

1 Phenological cue use varies with functional traits in North
2 American woody plant communities

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10 These plots are made using the species means and standard error of the trait data and the mean species
11 level cue estimates from the phenology model that includes four sites and phylogenetic effects.

- 12 1. Slight trend in Mean C:N and bb, with higher CN species bb earlier (Fig 1)
13 2. Slight trend with height, taller individuals bb later

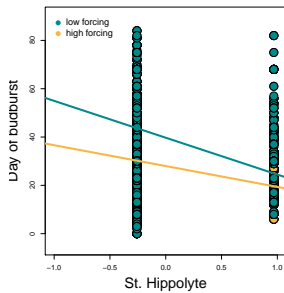


Figure 1: Relationship between mean species traits and mean bb day, with species bb day reflected in the colour gradient. Trendlines based on simple linear models comparing day of bb and trait values.

- 14 1. Slight trend in mean SSD, with western species having slightly lower ssd than shrubs in the east (Fig.2)
- 15 (Fig.2)
- 16 2. Slight trend in mean CN, with western shrubs having lower CN than easter spp (Fig.2)
- 17 3. Difficult to make any such inferences since we had so few speices of trees in BC (Fig. 3)

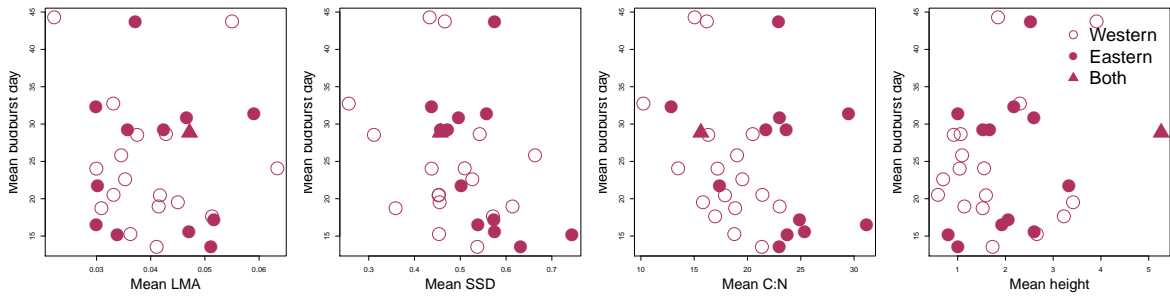


Figure 2: Relationship between mean shrub species traits and mean bb day, with point shapes indicating the transect.

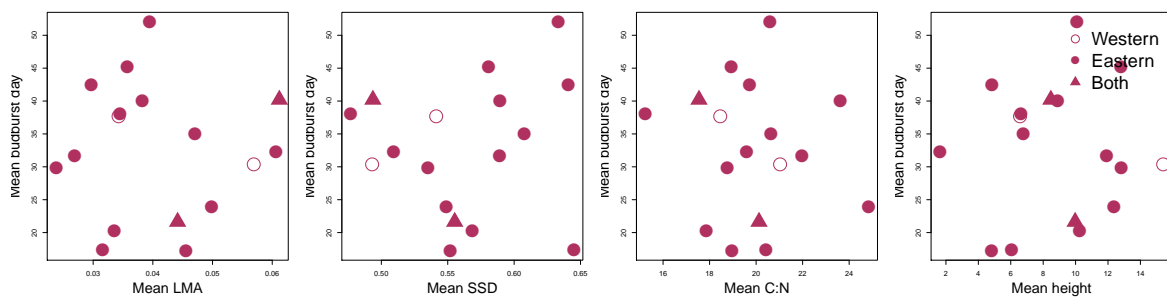


Figure 3: Relationship between mean tree species traits and mean bb day, with point shapes indicating the transect.

1. Species with stronger chill responses (more negative chilling slopes, shown in purple) bb later (Fig 6)
2. Similar for forcing and photoperiod
3. May be slight trends in C:N and height
4. Likely most driven by shrub vs tree differences

