Package 'nna'

October 13, 2022

Title Nearest-Neighbor Analysis

Version 0.0.2.1

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Description Calculates spatial pattern analysis using a T-square sample procedure.
This method is based on two measures ``x'' and ``y''.
``x'' - Distance from the random point to the nearest individual.
``y'' - Distance from individual to its nearest neighbor.
This is a methodology commonly used in phytosociology or marine benthos ecology to analyze the species' distribution (random, uniform or clumped patterns).
Ludwig & Reynolds (1988, ISBN:0471832359).

Depends R (>= 3.4.0)

License GPL (>= 2)

Encoding UTF-8

LazyData true

RoxygenNote 6.0.1

NeedsCompilation no

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Repository CRAN

Date/Publication 2018-04-13 08:54:13 UTC

R topics documented:

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nna	*Calculates Spatial Pattern Analysis usisng a T-square sample procedure.*

Description

Calculates Spatial Pattern Analysis usisng a T-square sample procedure.

Usage

```
nna(x, y)
```

Arguments

x	- Distance from the random point to the nearest individual
y	- Distance from individual to its nearest neighbor

Value

Returns the T-Square Index of Spatial Pattern (C); z-score of C; the Distance Index of Dispersion (I); and z-score of I

References

[1] Cottam, G., & Curtis, J. T. (1956). The use of distance measures in phytosociological sampling. Ecology, 37(3), 451-460. doi:10.2307/1930167 [2] Diggle, P. J., Besag, J., & Gleaves, J. T. (1976). Statistical analysis of spatial point patterns by means of distance methods. Biometrics, 659-667. [3] Johnson, R. B., & Zimmer, W. J. (1985). A more powerful test for dispersion using distance measurements. Ecology, 66(5), 1669-1675. doi:10.2307/1938029 [4] Lamacraft, R. R., Friedel, M. H., & Chewings, V. H. (1983). Comparison of distance based density estimates for some arid rangeland vegetation. Austral Ecology, 8(2), 181-187. doi:10.1111/j.1442-9993.1983.tb01605.x [5] Ludwig, J. A., & Reynolds, J. F. (1988). Statistical ecology: a primer in methods and computing (Vol. 1). John Wiley & Sons.

Examples

```
a=c(7, 19, 11, 18, 12, 27, 23, 27, 12, 8, 2, 4, 10, 18, 19, 8, 3, 9, 4, 5)
b=c(8, 6, 6, 13, 16, 11, 18, 8, 7, 7, 3, 7, 32, 22, 22, 12, 17, 18, 11, 10)
nna(a,b)
```

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