OR201

Through the Looking-Glass: reflection of ant-diversity in ant-mimics

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Ants show enormous diversity is the tropics, and high diversity of ant-mimics is also found in the regions. Focusing on ant-mimicking salticid genus *Myrmarachne*, we examined whether high diversity of ant-mimic is reflected on the ant-diversity in tropics, or not, as follows: 1) Ants and spiders are collected from canopy and ground layer respectively in tropical forest in different locations of Borneo, from 2004 to 2014. 2) We developed computer-vision tools, using the image-recognition technique, for assessment the mimetic resemblance by objective and quantitative indexes, and detected species-to-species association for *Myrmarachne* spiders to their ant models, by similarity index of shape, color and size. 3) Based on the judgments of mimic-model association, we tested whether the mimetic and species-diversity patterns of *Myrmarachne* were matched to morphological and species-diversity pattern of sympatric ants. 4) Using of null-model analysis and logistic regression analysis, we examined occurrence pattern of *Myrmarachne* spiders and ants in same habitat, and ascertained whether co-occurrence pattern was found between *Myrmarachne* spiders and their ant-models. As a result of the study, we found mimetic patterns, species diversity and occurrence patterns in ant-mimicking *Myrmarachne* spiders were closely matched with morphological and species diversity and occurrence patterns of ants in same habitat. In this presentation, we show supporting evidence that the enormous diversity of tropical ants play as a mechanism to creates high biodiversity in tropical forest, though ant-mimicking.