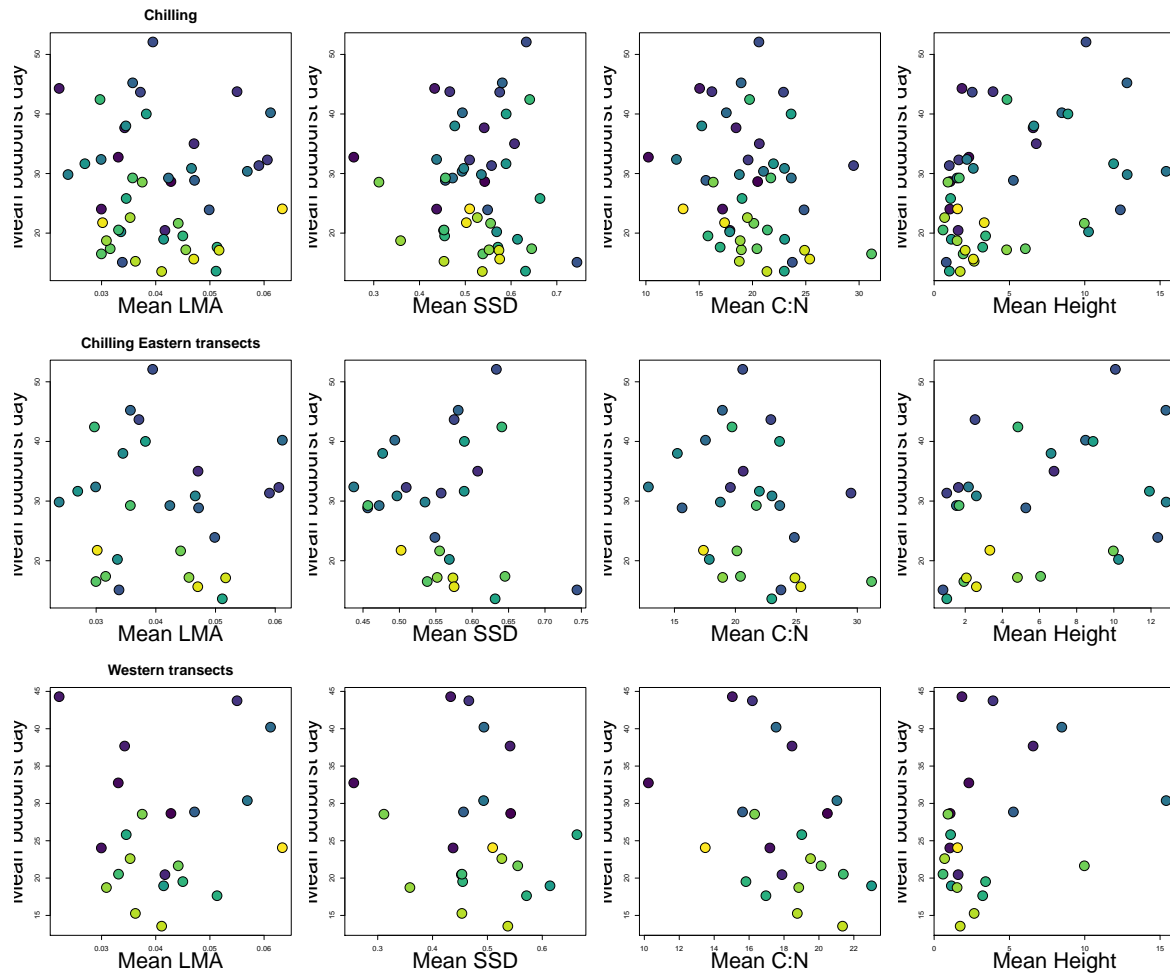


Figure 4: Relationship between mean species trait value and mean budburst day, with point colours representing chilling cues across both transect (a-c), the eastern transect = (d-f), and western transect (g-hi). All cue responses were negative. Purple points are more negative, with a strong trait response, while yellow points are weaker.

