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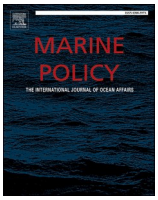

Corrigendum

Corrigendum to "What's the catch? Examining optimal longline fishing gear configurations to minimize negative impacts on non-target species" [Mar. Policy 143 (2022) 105186]

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The authors regret to inform that minor errors were present in the published article, the corrected version of those sections listed below

Abstract

Changes to fishing gear configurations have great potential to decrease fishing interactions, minimize injury and reduce mortality for non-target species in commercial fisheries. In this two-part study, we investigate potential options to optimize fishing gear configurations for United States Pacific pelagic longline vessels to maintain target catch rates whilst reducing bycatch mortality, injury, and harm. In part one, a paired-gear trial was conducted on a deep-set tuna longline vessel to compare catch rates and catch condition of target and non-target species between wire and monofilament leader materials. Temperature-depth recorders were also deployed on hooks to determine sinking rates and fishing depth between the two leader materials. In part two, hooks of different configurations (size, diameter, shape, metal type, and leader material) were soaked in a seawater flume for 360 days to obtain quantitative estimates of breaking strength, as well as the time taken for gear to break apart. We found that switching from wire to monofilament leaders reduced the catch rate of sharks by approximately 41 %, whilst maintaining catch rates of target species (Bigeye tuna, *Thunnus obesus*). However, trailing gear composed of monofilament did not break apart even after 360 days. In contrast, branchlines with wire leaders began to break at the crimps after approximately 100 days. Additionally, the breaking strength of soaked fishing hooks was greater for larger, forged hooks composed of stainless steel typically used in United States Pacific longline fisheries. These results have direct implications for fisheries management and the operational effectiveness of bycatch mitigation strategies for longline fisheries worldwide.

4. Results

4.2. Flume experiment

4.2.1. Flume experiment: gear deterioration

For all gear combinations, hooks rigged with monofilament leaders did not break apart, and all gear stayed attached to the hook for 360 days (Fig. 5). In contrast, gear rigged with wire leaders began to break apart after an average of 109.61 ± 32.47 days (mean ± SD), primarily due to corrosion of the copperlock crimps composed of dissimilar metals locking the stainless steel wire leader nearest the hook eye/ring or at the weighted swivel in place. Wire leaders remained attached to the hooks for an average of 163.92 ± 47.05 days (mean ± SD); however, the crimps connecting the hooks to wire leaders began to break apart around 174.6 ± 46 days (mean ± SD) (Fig. 5).

5. Discussion

However, switching gear types from wire to monofilament may only be beneficial to non-target species that are discarded alive if trailing gear is minimized. We found that monofilament gear did not 'rust out' or break apart under laboratory settings during our sampling period of 360 days. This finding indicates that sharks and other protected species released with monofilament trailing gear may be burdened with it for at least a year. In contrast, the copper crimps used by most U.S. Pacific longliners on branchlines with wire leaders began to break apart after ~ 100 days in the lab setting which could substantially decrease the amount of time an animal is carrying trailing gear.

The authors would like to apologize for any inconvenience caused.

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Abbreviations: Bycatch reduction, Fishing gear configuration; Longline fisheries, Fisheries management; Hook strength, Conservation.

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