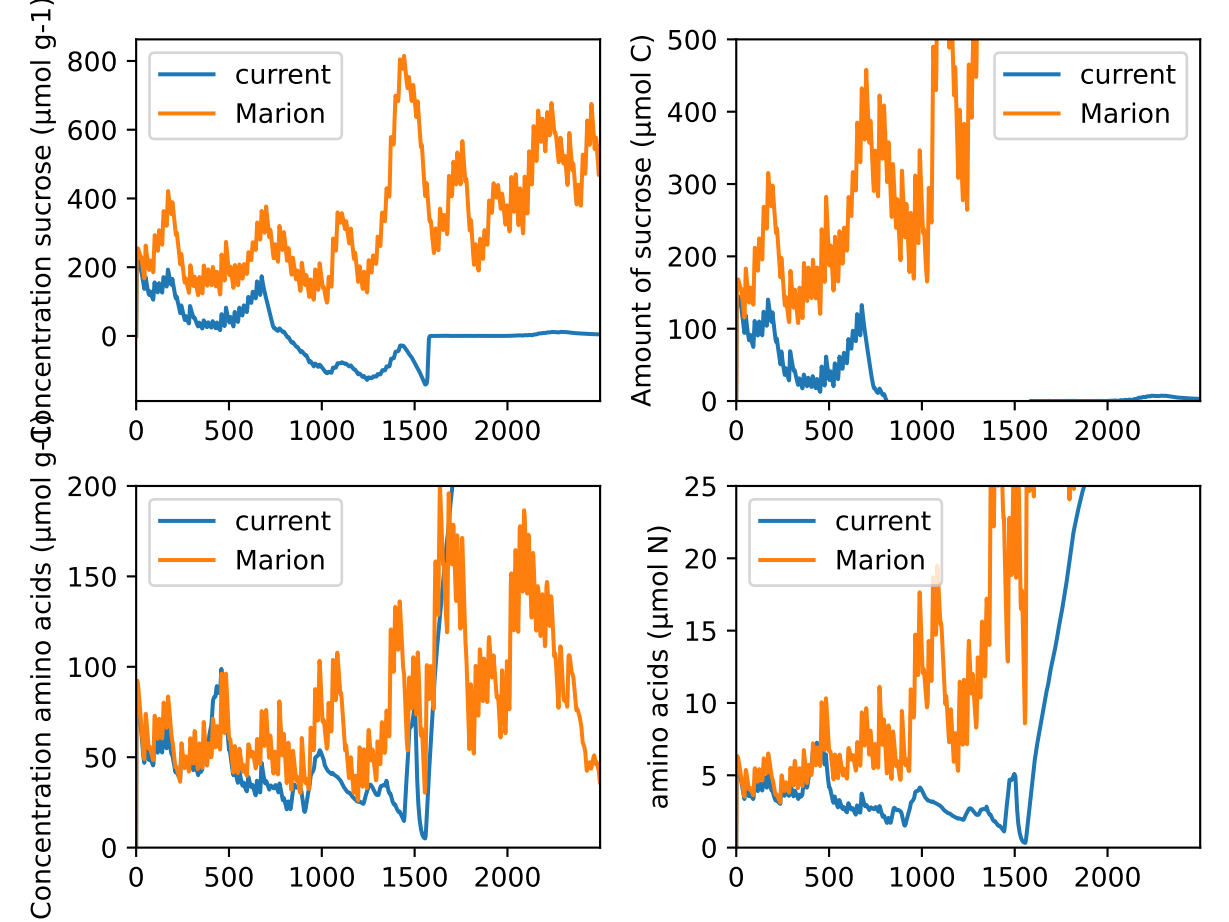
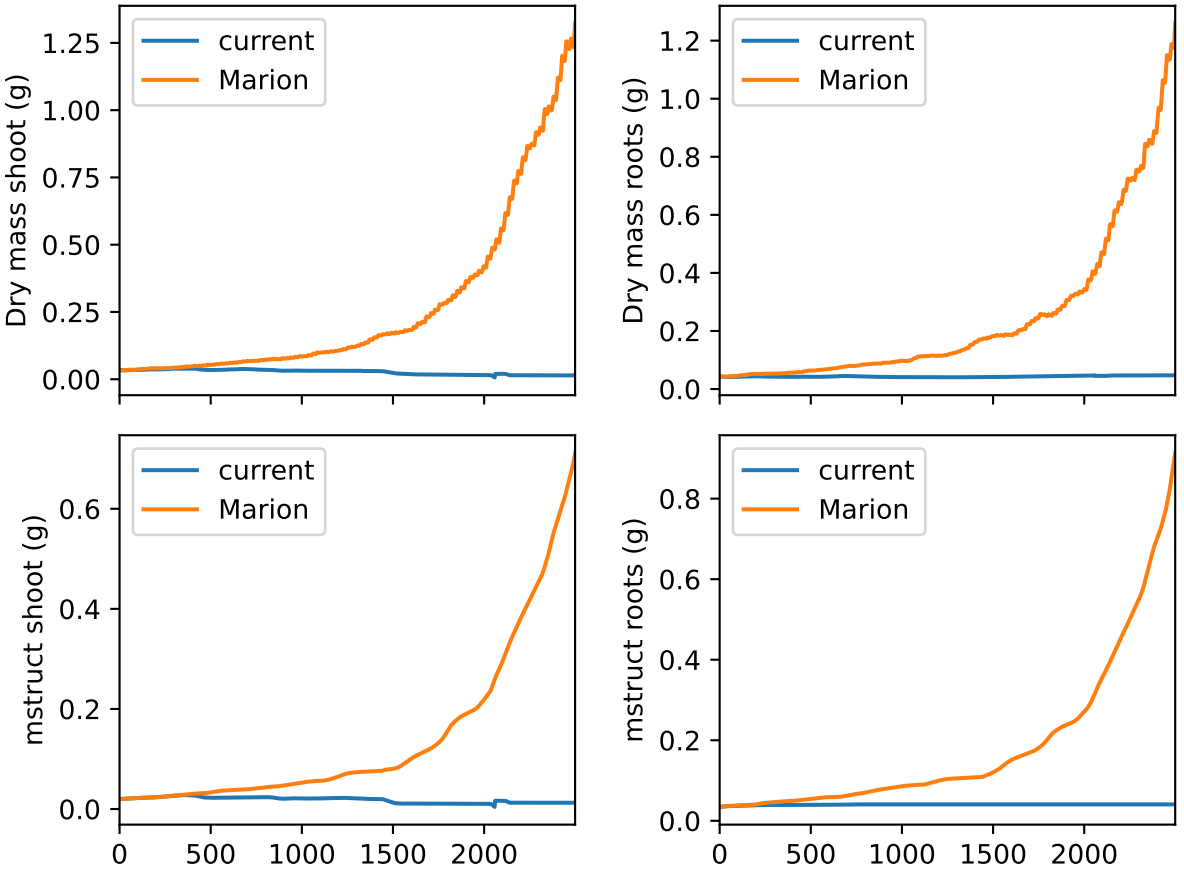
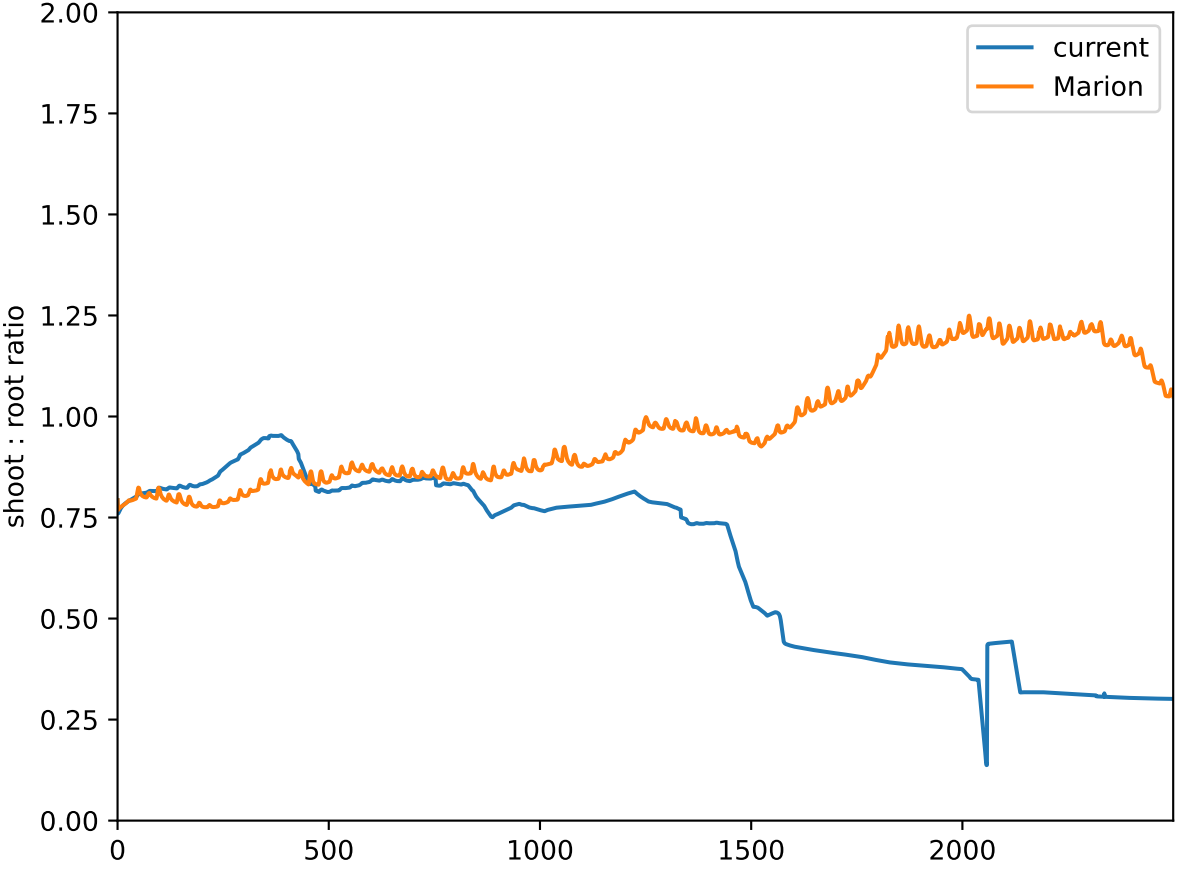