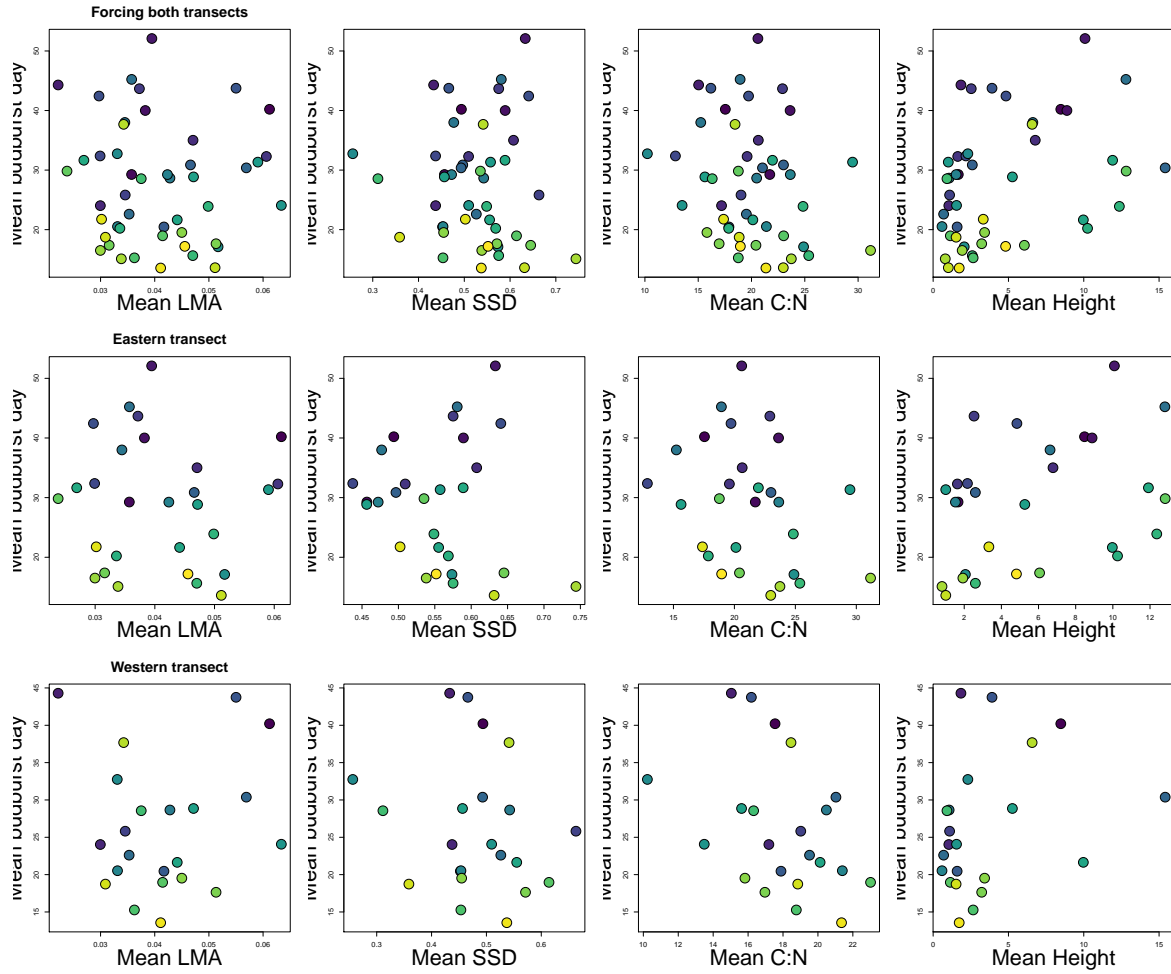


Figure 5: Relationship between mean species trait value and mean budburst day, with point colours representing forcing cues across both transect (a-c), the eastern transect = (d-f), and western transect. All cue responses were negative. Purple points are more negative, with a strong trait response, while yellow points are weaker.

