Tokyo University of Agriculture and Technology
Institute of Global Innovation Research

グローバルイノベーション研究院　公開セミナー
Institute of Global Innovation Research Open Seminar

Endocrine mechanisms of sexual plasticity in fishes

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どなたでもご聴講いただけます
Everyone is welcome to attend.

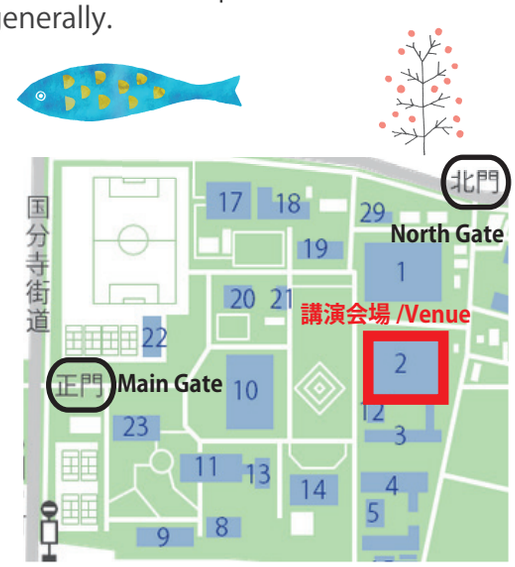
言語/英語
Language/English

Wednesday, July 3 2019, 17:00 ~ 18:30

東京農工大学 府中キャンパス　2号館 1階 多目的講義室
Multipurpose Seminar Room, 1st Fl., Building 2, Fuchu Campus TUAT

Abstract

Fishes display an extraordinary diversity of sex determination mechanisms including environmental sex determination with examples of both temperature and social cues being the critical influence determining whether an individual becomes female or male. We explore this variation in field-based studies with two species of fishes, the Caribbean bluehead wrasse that exhibits female-to-male functional sex change under social control and the southern flounder where sex determination is influenced by temperature. The transduction of environmental cues into sex determination responses remains poorly understood despite decades of study, but some basic principles are becoming clear from these studies. Both estrogen production in the gonads and brain and the endocrine stress response appear to play important roles in guiding environmental sex determination and do so through effects on conserved sex determination pathways. The mechanisms for these responses provide a fascinating example of how sex can adapt to environmental conditions and a useful system for studying phenotypic plasticity more generally.



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