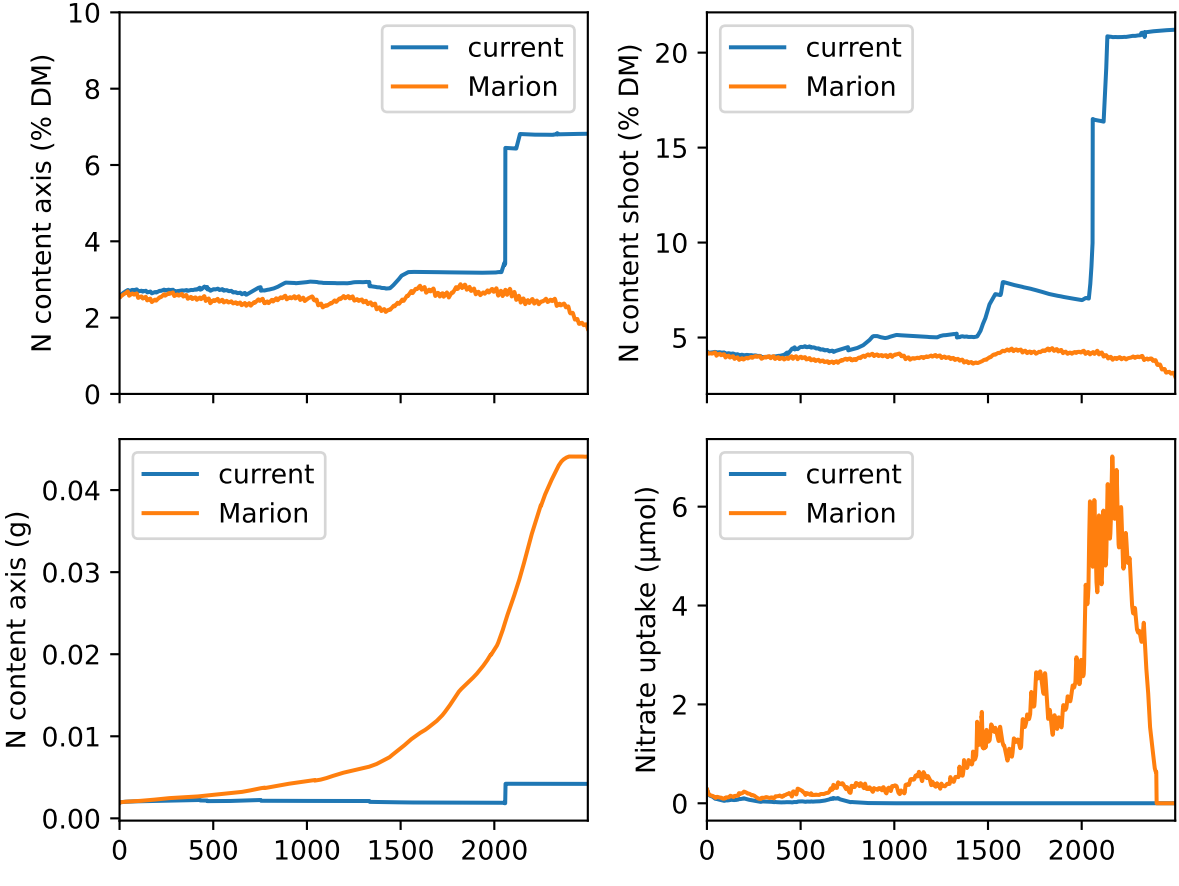
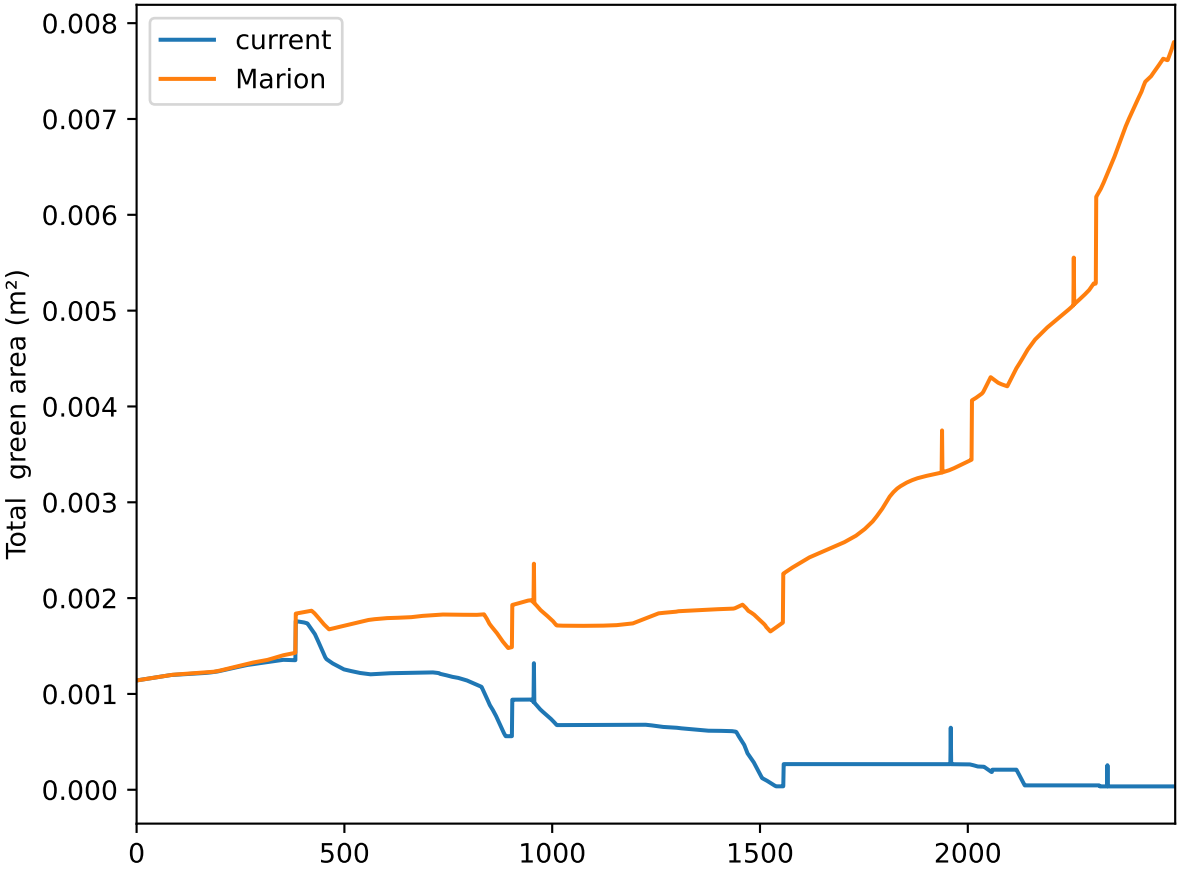

