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Title: **Distribution of zooplankton in ocean currents: high taxonomic resolution analyses using metatranscriptomic approach**

Authors/Affiliations: Ryuji Machida/Biodiversity Research Centre, Academia Sinica

Plankton are organisms that passively drift in water currents. However, each plankton species has its own biogeographic distribution. How do different populations and species of plankton achieve their biogeographic distributions within the open ocean, where water currents disperse and mix different populations and species? To answer this question, we are currently performing meta-transcriptomic analysis of zooplankton community samples. Using this method, we can determine nucleotide sequences of high-resolution (population level) marker regions without amplification bias from zooplankton community samples. In the face of global warming, it is also important that we are able to assess the spatial distribution of zooplankton species and populations in a limited time and with limited resources.

We have collected zooplankton samples from several locations in the tropical to subtropical North Pacific. Illumina sequencing libraries were constructed from the extracted RNA. Those libraries were sequenced by MiSeq (Illumina) at the Sequencing Core Facility of the Biodiversity Research Centre, Academia Sinica. We are currently processing these sequences with several informatics pipelines. Output data will be presented at the meeting.