

MEセミナー@数理生物學研究室

Evolutionary Stability and Geographic Variation of Plant-Pollinator Networks

Speaker : **Arndt Telschow**

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Network theory is important for describing and analyzing complex biological phenomena. Often, key characteristics of a specific network are well described, but not the factors that shape their structure and evolution. A game theoretical approach is presented that allows calculating evolutionary stable network structures. We focus on plant-pollinator communities, which are characterized by their high degree of heterogeneity, and also known to vary geographically. The theoretical analysis revealed (1) multiple stable network structures that form a gradient from specialism toward generalism with decreasing pollinator abundance, and (2) a characteristic pattern in evenness for the corresponding degree distributions. We tested model predictions by meta-analysis of > 50 plant-pollinator networks, and found theory and data to be consistent. In addition, the model offers a new explanation for geographical variation between tropics and temperate under the assumption that these differ in their relative abundance of pollinators.



- 日時 : **5/21 [火] 15:00 ~**
- 場所 : **3631号室 (3号館 6F)**
- 懇親会 : **あります！ご連絡ください。**