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**Re: PETITION TO LIST WHITE MARLIN AS THREATENED OR ENDANGERED  
UNDER THE ENDANGERED SPECIES ACT**

Pursuant to section 4 of the Endangered Species Act (“ESA”), 16 U.S.C. § 1533(b), the Center for Biological Diversity petitions the National Marine Fisheries Service to list white marlin as a threatened or endangered species. Overfishing has caused a precipitous decline of the population of white marlin and without actions to conserve this large marine fish it will continue on its path toward extinction.

Petitioner need not demonstrate that the petitioned action is warranted, rather, Petitioner must only present information demonstrating that such action *may be* warranted. The 90-day finding is a low threshold, which requires the Service to assess simply whether the Petition presents substantial information that would lead a “reasonable person” to find that ESA protections for white marlin “*may be*” warranted. 16 U.S.C. § 1533(b)(3)(A) (emphasis added); 50 C.F.R. § 424.14(b). The latest best available science indicates that listing white marlin as either threatened or endangered may be warranted. As such, NMFS must promptly make a positive initial finding on the petition and commence a status review as required by 16 U.S.C. § 1533(b)(3)(B).

As described in the letter submitted by Mr. Chambers, the recent preparatory stock assessment by ICCAT indicates that white marlin populations have failed to rebuild and they have also continued to decline (ICCAT 2011). The landings indicate this continued decline and the catch per unit effort shows instability in the population (Id.).

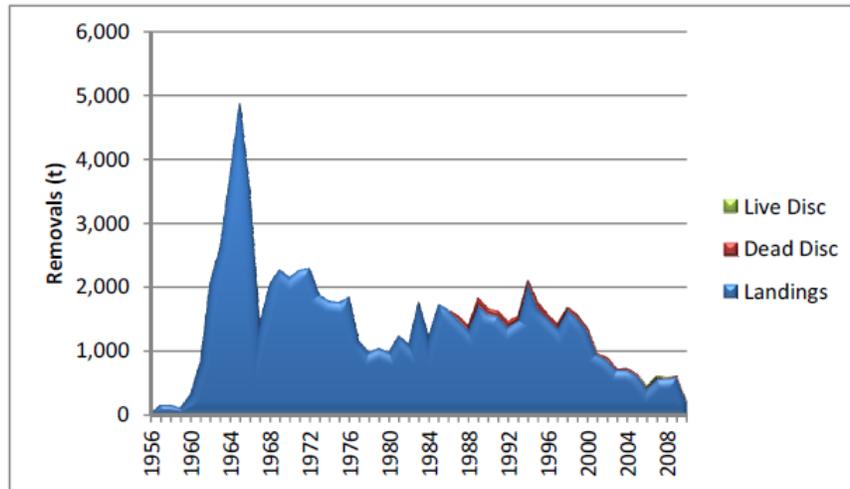


Figure 8. White marlin total catches with live and dead discards between 1956 and 2010.

In addition to the findings about the status of white marlin presented by Mr. Chambers, which focused on the 2011 stock assessment showing that the long term declining trend in white marlin population has not ceased, we would like to bring to your attention some additional recent studies for consideration of the petition. Beerkircher et al. consider white marlin among “the most overexploited pelagic fishes” (Beerkircher et al. 2009). White marlin has experienced significant declines in its Atlantic range coincident with its decline in abundance (Worm and Tittensor 2011).

