

CLAMP

Climate-Leaf Analysis Multivariate Program

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A palaeoclimate proxy based on leaf physiognomy initially developed by the late Jack A Wolfe.



Jack a Wolfe

Plant Palaeoclimate Proxies

Palaeoclimate proxies may be divided into two types:

- 1) those based on the environmental tolerances of assumed living relatives (nearest living relative approaches) and
- 2) those that are based on aspects of plant architecture constrained by environmental conditions (physiognomic approaches).

Each have specific advantages and disadvantages.

Nearest living relative techniques (NLR) can be applied to all plant organs assignable to modern taxa but are most useful for those plant organs lacking known morphological adaptations to the physical environment (e.g. seeds and pollen). However they are restricted to timescales where evolutionary change at the species level is unlikely. In most cases <1-5Ma, although techniques that involve protocols for examining populations (e.g. Co-existence Analysis and Overlapping Distribution Analysis) can be extended further back in time.

