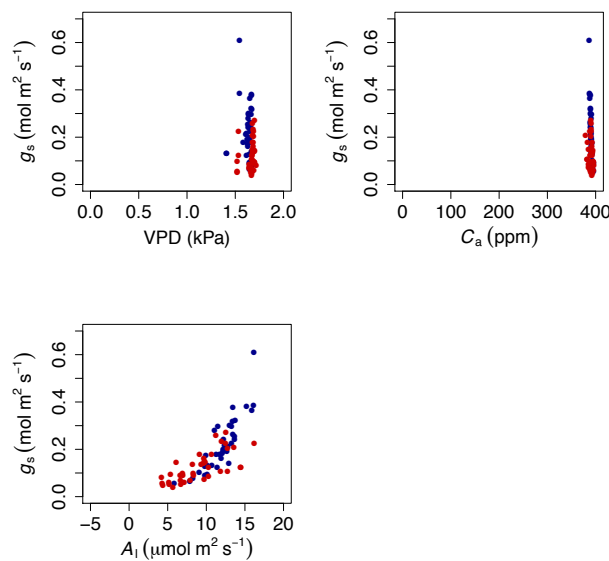


A commonality across the stomatal models used [1-3] is that photosynthesis ( $A_l$ ) acts as a driver of stomatal conductance ( $g_s$ ). We will now describe the model of Medlyn et al. [1], but we note that the same rationale applies to all other models. There are three variables driving this model:

$$g_s = g_0 + \left(1 + \frac{g_1}{\sqrt{VPD}}\right) \frac{A_l}{C_a}$$

namely, vapor pressure deficit (VPD),  $A_l$  and  $\text{CO}_2$  concentration ( $C_a$ ), with two fitting parameters ( $g_0$  and  $g_1$ ). Given that  $g_s$  and  $A_l$  are usually correlated [4, 5], even under constant environmental conditions the model has a reasonable goodness-of-fit (see Table 2), which is further enhanced by the addition of circadian oscillators (Table 2).



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