



MARINE MAMMAL COMMISSION

31 October 2018

Ms. Karla Gore
National Marine Fisheries Service
Southeast Regional Office
263 13th Avenue South
St. Petersburg, Florida 33701

Dear Ms. Gore:

The Marine Mammal Commission (the Commission), in consultation with its Committee of Scientific Advisors on Marine Mammals, has reviewed the National Marine Fisheries Service's (NMFS) 16 October 2018 request for comments on an exempted fishing permit (EFP) application that would authorize the deployment of golden crab trap gear in the Gulf of Mexico. The Commission has also reviewed the EFP application submitted to NMFS.

The *Federal Register* notice states:

"The golden crab trap gear would be deployed in the southeastern Gulf, on mud bottom. From south to north, the gear would be set, between 25° and 28° north latitude with the western gear boundary ranging from 84.20° to 85.40° west longitude in depths ranging from 1,800 to 2,600 ft (548.6 m to 792.4 m). The 1,800 ft (548.6 m) contour will also mark the eastern boundary for gear deployment."

This description of the location of the proposed EFP fishing activities presumably comes from the Location, Trap Type, and Frequency of Collection section of the EFP application, which states: "Sampling will be conducted between 25 and 28 degrees North, between 83 and 84 degrees West, in depths ranging from 1800 to 2600 feet." However, in the third paragraph of the same section the application states that traps will be set at depths between 1,500 and 2,200 feet. NMFS has since clarified that the location and depths identified in the Federal Register are correct.

Trap gear can pose a significant risk of entanglement to cetaceans (e.g., humpback and North Atlantic right whales; Knowlton et al. 2012), so it is important to assess the potential for entanglements in golden crab trap gear. Two large whale populations of concern (Bryde's whale, *Balaenoptera edeni*, and sperm whale, *Physeter macrocephalus*) and populations of three species of beaked whales occur or are likely to occur in or near the area proposed to be fished with golden crab trap gear. Entanglement possible when the distributions of gear and cetaceans overlap. Moreover the potential for contact with trap gear is especially high when the animals are engaged in certain types of activity, such as diving and foraging.

The north-eastern Gulf of Mexico is the principal known habitat for a small population of Bryde's whales (estimated at somewhat more than 30 individuals; Hayes et al. 2017) that is genetically distinct (Rosel and Wilcox 2014). This population was recently proposed by NMFS as 'endangered' under the Endangered Species Act (ESA; 81 Fed. Reg. 88639), and it is listed as 'critically endangered' on the IUCN Red List (Corkeron et al. 2017). These whales occur almost exclusively in a restricted area over the continental slope in the Northeast Gulf between the 100-m

and 400-m depth contours, from 27.6° to 30.0° north latitude (Soldevilla et al. 2017). Although their distribution overlaps the proposed fishing area latitudinally, these Bryde's whales are generally found in shallower depths. Nonetheless, because both these Bryde's whales and golden crabs occur along the continental slope, where depths can change substantially over very short distances, there is potential for the whales to be separated from the proposed fishing area by only a few kilometers.

Another species that may be present within the proposed fishing area is the endangered sperm whale, which occurs throughout the Gulf, primarily on the continental slope and in the deep ocean basin (Waring et al. 2016). Sperm whales in the Gulf of Mexico are culturally distinct from other sperm whale populations (Gordon et al. 2008, Antunes 2009), and also differ significantly in their matrilineal genetic characteristics (Engelhaupt et al. 2009). Three species of beaked whales, Cuvier's (*Ziphius cavirostris*), Blainville's (*Mesoplodon densirostris*) and Gervais' (*Mesoplodon europaeus*), also occur in the eastern Gulf near the proposed EFP fishing area (Hildebrand et al. 2015).

Cetaceans are entangled most frequently in the 'vertical' lines that run from a bottom-deployed trap to a surface buoy. Whales can also be entangled in 'ground' or 'bottom' lines that connect traps in a 'string' or lead to an anchor. Gulf of Mexico Bryde's whales are believed to forage at least some of the time on demersal schooling fishes (Soldevilla et al. 2017), while sperm whales are known to feed some of the time on squid and fish found near the bottom (Watwood et al. 2006, Guerra et al. 2017), putting both species at potential risk of entanglement in bottom lines. Beaked whales that forage near the bottom along the continental slope are also at risk (e.g., Blainville's beaked whale, Arranz et al. 2011). The applicants have proposed to deploy strings of 6-30 traps connected by bottom lines without any vertical lines or buoys. While the method for retrieving the traps was not specified in the permit application, NMFS has indicated that grappling hooks will be used. Although the Commission is not aware of any cases where whales have become entangled in grappling lines, these lines, like any line in the water column, present the threat of entanglement if whales are present during trap retrieval.

While the known distribution of Bryde's whales does not directly overlap the proposed fishing area, they definitely occur in close proximity to the northeastern portion of the area. Given uncertainty about the full extent of the population's current distribution, and the potential for oceanic changes that could alter the distribution of the whales, the whales could be found in the proposed fishing area both now and in the future. Because the known distribution of Gulf of Mexico Bryde's whales is based on a small number of surveys, the actual distribution could be larger and could overlap with the proposed EFP fishing area. Further, decade-scale processes or ocean warming could alter the distribution of their prey, which could lead to the whales shifting their distribution and potentially overlapping with the fishing area. Considering the small size of the Bryde's whale population, the risk of entanglement in trap gear, and uncertainties regarding the whales' distribution, diving behavior, and preferred prey, the Commission recommends that the boundaries of any approved EFP fishing area include a sufficiently large separation (buffer) zone from known and potential Bryde's whale habitat to account for the possibility of overlap now and in the near future.

It is not clear what type of bottom line will be used to connect the crab traps. While floating lines may be the preference when grapples are used to retrieve bottom-deployed gear, the presence of floating bottom lines in the water column would substantially increase the likelihood of entanglement, relative to sinking line, for cetaceans that feed at or just above the bottom (Johnson et al. 2005). In addition, research has shown that lethal entanglement, at least of humpback whales and

North Atlantic right whales, is significantly less likely if the rope has a breaking strength of less than 1700 lb (Knowlton et al. 2016). Therefore, the Commission recommends that NMFS specify EFP conditions to minimize the likelihood of entanglement and the potential for serious injury or mortality in the event an entanglement occurs, which at a minimum should include the use of sinking line and weak bottom lines. Bryde's and sperm whales may not be as strong as right whales, which would require the use of bottom lines proportionally weaker than 1700 lb. The Commission further recommends that NMFS require all gear to be marked so that it can be identified as golden trap gear, and that any lost gear be reported.

Although the risk of entanglement in grappling lines themselves has not been demonstrated, and is likely low, the Commission recommends that any EFP specify under what circumstances (e.g., species, proximity, behavior) gear can be retrieved when whales are present.

Finally, the Commission notes that use of this gear may affect at least one marine mammal species listed under the ESA and one proposed for listing. Therefore, the Commission recommends that NMFS, if it not already doing so, conduct a consultation on the proposed EFP under section 7 of the ESA prior to issuing a permit for the golden crab fishing.

The Commission appreciates the opportunity to comment on this proposal. Please contact me if you have questions concerning the Commission's recommendation.

Sincerely,



Peter O. Thomas, Ph.D.
Executive Director

Cc: Mr. David Bernhart, Assistant Regional Administrator, Protected Resources Division,
Southeast Regional Office, NMFS
Dr. Jim Bohnsack, Chief, Protected Resources and Biodiversity Division, Southeast Fisheries
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