current
Marion
Concentration sucrose (µmol g-1)
Amount of sucrose (µmol C)
Concentration amino acids (µmol g-1)
amino acids (µmol N)
0
500
1000
1500
2000
100
200
300
400
600
800
50
150
5
10
15
20
25


current
Marion
Dry mass shoot (g)
0.00
0.25
0.50
0.75
1.00
1.25
current
Marion
Dry mass roots (g)
0.0
0.2
0.4
0.6
0.8
1.0
1.2
current
Marion
mstruct shoot (g)
0.0
0.2
0.4
0.6
0
500
1000
1500
2000
current
Marion
mstruct roots (g)
0.0
0.2
0.4
0.6
0.8
0
500
1000
1500
2000


current
Marion
shoot : root ratio
2.00
1.75
1.50
1.25
1.00
0.75
0.50
0.25
0.00
0
500
1000
1500
2000


N content axis (% DM)
current
Marion
N content shoot (% DM)
current
Marion
N content axis (g)
current
Marion
Nitrate uptake (µmol)
current
Marion
0
500
1000
1500
2000


current
Marion
Total green area (m²)
0.008
0.007
0.006
0.005
0.004
0.003
0.002
0.001
0.000
0
500
1000
1500
2000

leaf_L
Plant: 1 - Axis: MS

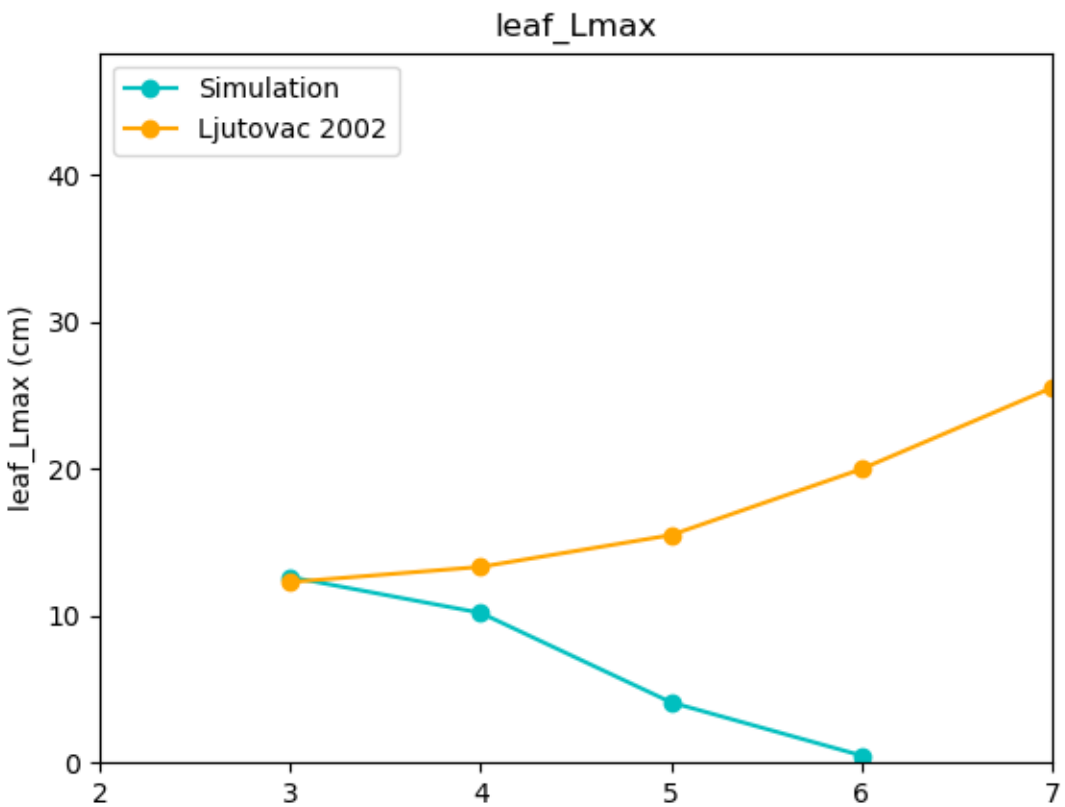
Leaf length in hz (m)