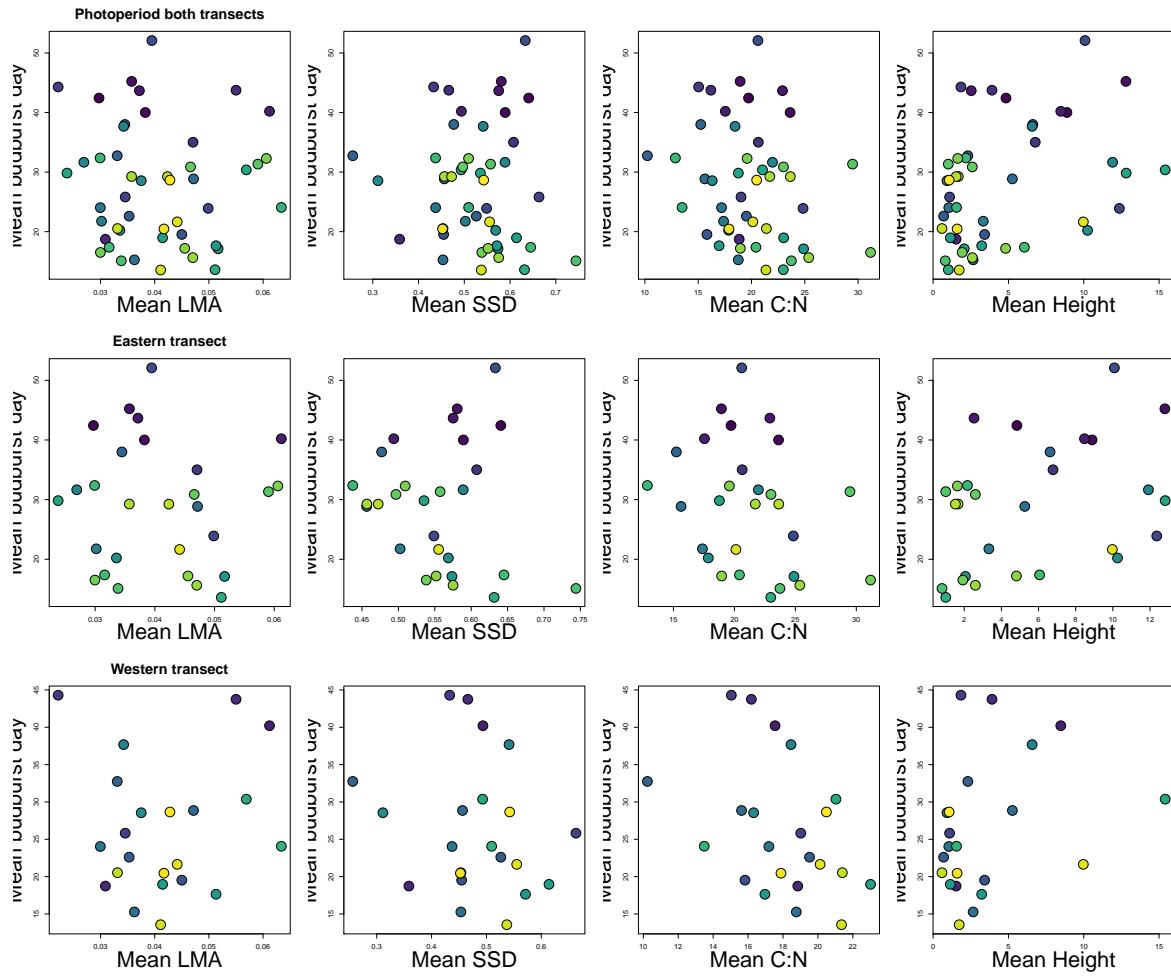


Figure 6: Relationship between mean species trait value and mean budburst day, with point colours representing photoperiod cues across both transect (a-c), the eastern transect = (d-f), and western transect. All cue responses were negative. Purple points are more negative, with a strong trait response, while yellow points are weaker.

1. One challenge in interpreting these plots is that our western transect is mostly shrubs, while the eastern transect is mostly trees
2. No clear trends with traits and transects (Fig. 7)

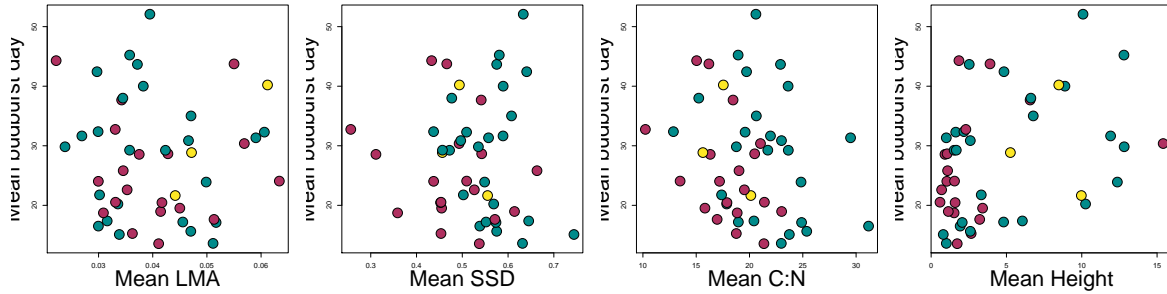


Figure 7: Relationship between mean species trait value and species mean budburst days. Point colours representing different transects, with the eastern transect shown in teal and the western transect shown in maroon, with species growing in both regions shown in yellow.

1. Interesting convergence on chilling responses for taller species
2. *Fagus* is an outlier with strong chilling and photoperiod responses
3. No clear trends with traits and transects (Fig. ??)

