

国際水研 第109回 所内談話会

日 時： 平成 28 年 4 月 26 日 15:00～

場 所： 国際水研会議室 富士 （清水庁舎 本館 2 階）

演 者： John Hampton 博士

WCPFC（中西部太平洋まぐろ委員会）において資源評価を行っている SPC の OFP（The Oceanic Fisheries Programme）のマネージャーです。

Title: Estimation of swimming depth of bigeye tuna from archival tag data: relationships with environmental variables and CPUE data

Abstract:

Swimming depth characteristics of bigeye tuna were estimated from recovered archival tags that were deployed in the western and central equatorial Pacific since 2008. The data were classified by day and night, and for three behavioural modes – classical, associated and other. Both day and night distributions are significantly deeper in the western Pacific (west of 180) than in the central Pacific. It is possible to explain this longitudinal variation in a generalized additive model that associates swimming depth with key oceanographic variables, the depth of the 20°C isotherm and the intensity of stratification of the surface layer. These patterns appear to be related to the spatial distribution of purse seine and longline CPUE for bigeye tuna, both of which increase strongly from west to east in the equatorial Pacific. This raises the possibility that the pattern of CPUE could be at least partly due to changing vulnerability of bigeye tuna related to their swimming depth. In particular, it suggests that the recent (2014-2015) upturn in longline CPUE for bigeye could be related to shallower swimming depth resulting from the recent El Nino conditions.

以上