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**Short biographical sketch and description of the seminar presentation: Oceanic migration and spawning ecology of freshwater eels in the western North Pacific**

Katsumi Tsukamoto has contributed to the field of fish migration through his 40-years career of wide-ranging research on diadromous fishes (ayu, salmon, eels) that migrate between the sea and freshwater. He lead his research team to collect freshwater eel eggs in the ocean for the first time in the world and discovered the spawning area of the Japanese eel in the western Pacific, which was highly publicized in Japan. Even after some of the spawning areas of freshwater eels were outlined about 100 years ago in the Atlantic, their spawning migration and natural reproductive ecology remained a mystery in the mist of ocean. Recent progress in marine biology, technologies and oceanographic methodologies lead us to successful collection of the Japanese eel eggs, hatched larvae and spawning condition adults in the estimated spawning area of the western North Pacific, and finally revealed a long lasting eel problem since the ancient Greek Aristotle more than 2000 years ago. The collection validates the hypotheses of new moon spawning at seamount area in the southern West Marina Ridge and confirms that salinity fronts and the seamount chain are important determinants of their spawning location. This type of spawning may help forming of spawning aggregation of males and females and reduce predation to facilitate reproductive success. The depths where adults and newly-hatched larvae were captured indicate eel spawning occurs in shallower layers of about 200 m and not at great depths. Ovaries of female Japanese eel and giant mottled eel adults were polycyclic, suggesting freshwater eels can spawn more than once during a spawning season. Monthly and annual changes of spawning location based on a decadal collection data of eggs, preleptocephali (hatched eel larvae) and adult eels suggested a recent southern shift of the spawning locations of the species that could be a major factor causing a drastic decline of the glass eel recruitment into East Asia through ocean atmospheric change in the western North Pacific. Recent progress of research on oceanic migration of adult eels by satellite-relayed pop up tag will also be presented.