

# Evolutionary walks through a land plant morphospace

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October 27, 2010

## 1 Introduction

Wright’s protocol has been successfully recast in terms of spatial domains containing all (or at least many) of the conceivable morphological variants (‘morphospaces’ *sensu* Thomas and Reif (1993)).

In this paper, I review the construction of a morphospace for early land plants (Niklas and Kerchner, 1984; Niklas, 1997a; 1997b) and show how it can be used . . . .

... horizontally cantilevered branches impose the largest bending moments on subtending branches (Niklas, 1992; 1994a).

... This definition removes the sharp dichotomy said to exist between ‘object’ and ‘process’ complexity (i.e. the number of different parts in an organic system versus the number of different interactions among them (McShea, 1996)).

... fossil record for Devonian and Carboniferous vascular land plants (Niklas et al., 1980; 1983; Gensel and Andrews, 1984).

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