

第15回 MEE SEMINAR

MATHEMATICAL ECOLOGY & EVOLUTION

2010年1月19日(火) 14:40~16:10

明治大学生田キャンパス第二校舎A館：A207

小田急小田原線 「生田駅」から徒歩10分

又は「向ヶ丘遊園」駅北口から「明治大学正門前」行きバスで10分終点下車

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January 19, 2010. 14:40~16:10

Meiji Univ. Ikuta campus A207

Replicator-dynamics models of sexual conflict

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Abstract:

In many species, females prefer mates with extreme characteristics that are apparently useless or deleterious for survival, such as bright colors, elaborate ornaments and conspicuous songs. Although empirical evidence has shown that many male traits have evolved via sexual selection by female mate choice, our understanding of the adaptive value of female mating preferences is still very incomplete. It has recently been suggested that female mate choice may result from females evolving resistance rather than attraction to males. When the sexes are in conflict over mating rates, natural selection favors both males that induce higher mating rates and females that are more successful at resisting mating attempts. Such sexual conflict may result in an escalating coevolutionary arms race between males and females. Here, we develop simple replicator-dynamics models of sexual conflict in order to investigate its evolutionary dynamics. For these models, we obtain the conditions for a coevolutionary process to establish costly male and female traits and examine under what circumstances polymorphism is maintained at equilibrium. Then we discuss how assumptions in previous models of sexual conflict are translated to fit to our model framework and compare our results with those of the previous studies.

参加自由です。皆様のお越しをお待ちしております。

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