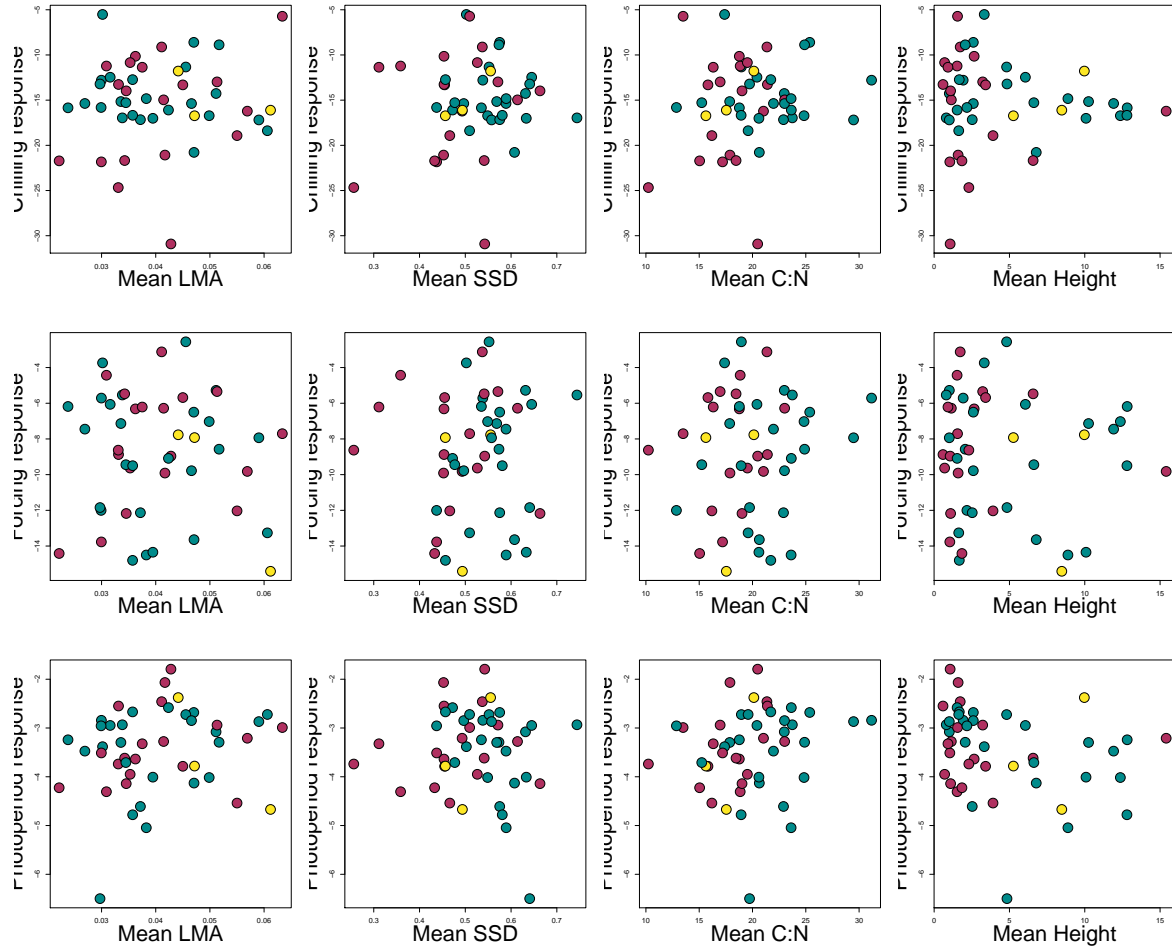


Figure 8: Relationship between mean species trait value and mean budburst day, with point colours representing chilling cues (a-c), forcing cues = (d-f), and photoperiod cues (g-hi). All cue responses were negative. Point colours representing different transects, with the eastern transect shown in teal and the western transect shown in maroon, with species growing in both regions shown in yellow.

1. No clear trends for LMA, SSD, or C:N
2. Slight trend for height, with shrubs budburst earlier than trees (Fig. 9)

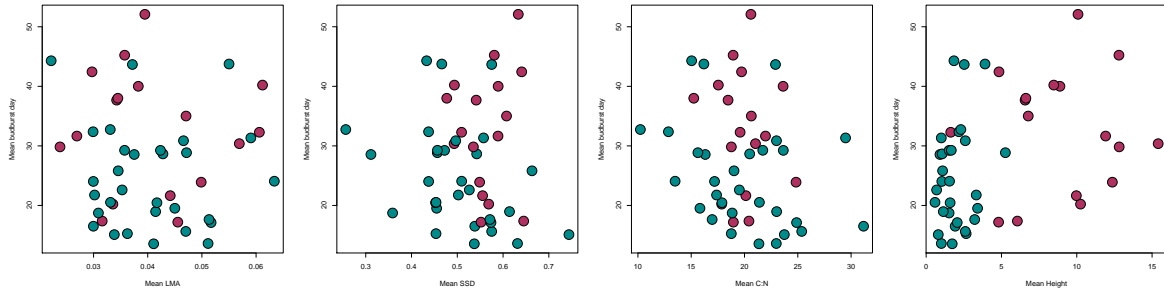


Figure 9: Relationship between mean species trait value and mean budburst, with chilling (a-c), forcing (d-f), and photoperiod cues (g-i). Point colours representing different species groups, tree species are depicted in maroon and shrub species in teal.