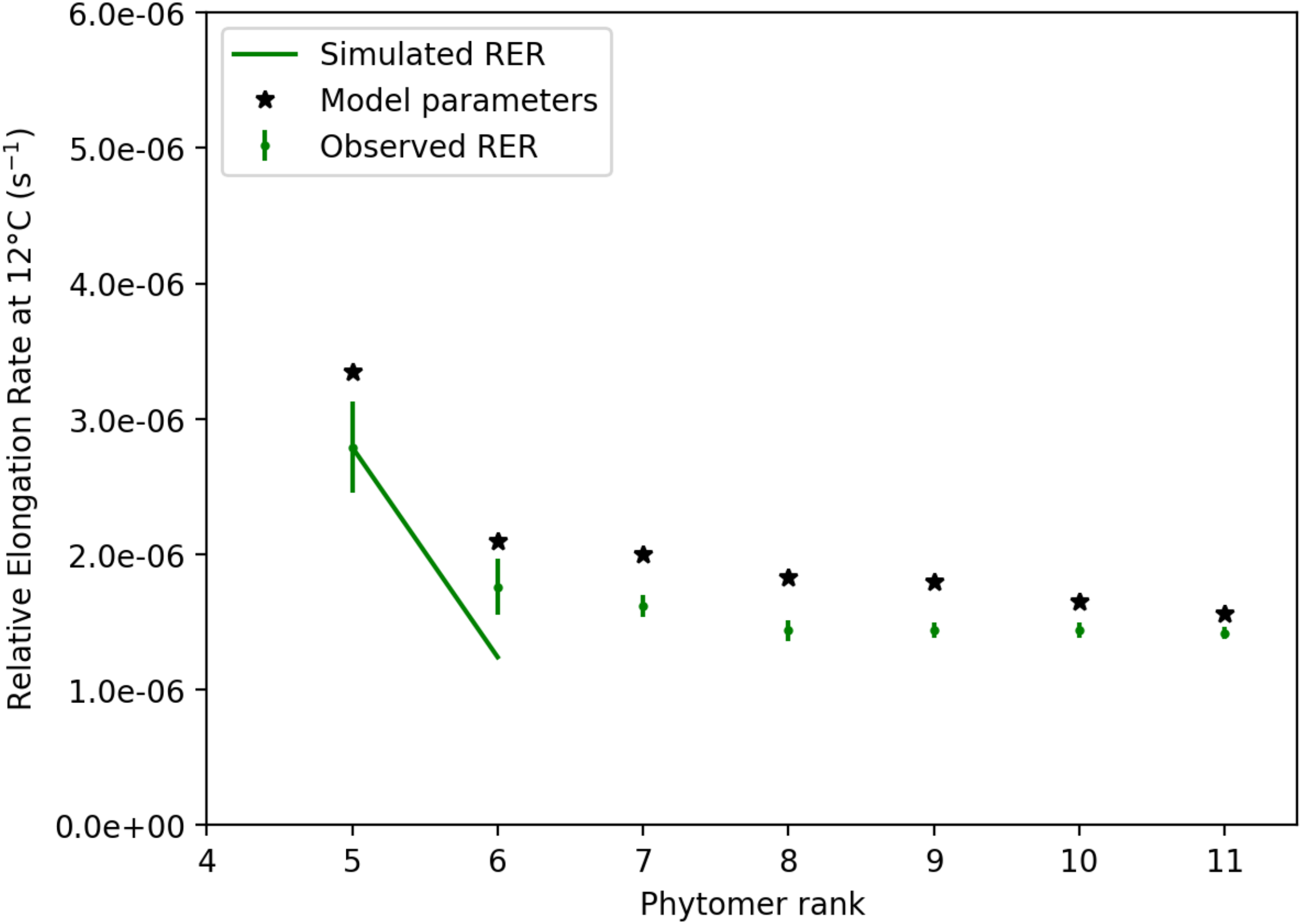
0.00
0.02
0.04
0.06
0.08
0.10
0.12

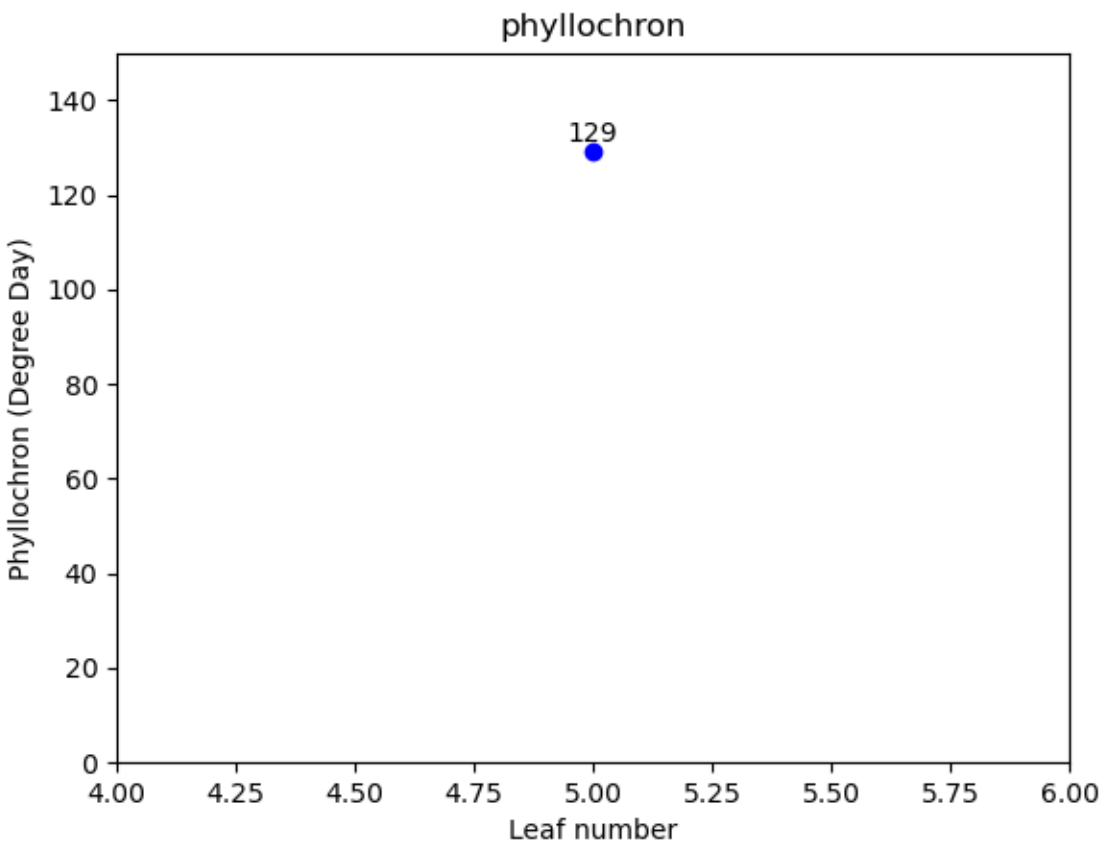
0
500
1000
1500
2000
2500

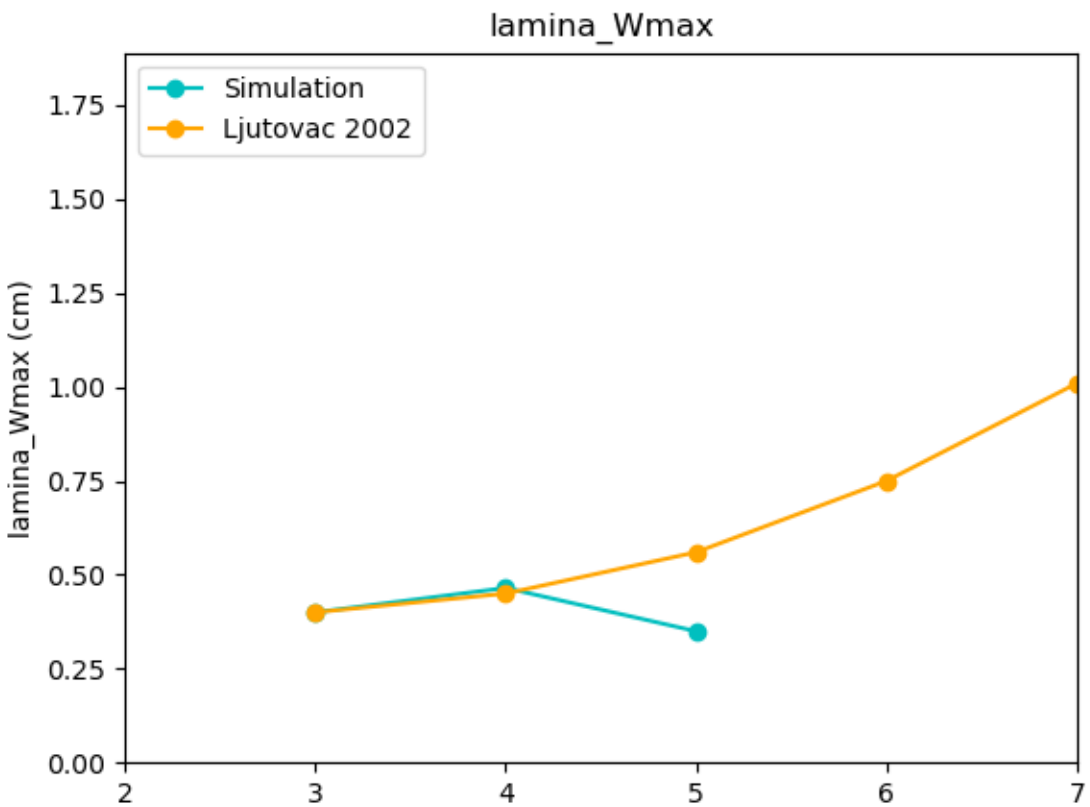
Time (Hour)

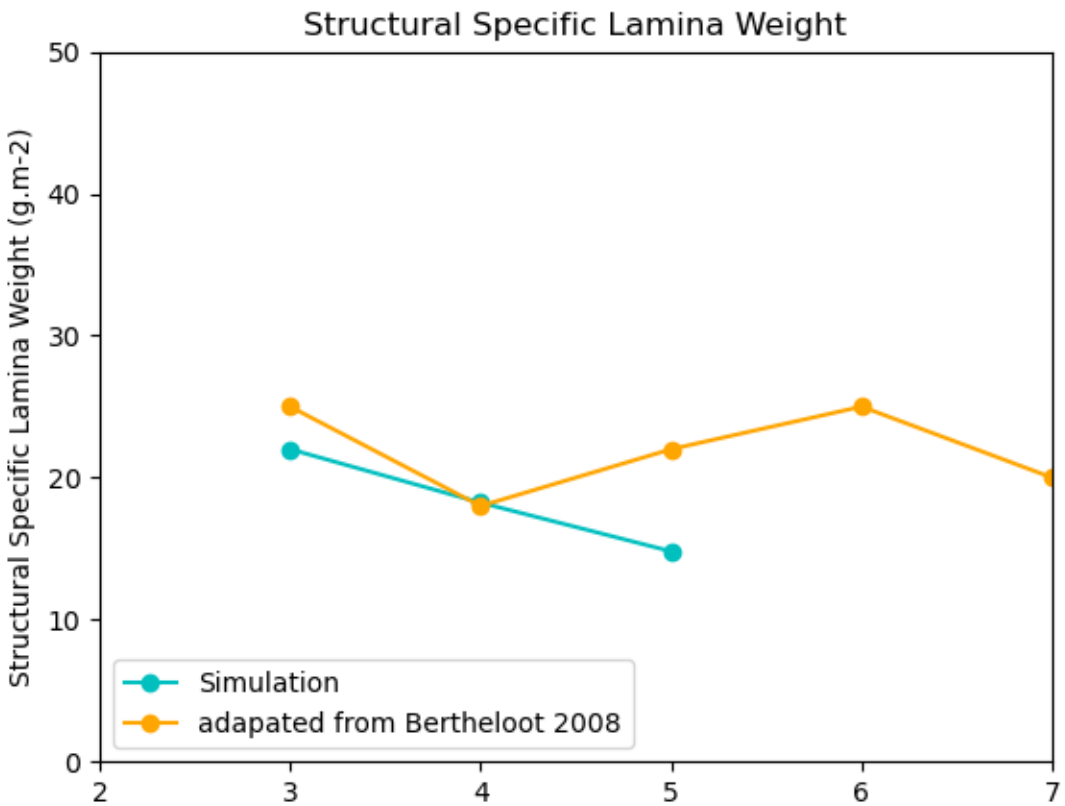
Metamer: 3
Metamer: 4
Metamer: 5
Metamer: 6
Metamer: 7
Metamer: 8
Metamer: 9
Metamer: 10
Metamer: 11

