Commentary

Comments on Dalebout et al. (2008) "DNA Identification and the impact of illegal, unregulated, and unreported (IUU) fishing on rare whales in Micronesian waters." *Micronesica* 40: 139-147.

In a recent paper, Dalebout et al. (2008) reported the molecular detection of a rare ginkgo-toothed beaked whale (Mesoplodon ginkgodens) after it was discovered onboard a Taiwanese-registered longlining vessel (docked in Guam) by the US Coast Guard during a routine inspection. They labeled this vessel 'illegal, unregulated and unreported (IUU)'. Their work clearly showed how molecular techniques can used in identification of difficult-to-identify species; however, their claim that the vessel was IUU needs to be revisited. To be clear, I fully support any and much increased monitoring and enforcement globally of fishing vessel operations. However, mislabeling of vessels as IUU can have a negative outcome as it can detract attention from areas where improvements in management are required. In this case, the claim that this vessel was IUU probably misdirected focus to the Taiwanese vessel and Taiwan (as the flagging nation) as lawless exploiters of another nation's resources (in this case that of the Federal States of Micronesia - FSM). However, more attention should have been given to the regulations and laws of FSM and the conditions on the fishing permit that was issued to this (and possibly other) foreign vessels.

Based on the information that was provided in Dalebout et al. (2008), the Taiwanese-registered vessel was fishing with a valid permit within the FSM and did not violate FSM law when it caught and retained the juvenile ginkgo-toothed beaked whale. Furthermore, no information was provided as to whether or not the practice of shark-finning (although unethical to many) was illegal in the waters of the FSM. If so, this information should have been presented, along with the discovery of shark fins onboard, as evidence of illegal activities. As presented, the only certain illegal activity was the 'importation' of the whale carcass into US territory when the vessel carrying the whale entered Guam. Whether this was an intentional gamble by the captain (hoping to escaping discovery by local inspection agents) or an accidental oversight will never be known. If the captain actually succeeded in accomplishing his stated intentions (i.e., bringing the carcass back to sell in Taipei), he would have done so illegally under Taiwan's Wildlife Conservation Act. However, with inadequate inspections, minimal consequences and loop-holes (e.g., the penalty for those found in possession of cetacean parts have been confiscation of the parts, unless there is evidence that they had killed the animals or were selling the parts; this often results in increased trade to compensate for the loss), this legislation clearly has not stopped the trade of cetacean meat in Taiwan (and still at the same ports and markets as they did before the law was enacted) but rather has pushed the trade 'underground' where it is less visible to enforcement.

If the Taiwanese-registered vessel did not violate their FSM permit or break any local fishing laws, then at least part of the responsibility has to lie with the FSM government to pass legislation to better protect their resources. Attention to this matter is required and would empower the people of FSM to take responsibility and control of their own resources. Attention should also be placed on amendments to Taiwan's Wildlife Conservation Act to eliminate loop-holes that presently exist and increase the consequences for Taiwanese citizens who violate this law anywhere in the world (the Wildlife Conservation Act does not appear to apply to Taiwanese citizens outside Taiwanese jurisdiction).

Finally, the ginkgo-toothed beaked whale reported in Dalebout et al. (2008) should not be taken as the first record of the species in Micronesian waters. Taiwanese vessels fish waters throughout the world. Because there are great consequences for killing marine mammals within certain territorial waters (e.g., US) and less to none in others (e.g., Federal States of Micronesia), there is an obvious incentive for captains to provide statements that would result in the least negative outcome and the least amount of information about other activities (e.g., possible trade) that are occurring at sea. Therefore, the actual origin of this whale has to be considered unknown and should not be considered a record for the waters of the FSM.

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