國立中央大學

統計研究所

學術演講

主 講 人:沈宗荏 教授(國立中與大學統計學研究所)

講題: Predicting the number of newly found rare species using a

Bayesian-weighted approach

時 間:108年3月26日(星期二) 上午11:00 ~ 12:00

地 點:中央大學鴻經館M429室

茶 會: <u>上午 10:30 ~ 11:00</u> 地 點: 鴻經館 510 室

ABSTRACT

In natural ecological communities, most species are rare and thus susceptible to extinction. Consequently, the prediction and identification of rare species are of enormous value for conservation purposes. How many newly found species will be rare in the next field survey? By using observed species abundance information in an ecological sample, we developed an accurate estimator for estimating the number of new rare species (e.g., singletons, doubletons, and tripletons) that will be found in an additional unknown sample. An semi-numerical test showed that the proposed Bayesian-weight estimator accurately predicted the number of rare new species with low relative bias and relative root mean squared error and accordingly, high accuracy.

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