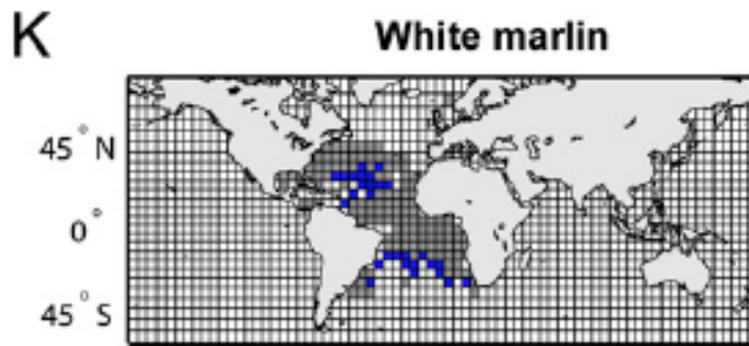


Figure 2. Changes in white marlin range between the 1960s and 1990s. Cells that are occupied in both decades are indicated in gray, range loss over time is shown in blue (Worm and Tittensor 2011: 11944).

In its prior not warranted finding, NMFS estimated that the look-alike roundscale spearfish comprised 17.5 percent of the composite marlin/spearfish population and were rare based on limited data. New research suggests that this ratio is an underestimate. NMFS should re-evaluate its prior findings on the ratio of white marlin to roundscale spearfish. Beerkircher et al. (2009) highlights that the ratio of roundscale spearfish to white marlin can affect the marlin stock assessment. Roundscale spearfish may be more common than previously suspected and

make up 27 percent of the composite marlin/spearfish population (Beerkircher and Lee 2008, Beerkircher et al. 2009). In the U.S. East Coast and Caribbean, roundscale spearfish represented 21 to 42% of the samples and dominated the samples further offshore (Beerkircher et al. 2009). It is extremely important to consider the ratio of roundscale spearfish to white marlin in NMFS's evaluation because management and biological information about the white marlin may be compromised by including roundscale spearfish data (Beerkircher et al. 2009). All simulations conducted by Beerkircher that considered the two species separately showed declining historical trajectories for white marlin in the western North Atlantic (Id.).

In its 2011 assessment, the International Union for the Conservation of Nature ("IUCN") classified white marlin as vulnerable (Collette 2011, IUCN 2011). IUCN is the world's foremost authority on the status of threatened species. The IUCN Redlist classification system is widely regarded as the most authoritative list of globally threatened species (Akçakaya et al. 2006; IUCN 2001). Billfish, including white marlin, are heavily overfished and lack adequate management to protect against overexploitation (Collette 2011). Lynch also notes the pervasive problem that although white marlin are excessively exploited management to prevent its decline is underwhelming (Lynch 2011). Collette et al. (2011) summarize the findings of the IUCN's 2011 assessment and classification of tunas and billfish, which included a determination that white marlin should be classified as vulnerable.



**Figure 1.** Indices of abundance used to estimate population declines shown by stock for species of ... [white marlin]. ... Indices of abundance include catch landings in 1000 tonnes, catch per unit effort (CPUE), total biomass in 1000 tonnes, adult biomass in 1000 tonnes, biomass relative to virgin biomass ( $B:B_0$ ), and biomass relative to the biomass that would provide the maximum sustainable yield ( $B:B_{msy}$ ). Projected stock outlook is also indicated by (+) or (-) as this metric was used in combination with the reference points  $B/B_{msy}$  and  $F/F_{msy}$  when available to evaluate whether criterion A1 or A2 should be used for the global population assessment. Data shown are from the most recent stock assessments (49–68) (Collette et al. 2011, supplemental materials).

Lynch (2011) provides an overview of problems of white and blue marlin fisheries management. White marlin are generally bycatch of the commercial tuna and swordfish fisheries with recreational and artisanal fisheries also targeting them. Although they are supposed to be released alive from the commercial fisheries, a significant source of mortality is fish that are landed dead upon the retrieval of the gear (Lynch 2011). Recreational fisheries are also a source of white marlin mortality. Endangered Species Act listing could significantly impact the management of white marlin especially the management of the recreational fishery and measures to prevent bycatch in the commercial fisheries (Id.). ICCAT efforts to regulate white marlin catches are inadequate, possibly due to inaction caused by uncertainties in the assessment

information (Id.). However, “uncertainties should not be used to justify delayed management action” (Lynch 2011: 215). Lynch provides recommendations for management of white marlin that, among other things, demonstrate that existing regulatory measures are inadequate to prevent the decline of white marlin populations.