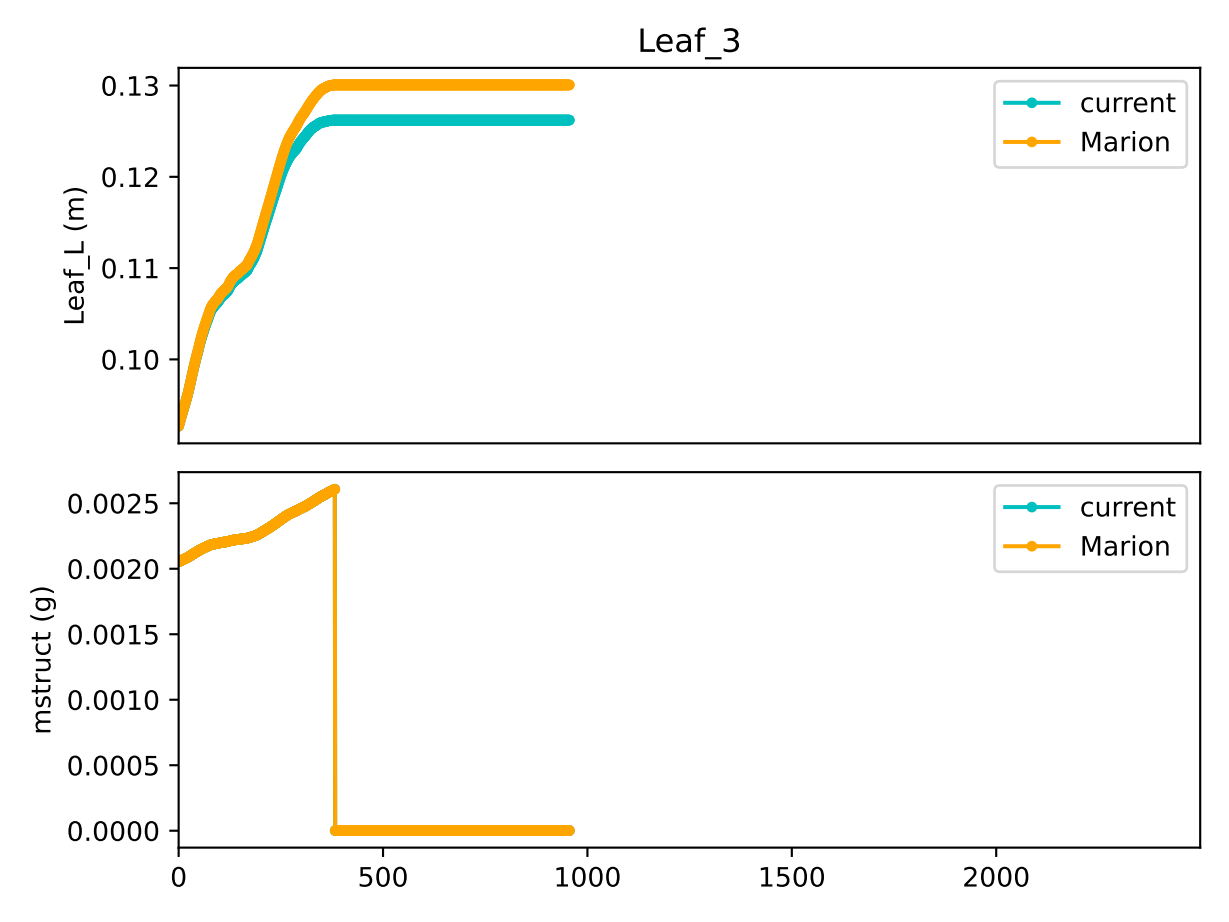

leaf_Lmax
Simulation
Ljutovac 2002
leaf_Lmax (cm)
0
10
20
30
40
2
3
4
5
6
7

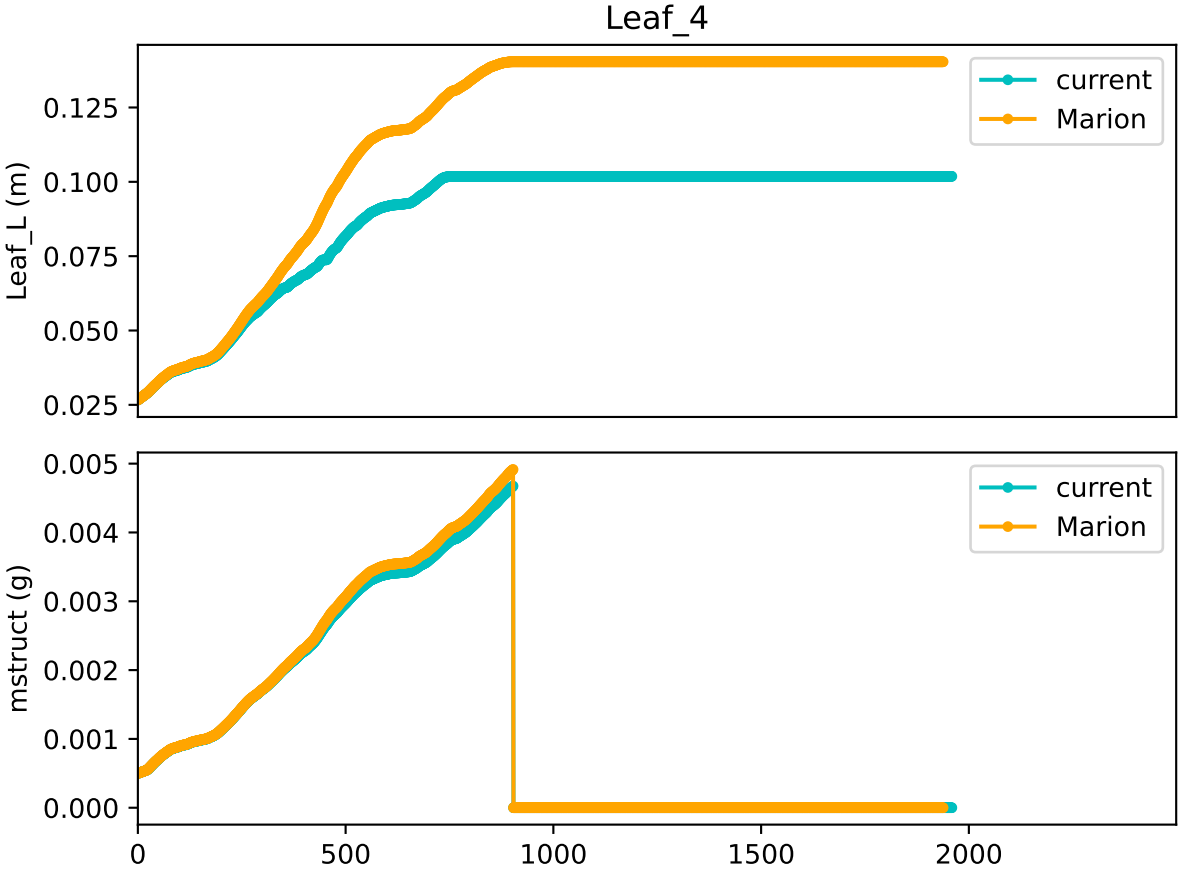

Simulated RER
Model parameters
Observed RER
Relative Elongation Rate at 12°C (s^{-1})
6.0e-06
5.0e-06
4.0e-06
3.0e-06
2.0e-06
1.0e-06
0.0e+00
4
5
6
7
8
9
10
11
Phytomer rank

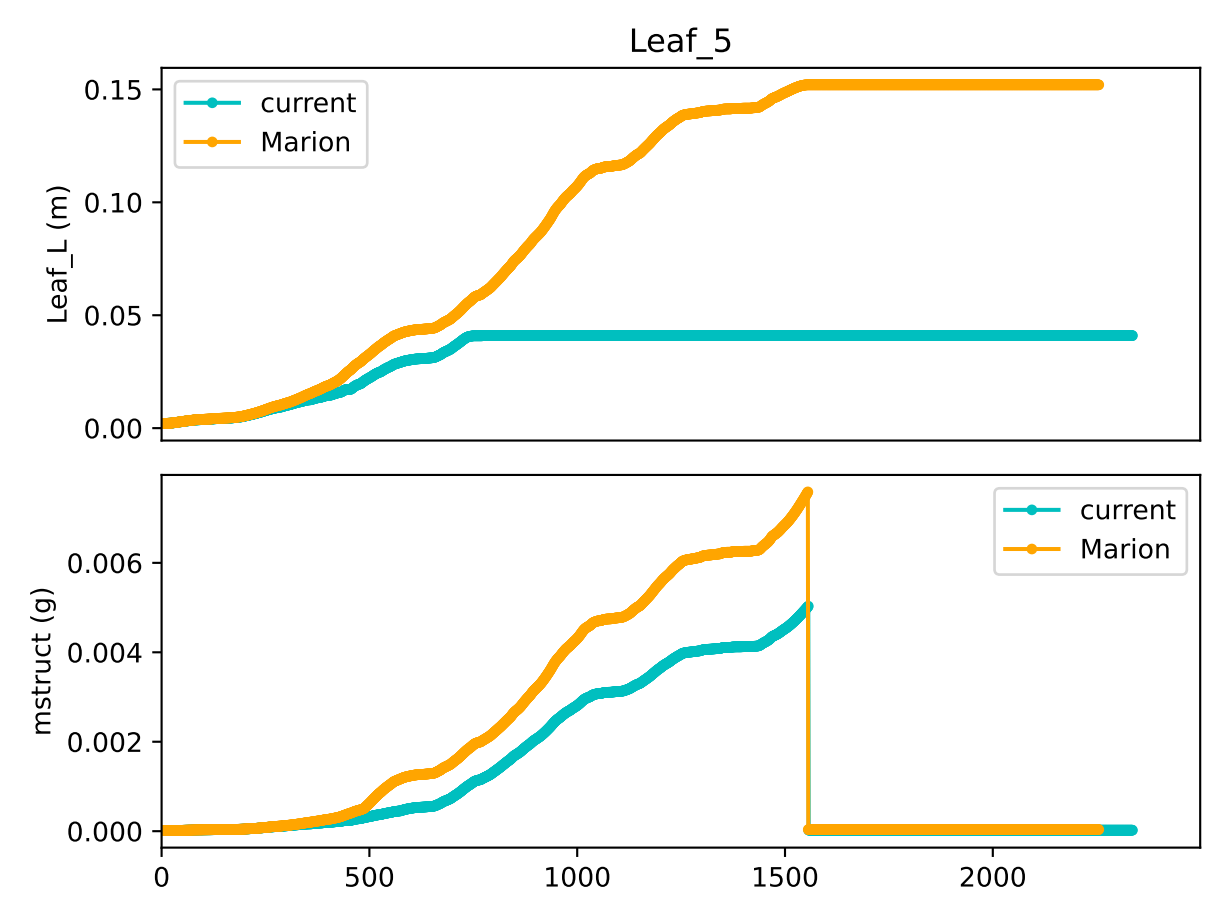

phyllochron
129
Phyllochron (Degree Day)
Leaf number
0
20
40
60
80
100
120
140
4.00
4.25
4.50
4.75
5.00
5.25
5.50
5.75
6.00

