achieved the concept originally conceived by Dr. Rose while being practical for everyday fishing conditions.

Using an exempted fishery permit intended for such experimental work, both designs were tested in the fall of 2006. The testing compared catch rates from two vessels doing "paired" towing: one boat using the excluder and the other without to act as a control. A total of 14 pairs of tows were made, but worsening fall weather cut the experiment short.

The initial results were positive but not as good as hoped for so Gauvin, Rose and Kodiak fishermen went back to the drawing board. Video from the fall test fishery indicated water flow through the excluder was too fast for some halibut to escape. So a "gauntlet" was designed using floats to slow the water and create an area within the net where the fish can mill around while trying to escape.

Testing of the modified excluder resumed this April on Portlock Bank northeast of Kodiak. Under more favorable conditions, the test boats completed most of the 45 paired tows needed for the experimental design. Based on a preliminary look at the data, the excluder shows a consistent reduction in halibut bycatch of about 50 percent with higher halibut escapement on tows with large cod catches. Underwater video shows halibut and cod utilizing the modified portion of the excluder in the manner researchers expected.

“That’s a significant reduction in the halibut bycatch which shows the design has a lot of promise,” Gauvin said. “Despite the 20-30 percent reduction in the catch of cod, these appear to be mostly the undersized cod, although some larger cod are managing to find their way out of the excluder. With additional work on the excluder, we think that we may be able to reduce the loss of the larger cod.”

Gauvin noted more work is needed to test and fine tune the design before it can be widely adopted by the fleet. He thanked Dr. Rose for his assistance with the gear design and testing, and especially for the loaned underwater video equipment and technical assistance so fish behavior could be observed during the test. “Video is the key to learning how to improve the excluder design in the future,” Gauvin said.

The researchers also thanked the captains and crews of the Kodiak-based fishing vessels *Topaz*, *New Life*, *Caravelle* and *Pacific Star* for their hard work and for their willingness to provide ideas for further development of the excluder and Katy McGauley for her field management during the project.

“This is a great example of how cooperative research works – solving problems by getting fishermen, industry and scientists together,” Gauvin said. “We anticipate even greater success in the future from a continuing exchange of ideas between Kodiak fishermen and the researchers.”

The MCA Foundation is the non-profit arm of the Marine Conservation Alliance, a Juneau-based fishing industry trade association that works to find practical, workable solutions to boost the sustainability of Alaska fisheries. Members of the MCA and MCAF include fishermen, vessel owners and processors involved in the Gulf of Alaska and Bering Sea fisheries, as well as Alaska coastal fishing communities dependent on healthy fisheries. <http://www.mcafoundation.org/>

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