

Alternative sets of calibration points used to constrain relaxed molecular clock analyses. Node ages were inferred for each of these conditions to evaluate the impact of some potentially erroneous fossil assignments.

condition	combination	description
01	a1 a2 b1 c d2 e1 f g h1	moderately conservative
02	a1 a3 b1 c d1 e1 f g h1	ultraconservative youngest
03	a1 a2 b2 c d3 e2 f g h2	ultraliberal oldest
04	a1 a2 b1 c d2 e1 f h1	moderately conservative, no <i>Caulerpa</i>
05	a1 a2 b1 c d2 e1 g h1	moderately conservative, no <i>Dimorphosiphon</i>
06	a1 a3 b1 c d1 e1 g h1	ultraconservative youngest, no <i>Dimorphosiphon</i>
07	a1 a2 b2 c d3 e2 g h2	ultraliberal oldest, no <i>Dimorphosiphon</i>
08	a1 a2 b1 c d2 e1 h1	moderately conservative, no <i>Caulerpa</i> , no <i>Dimorphosiphon</i>
09	a2 b1 b3 c d2 e1 h1	very conservative young: strongly constrained age for crown Dasycladaceae based on <i>Uncatoella</i>
10	a2 b1 b3 c d2 e1 h2	very conservative young: strongly constrained age for crown Dasycladaceae based on <i>Uncatoella</i>
11	a1 a2 c d2 e1 h1	condition 08 without calibrations on node b

As mentioned in the text, analyses were also repeated with different maximum age constraints on the root node to evaluate the sensitivity to this particular assumption. These analyses were variants of condition 08 in which the maximum age constraint a1 was replaced with 800 my and 500 my.

The chronogram resulting from analysis 08 is shown in Fig. 4.

The chronogram resulting from analysis 09 is shown in the online appendix (i.e. below).

Alternative chronogram inferred with node b constrained to lie within the Lower Devonian (416.0–397.5 my) based on the occurrence of fossils with thalli comparable to those of Dasycladaceae in this epoch. The calibration points used for this analysis are a2, b1, b3, c, d2, e1 and h1 (Table 3). This chronogram can be seen as a conservative (i.e. young) alternative to the analysis presented in Fig. 4.