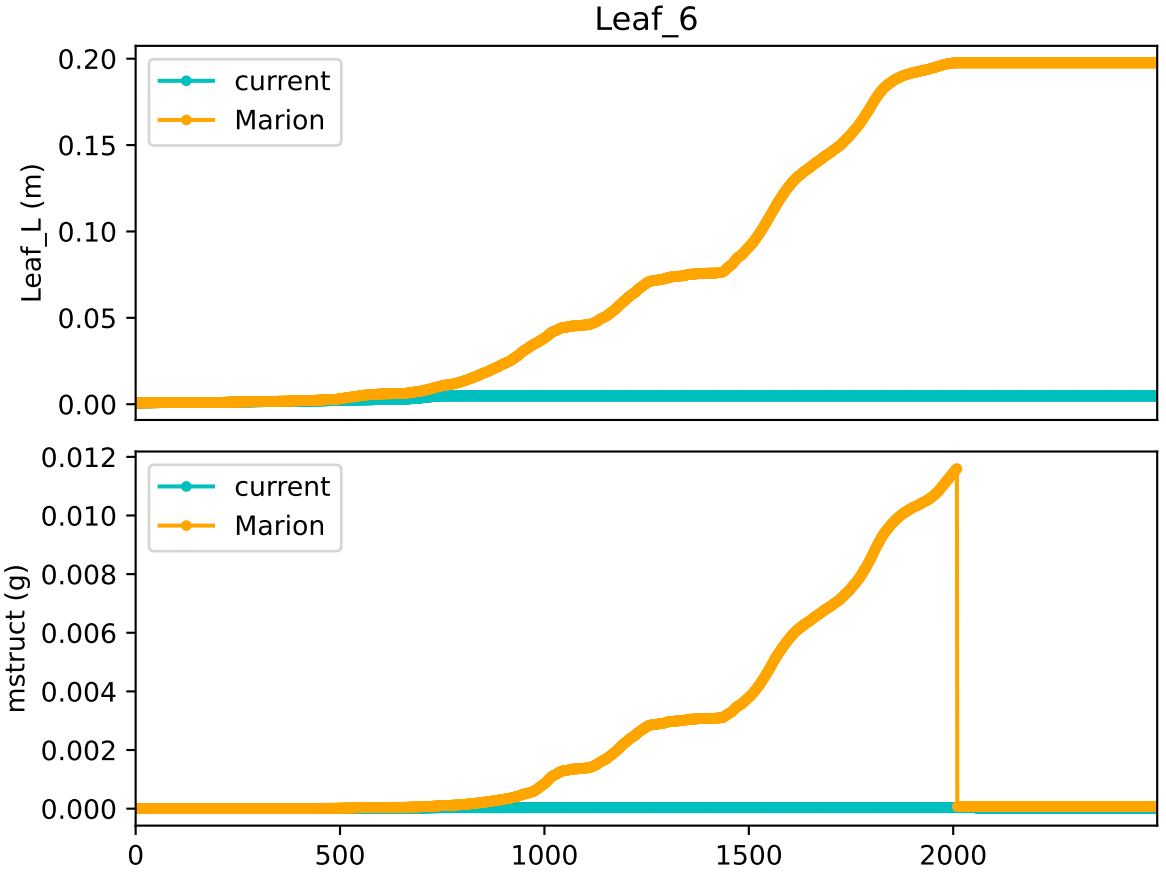

lamina_Wmax
Simulation
Ljutovac 2002
lamina_Wmax (cm)
0.00
0.25
0.50
0.75
1.00
1.25
1.50
1.75
2
3
4
5
6
7

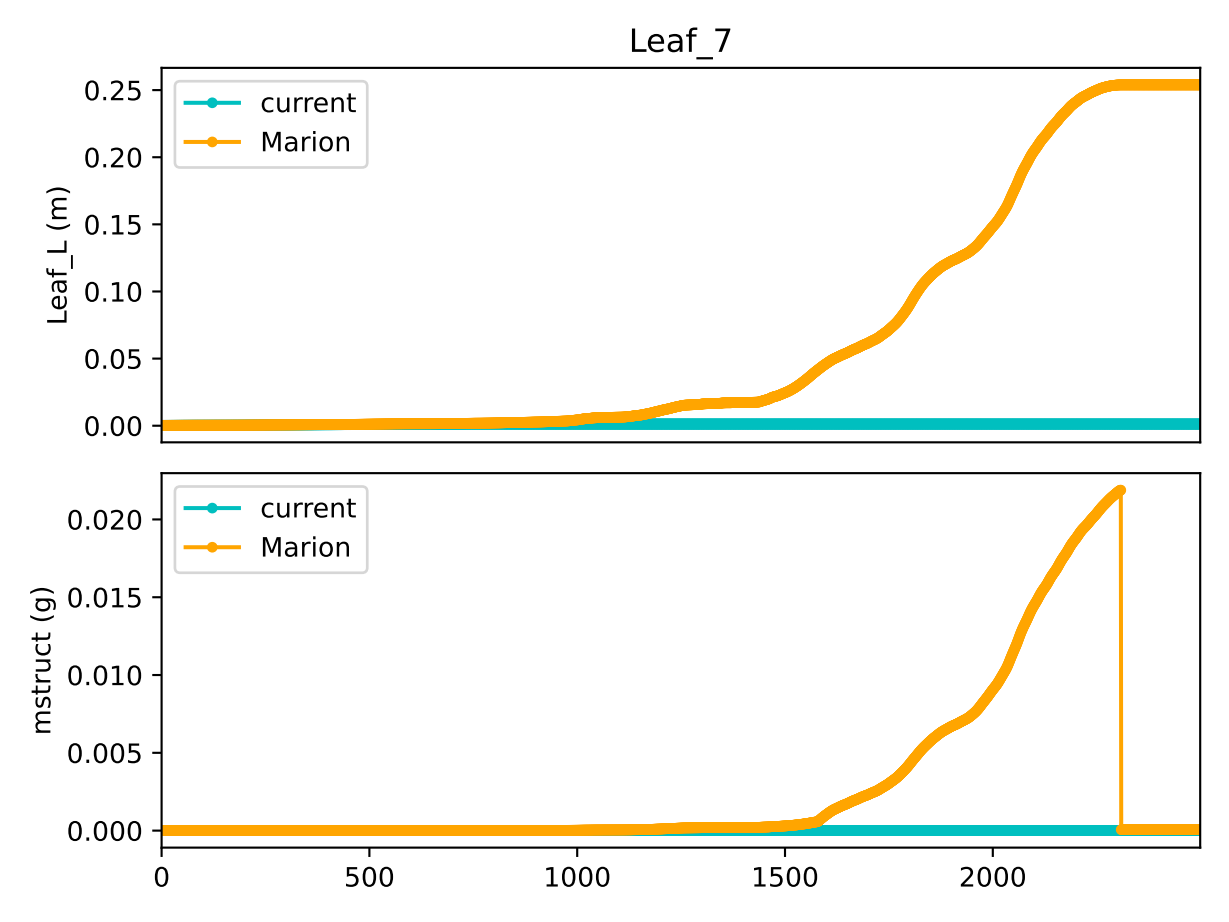

Structural Specific Lamina Weight
Structural Specific Lamina Weight (g.m-2)
50
40
30
20
10
0
2
3
4
5
6
7
Simulation
adapated from Bertheloot 2008

