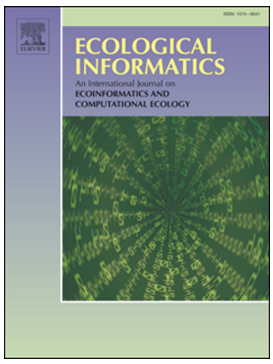
Accepted Manuscript



Through the jungle of methods quantifying multiple-site resemblance

Dénes Schmera, János Podani

PII: S1574-9541(17)30269-8
DOI: https://doi.org/10.1016/j.ecoinf.2018.01.001
Reference: ECOINF 833

To appear in: *Ecological Informatics*

Received date: 9 October 2017
Revised date: 23 November 2017
Accepted date: 3 January 2018

Please cite this article as: Dénes Schmera, János Podani , Through the jungle of methods quantifying multiple-site resemblance. The address for the corresponding author was captured as affiliation for all authors. Please check if appropriate. Ecoinf(2017), https://doi.org/10.1016/j.ecoinf.2018.01.001

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

ACCEPTED MANUSCRIPT

Through the jungle of methods quantifying multiple-site resemblance

Dénes Schmera[1,2] & János Podani[3,4]

[1]MTA Centre for Ecological Research, Balaton Limnological Institute, Klebelsberg K. u. 3, H-Tihany, Hungary, E-mail: schmera.denes@okologia.mta.hu

[2]MTA Centre for Ecological Research, GINOP Sustainable Ecosystem Group, Klebelsberg K. u. 3, H-Tihany, Hungary

[3]Department of Plant Systematics, Ecology and Theoretical Biology, Institute of Biology, L. Eötvös University, Budapest, Hungary

[4]MTA-ELTE-MTM Ecology Research Group, Budapest, Hungary

Abstract

Methods that quantify multiple-site resemblance are basic toolkits of ecology for studying community variation in space and time. Although both pairwise and multiple-site coefficients have received increasing attention in the past decade, the high variety of methodologies combined with the absence of a systematic review prevents full understanding and comprehension. To illuminate the situation, we compare and classify methods that use incidence data and propose a unified terminology. The methods can be grouped according to families, approaches and forms. The examination of algebraic expressions and analyses of artificial and actual data sets suggest that inference drawn about communities strongly depends on the methodology applied. We found that the impact of mimicking the original pairwise indices (i.e. the impact of families) was stronger than the impact of components used in formulating the coefficients (i.e. the impact of approach). Our findings suggest that the measures examined quantify drastically different facets of multiple-site resemblance and therefore they have to be selected with care in community studies.

Download English Version:

https://daneshyari.com/en/article/8845832

Download Persian Version:

https://daneshyari.com/article/8845832

Daneshyari.com