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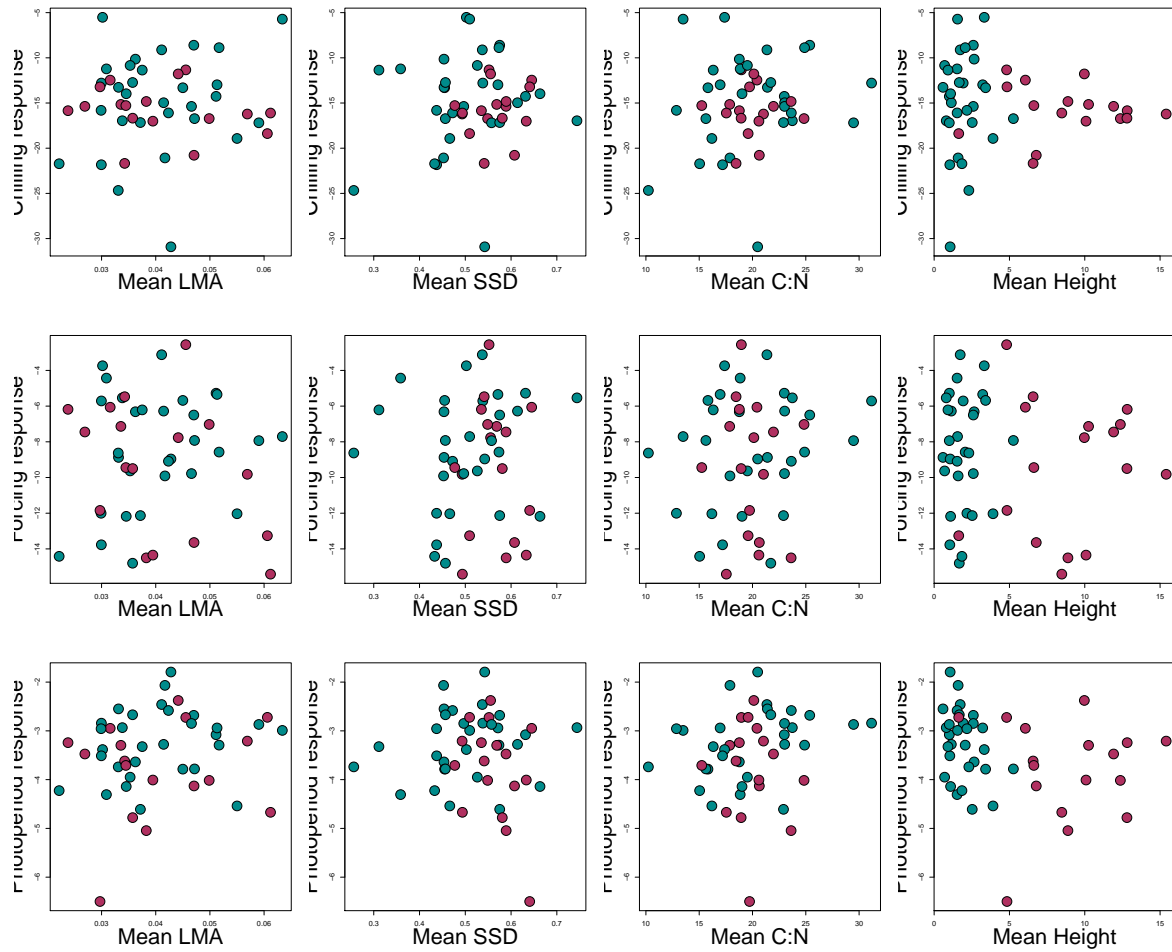


Figure 10: Relationship between mean species trait value and cue responses, with chilling (a-c), forcing (d-f), and photoperiod cues (g-i). Point colours representing different species groups, tree species are depicted in maroon and shrub species in teal.