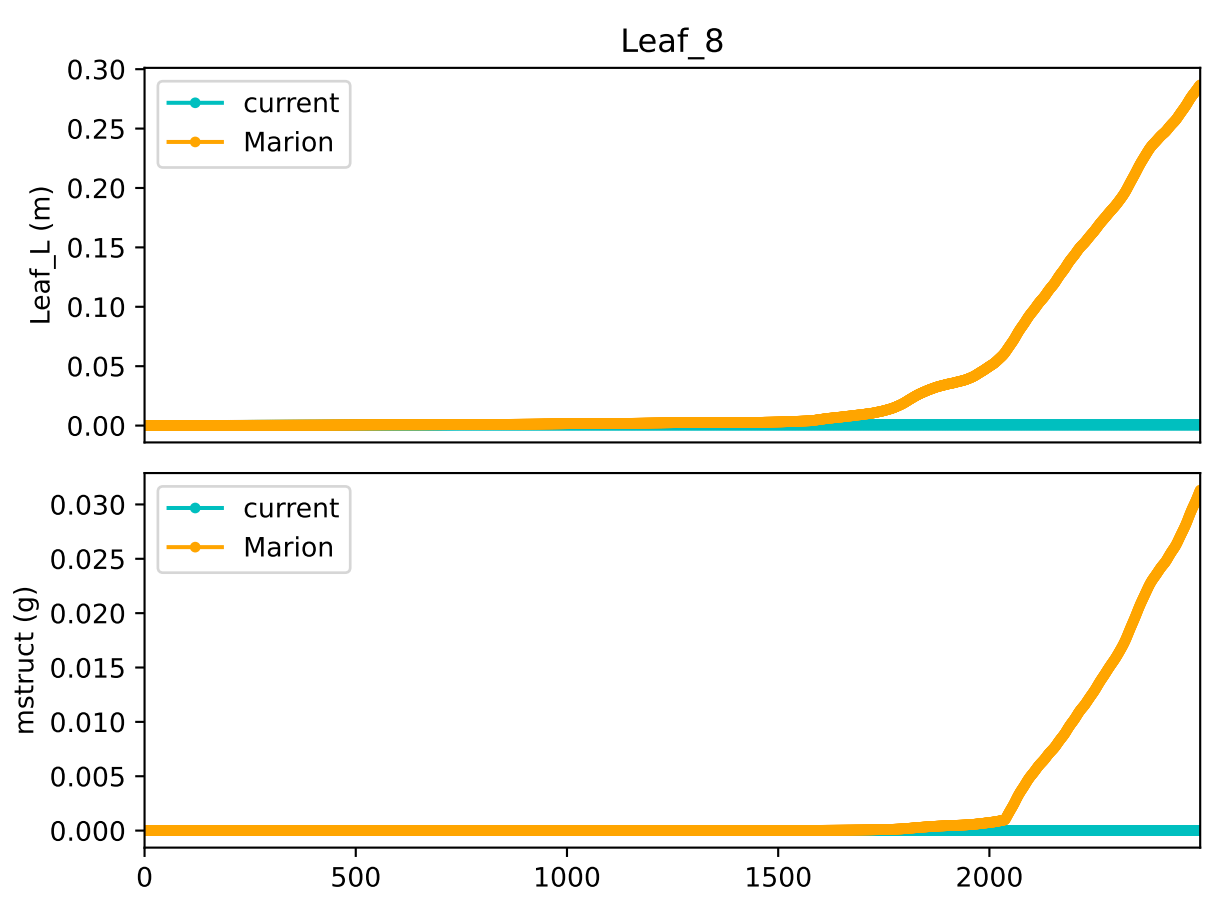

Leaf_3
Leaf_L (m)
0.13
0.12
0.11
0.10
current
Marion
mstruct (g)
0.0025
0.0020
0.0015
0.0010
0.0005
0.0000
current
Marion
0
500
1000
1500
2000

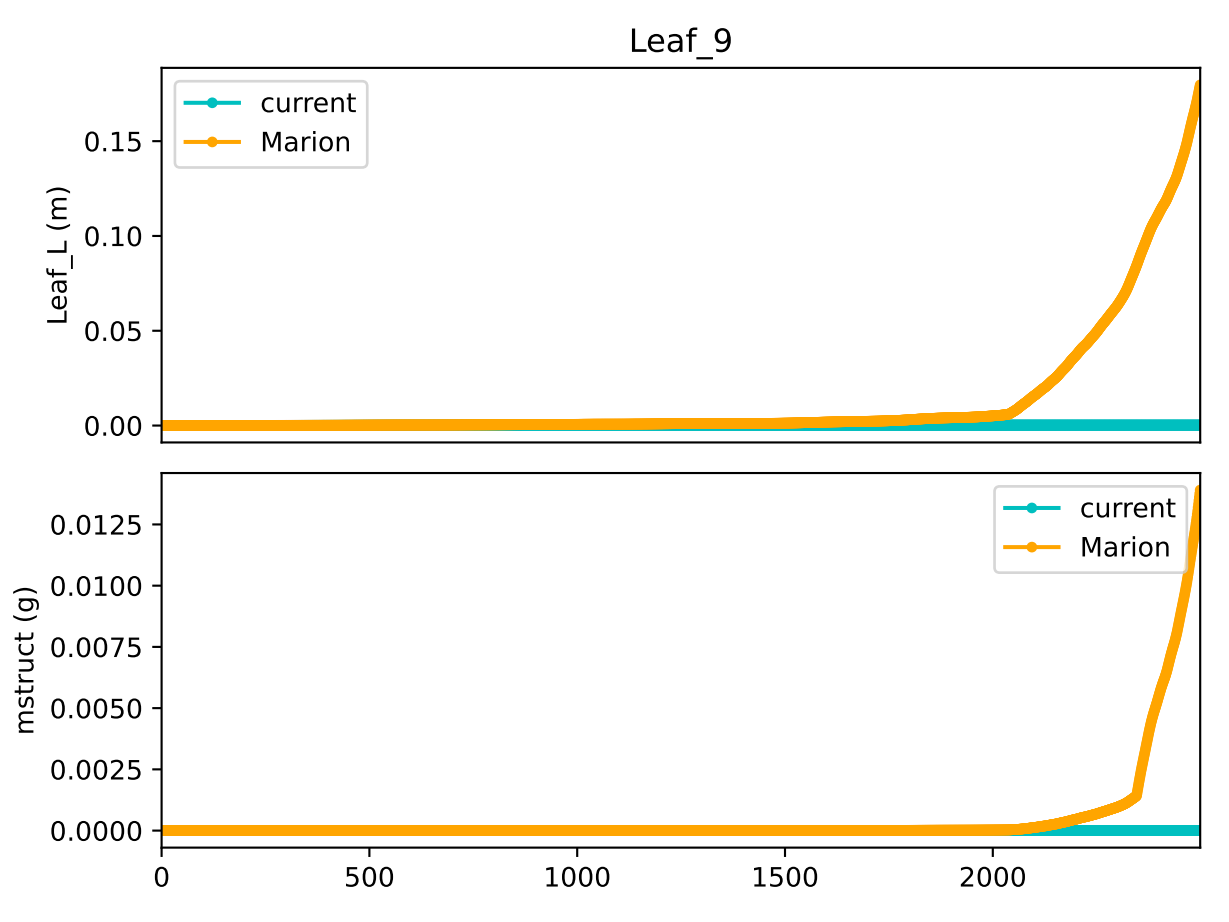

Leaf_4
Leaf_L (m)
0.025
0.050
0.075
0.100
0.125
current
Marion
mstruct (g)
0.000
0.001
0.002
0.003
0.004
0.005
current
Marion
0
500
1000
1500
2000

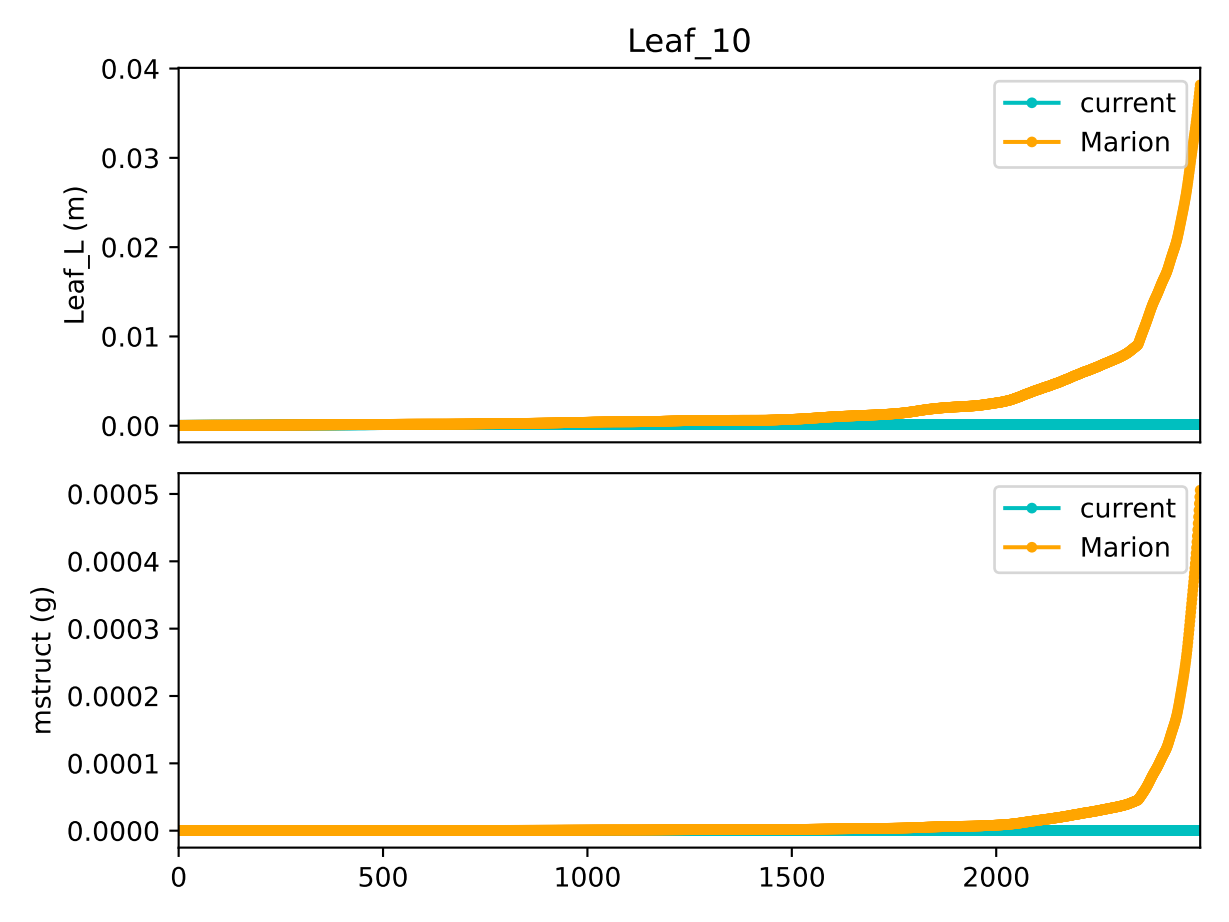

Leaf_5
current
Marion
Leaf_L (m)
0.15
0.10
0.05
0.00
current
Marion
mstruct (g)
0.006
0.004
0.002
0.000
0
500
1000
1500
2000

