

Grephon: What we learned from the papers

Grephon group

May 4, 2023

Contents

1	Quick results	2
2	Questions I think we need to answer before entering more data...	4
3	Next steps	5

1 Quick results

Most folks submitted their tables trying to digest papers on growing season length relates to growth – thank you! We ended up with 35 rows of data across 21 papers. You can check out the merged file

I did a quick review and then clean on some entries. Here’s some info from that....

Most studies are temperate or boreal forests as best I can tell. Lots of *Pinus*, *Abies*, *Betula*, *Fraxinus*, *Quercus*, *Fagus*.

Growth metrics were dominated by tree rings (annual cores):

	NDVI/LAI	annual core
1	2	10
biomass/height/R:S dendrometer diameter		intra-annual core
5	2	6
other	photosynthesis	
4	5	

Study types were dominated by tree rings (intra and inter-annual) but then more diverse:

	2
continental scale obs phenology with model	1
ecosystem carbon budget model	1
greenhouse	7
greenhouse or chamber	1
intra-annual cores (xylogenesis)	2
provenance	1
satellite	3
shade and climate manipulation experiments	1
shade manipulation experiments	1
tree ring	15

In 6 papers and 10 rows of data, authors thought they found a relationship, but this varied with growth metric (you'll also see we're rather unsure about those intra-annual core studies):

	no	not mentioned	unsure	yes
	0	0	0	0
NDVI/LAI	0	2	0	0
annual core	3	1	0	4
biomass/height/R:S	1	0	0	3
dendrometer diameter	2	0	0	0
intra-annual core	2	0	4	0
other	2	0	0	2
photosynthesis	0	1	0	1

And we're not so sure more than one row of data includes a growth x growing season relationship:

	no	unsure	yes
no	0 3	5	0
not mentioned	0 0	0	0
unsure	0 4	0	0
yes	0 0	9	1

2 Questions I think we need to answer before entering more data...

1. Was this data entry doable? It was easy enough for me to clean quickly, but I did not hear how it went for others doing entry?
2. I and Ailene want some of our papers reviewed by someone else, do we want to just have everything checked twice?
3. Adjustments to data entry ...
 - (a) What do we mean by 'did authors think they found evidence?' ... I still struggled with this. Do we mean in whatever way they defined it? Do we want or have a column for GSL x growth (our version ... and what is our version? We could have a couple, see list below)?
 - (b) Are we separating out leaf from wood phenology studies enough?
 - (c) How to enter xylogenesis studies?
 - (d) I like the study level question, but I think it needs refining. Ailene added "Strideck et al 2022 study created tree ring chronologies (by merging tree rings across individuals within sites- a common practices in tree ring research) so I selected 'Across sites' for study_level. Might be worth a discussion as there may be other tree ring studies that use a similar approach." See below also ...

	1
across individuals	
10	
across sites	
1	
across sites/populations	
9	
across sites/populations across years within individuals	
1	
across species	
1	
across years within individuals	
7	
across years within individuals\302\240	
2	
within individuals	
1	
within individuals for < 1 year (April to October 2018)	
1	
within years within individuals	
1	

1. Can we write out the statements we want to make or line widths in a figure we want to define from this so we can make sure we're happy with the table?
2. What is our dream metric of GSL x growth?
 - (a) GSL must be start to end for me – NOT days growth >0 or such ...
 - (b) Does photosynthesis count as growth? What about the other random entries such as NDVI?

3 Next steps

1. Finalize the table again
2. Decide on how to assign additional reviews (re-reviewing) and assign!
3. Decide on aims to decide which papers we WOULD add
4. Do it ...