Setsunan University





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**Key words** Aquatic ecosystems, Life history, Community structure, Field survey, Biodiversity, Specimens, Environmental education

**Adults** 

### **Summary**

### **Backgrounds**

■ Life history is a series of events and processes that an organism goes through from birth to death, and during its life history, it experiences various events.

■ To examine ecological information such as longevity, growthdeath pattern and spawning periods is important to manage the fisheries resources appropriately.

■ In order to increase stocks, it is essential to identify and conserve the "nursery grounds" where juveniles grow up.

# Reproduction spawning Life history Metamorphosis hatching Larvae

Oncorhynchus keta (Walbaum, 1792)

### **Purpose**

■ We examine life history and community structure of fishes in coastal ecosystems by field surveys, and utilize these findings for fisheries resource managements and habitat conservations.

### **Major achievements**

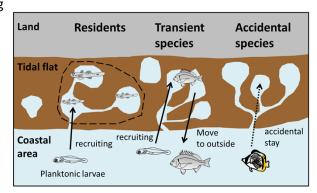
- We have conducted detailed research on the life history of commercially valuable and endangered fish species, proposing various conservation and resource management strategies.
- Our investigations have focused on the ecological roles of coastal and estuarine habitats, with a particular emphasis on tidal flats, in supporting fish populations.

# Prospects of collaboration

**Collaboration with agriculture and fisheries** Life history information not only benefits fisheries managements but also plays a crucial role in seedling production and aquaculture. Through our research on life histories of fishes, we aim to contribute to the discovery of new species suitable for aquaculture.

【Collaboration with a field of biodiversity】 With the adoption of COP15, investments in natural capital, including biodiversity, are advancing. We are committed to conducting ongoing diversity surveys of fish in Osaka Bay and the Kii Peninsula, aiming to contribute to initiatives like TNFD and OECM establishment.

Schematic diagram of fish life history. Even within the same species, the way of life varies depending on the region. What is the life history of fish in Osaka Bay?



Fish species that appear on tidal flats can be divided into three patterns. Many species send their whole life history on tidal flats, while some appear only as juveniles. What about in other coastal habitats?



# Selling point

We conduct extensive research on the life histories and nursery grounds of fishes, aiming to contribute to the management of fisheries resources and the conservation of diversity.