Comments on the paper by Wade and Brownell titled 'A review of the biology of western North Pacific minke whales relevant to stock structure' (SC/62/NPM13)

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We would like to comment on the paper by Wade, P.R. and Brownnel Jr., R.L. titled 'A review of the biology of western North Pacific minke whales relevant to stock structure' (SC/62/NPM13). This paper describes views for stock structure on the following four points,

1) Are whales in the Yellow Sea part of a population that migrate into the Sea of Japan?
2) Are whales along the Korean coast part of the same population along the Japanese coast?
3) Are whales on the east coast of Japan the same population as on the west coast of Japan?
4) Is there a coastal population in Sub-area 7 that is different from offshore minke whales, even after accounting for Sea of Japan whales that might migrate into this area?

Our comments are given on each of above points as follow.

1) The separation of feeding grounds (Yellow Sea) from the Sea of Japan is not enough criteria for defining independent populations. For example a single population might have two or more feeding grounds, such as Okhotsk Sea, North Pacific and Bering Sea in the case of O stock. Genetic difference, if it exist, will be critical for a better interpretation. Information by Wang (1985) is interesting, but accumulation of sample will be necessary.
2) Authors could not conclude based on biological data whether three groups of whales (Korean, west coast and east coast of Japan) are different population or not. Again, genetic information will be useful for a better understanding.
3) Different conception date between west and east coast of Japan (only winter in Sanriku area) can be explained saying that juveniles of J-stock animals intrude into this area (pregnant female of J-stock seldom intrudes into this area). Different composition of flipper color types can be explained saying that J and O-stocks are mixed in the east coast while only J-stock occur in west coast. Therefore, authors' conclusion can not be composed.
4) Difference in sex ratio between coastal and offshore whales can be explained saying that coastal area

is a feeding ground of juveniles (males and females) while offshore area is occupied mainly by adult males (Hatanaka and Miyashita 1997, Zenitani *et al*., 2000). Differences in body scars from cookie-cutter shark can be explained saying that juveniles (fewer scars) are abundant in coastal area and J-stock animals (fewer scars) mixed in coastal area while adult males (more scars) are distributed in offshore area. Therefore, authors' conclusion is not logical.

We would like to recommend authors to refer recent information on NP common minke whale, especially genetic analyses, in the hope to define comprehensively sound hypotheses. We would like also to point out that the Antarctic minke whales have similar pattern of migration and segregation as the North Pacific common minke whales. It will be helpful to interpret various kind of information as much as possible in order to get reasonable and plausible stock structure hypotheses.

References

Hatanaka, H. and Miyashita, T. 1997. On the feeding migration of the Okhotsk Sea-West Pcificstock of minke whales, estimates based on length composition data. Rep. Int. Whale Commn. 47:557-564.

Zenitani, R., Fujise, Y., Kawahara, S. and Kato, H. 2002. Examination of the distribution and reproductive status of western North Pacific minke whales collected in sub-areas 7, 8 and 9 during JARPN and JARPN II from 1994 to 2001. SC/J02/NP12.