Do community-weighted mean functional traits reflect optimal strategies?

Robert Muscarella[1,2*] and María Uriarte[1]

Proceedings of the Royal Society B (In Press)

[1] Department of Ecology, Evolution and Environmental Biology, Columbia University, USA
[2] Department of Bioscience, Section for Ecoinformatics and Biodiversity, Aarhus University, DK

Contact: Bob Muscarella <bob.muscarella@gmail.com>

Description: An RDS Rdata object (named 'data') containing a list with four elements.

$site_data:	A data.frame of mean annual precipitation ('MAP', mm yr^{-1}) and unscaled community-weighted mean trait values for each of the 12 study sites. CWM values are given for wood density ('WD', g cm^{-3}), leaf mass per area ('LMA', g m^{-2}), and maximum height ('Hmax', meters).
$ppt_at_RORmax:	A vector holding the values of mean annual precipitation (mm yr^{-1}) in grid cells where each species was predicted to have its highest relative occurrence rate (based on ENMs). Elements are named with species six-letter codes (*see* $species_names).
$species_data:	A data.frame with relative occurrence rate ('ROR', output from ecological niche models), ΔCWM ('deltaCWM'), and basal area ('BA') for each species ('species') in each plot ('site') and for each trait ('trait'), including the multivariate trait (which is designated as 'MVT').
$species_names:	A data.frame holding the taxonomic information ('order', 'family', 'genus', 'species', 'code', 'binom') for the study species. The 'code' column corresponds to the six-letter codes used in the other data objects.