Finally, while NMFS’s prior not warranted finding did not find that habitat issues or other pressures contributed to the classification of white marlin as a threatened or endangered species, this needs to be reconsidered. Studies have found that billfish, such as white marlin, are sensitive to water quality conditions, which are rapidly changing as a result of climate change and ocean acidification. Specifically, white marlin are sensitive to water temperatures and hypoxia (Lynch 2011).

In conclusion, we have enclosed scientific information published since NMFS last considered the status of white marlin. These information and data must be considered during NMFS’s evaluation of this petition and Mr. Chambers’ petition to classify the white marlin as threatened or endangered. We believe that the information presented in the petition and supporting documents meet the low threshold of the 90-day finding and that the white marlin should move forward to a full status review.

Sincerely,

/s/ Miyoko Sakashita

Miyoko Sakashita

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Enclosed:

Arocha, Freddy, and Alexander Bárrrios. 2009. “Sex ratios, spawning seasonality, sexual maturity, and fecundity of white marlin (*Tetrapturus albidus*) from the western central Atlantic.” *Fisheries Research* 95 (1) (January): 98-111. doi:10.1016/j.fishres.2008.08.010.

Beerkircher, L, F Arocha, a Barse, E Prince, V Restrepo, J Serafy, and M Shivji. 2009. “Effects of species misidentification on population assessment of overfished white marlin *Tetrapturus albidus* and roundscale spearfish *T. georgii*.” *Endangered Species Research* 9 (Wmbrrt 2007) (December 10): 81-89. doi:10.3354/esr00234.

Beerkircher, LR, and DW Lee. 2008. “Roundscale spearfish *Tetrapturus georgii*: Morphology, distribution, and relative abundance in the western North Atlantic.” *Bulletin of Marine* 82 (1): 155-170.

- Collette, BB, KE Carpenter, BA Polidoro, MJ Juan-Jordá, A Boustany, DJ Die, C Elfes, et al. 2011. "High value and long life--double jeopardy for tunas and billfishes." *Science* 333 (6040): 291.
- Collette, B B, K E Carpenter, B a Polidoro, M J Juan-Jordá, A Boustany, D J Die, C Elfes, et al. 2011. "Supporting Material. High value and long life--double jeopardy for tunas and billfishes." *Science (New York, N.Y.)* 333 (6040) (July 15): 291-2.  
doi:10.1126/science.1208730.
- ICCAT. 2011. Report of the 2011 Blue Marlin Stock Assessment and White Marlin Data Preparatory Meeting. Madrid 2011.
- IUCN. 2011. IUCN Red List of Threatened Species (ver. 2011.2). Available at: <http://www.iucnredlist.org>. (Accessed: 10 November 2011).
- Lynch, P.D., J.E. Graves, and R. Latour. 2011. "Challenges in the Assessment and Management of Highly Migratory Bycatch Species: A Case Study of the Atlantic Marlins." in Sustainable Fisheries: Multi-Level Approaches to a Global Problem pp. 197-225,  
[http://www.vims.edu/people/latour\\_rj/pubs/Lynch\\_et\\_al\\_2011\\_Sustainable.pdf](http://www.vims.edu/people/latour_rj/pubs/Lynch_et_al_2011_Sustainable.pdf).
- Wells, R.J. David, Jay R. Rooker, and Eric D. Prince. 2010. "Regional variation in the otolith chemistry of blue marlin (*Makaira nigricans*) and white marlin (*Tetrapturus albidus*) from the western North Atlantic Ocean." *Fisheries Research* 106 (3) (December): 430-435.  
doi:10.1016/j.fishres.2010.09.017.
- Worm, Boris, and Derek P Tittensor. 2011. "Range contraction in large pelagic predators." *Proc. Nat'l Academy of Sciences* 108(29):11942-11947.