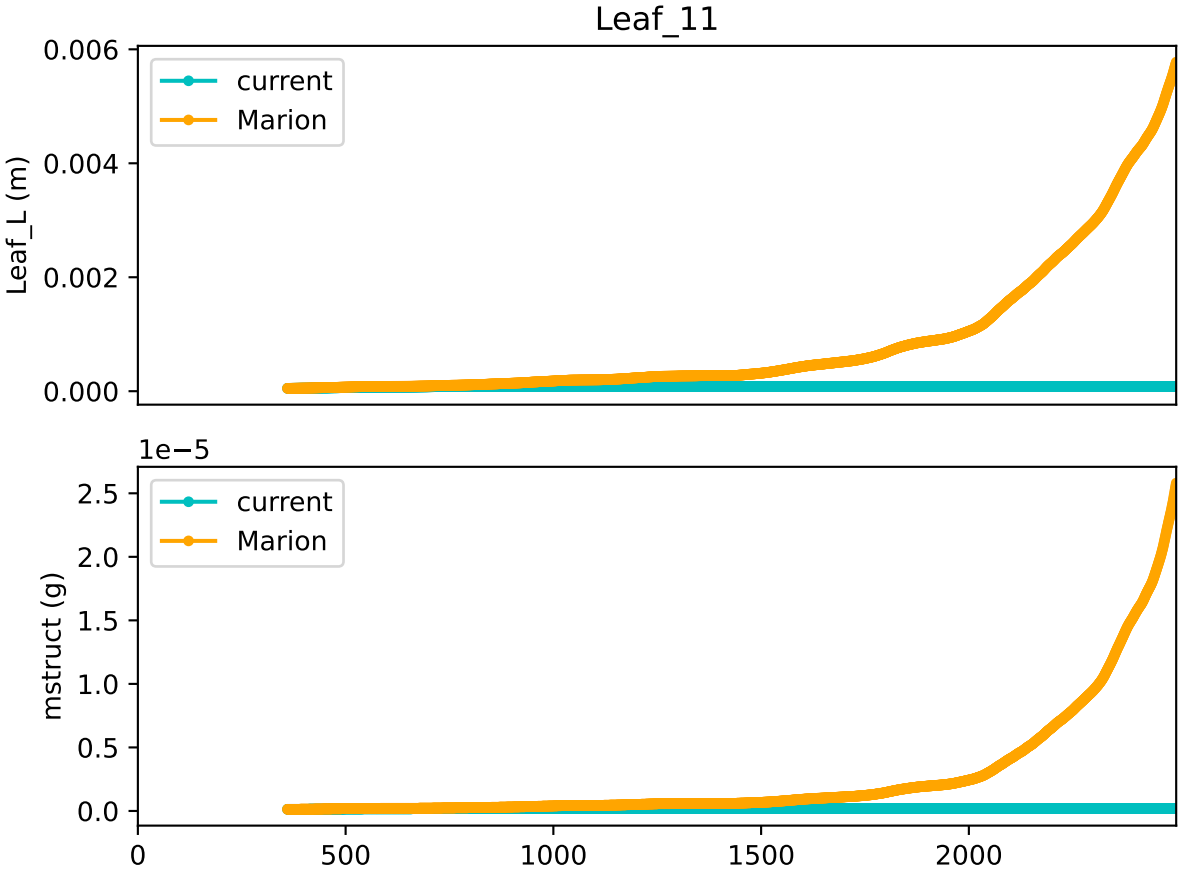

Leaf_6
current
Marion
Leaf_L (m)
0.20
0.15
0.10
0.05
0.00
current
Marion
mstruct (g)
0.012
0.010
0.008
0.006
0.004
0.002
0.000
0
500
1000
1500
2000

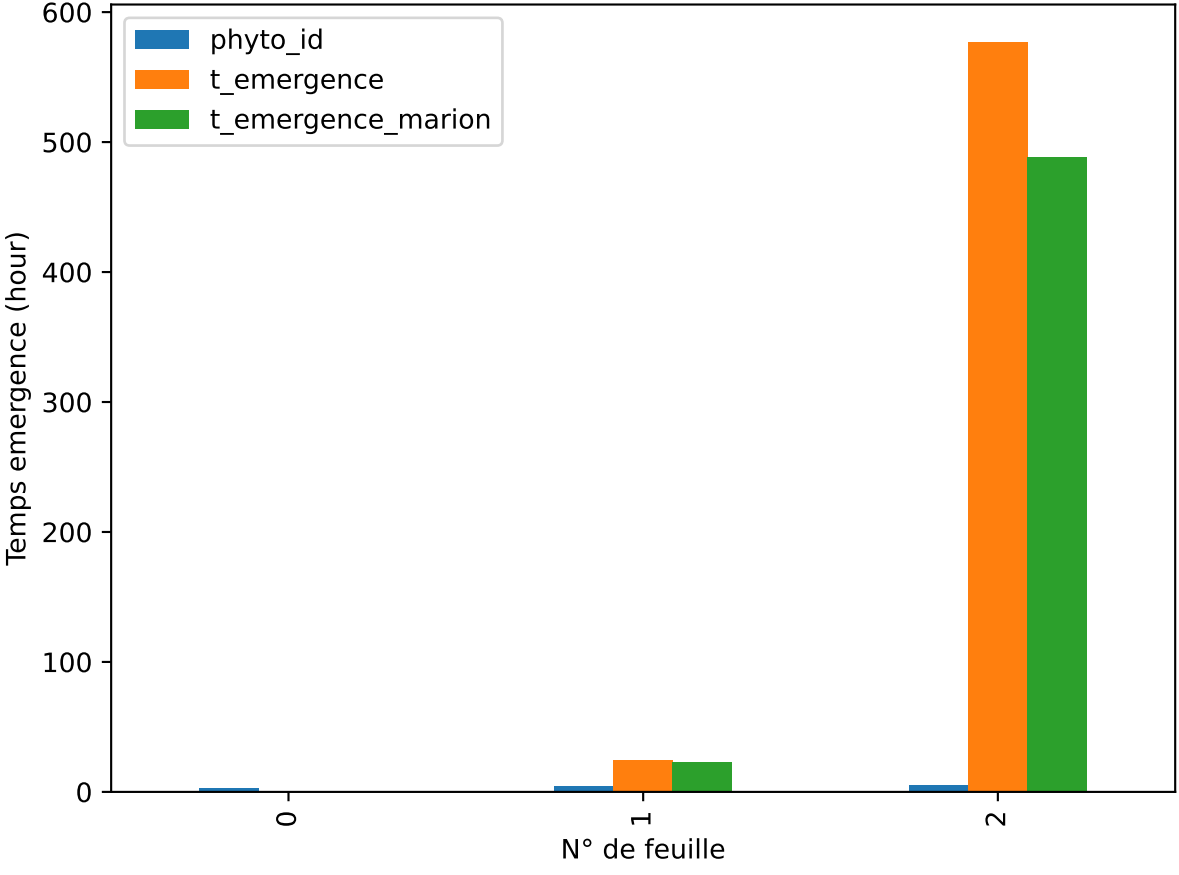

Leaf_7
current
Marion
Leaf_L (m)
0.25
0.20
0.15
0.10
0.05
0.00
current
Marion
mstruct (g)
0.020
0.015
0.010
0.005
0.000
0
500
1000
1500
2000


Leaf_8
current
Marion
Leaf_L (m)
0.30
0.25
0.20
0.15
0.10
0.05
0.00
current
Marion
mstruct (g)
0.030
0.025
0.020
0.015
0.010
0.005
0.000
0
500
1000
1500
2000


Leaf_9
current
Marion
Leaf_L (m)
0.15
0.10
0.05
0.00
current
Marion
mstruct (g)
0.0125
0.0100
0.0075
0.0050
0.0025
0.0000
0
500
1000
1500
2000


Leaf_10
Leaf_L (m)
0.04
0.03
0.02
0.01
0.00
current
Marion
mstruct (g)
0.0005
0.0004
0.0003
0.0002
0.0001
0.0000
current
Marion
0
500
1000
1500
2000


Leaf_11
0.006
0.004
0.002
0.000
Leaf_L (m)
current
Marion
1e−5
2.5
2.0
1.5
1.0
0.5
0.0
mstruct (g)
current
Marion
0
500
1000
1500
2000


phyto_id
t_emergence
t_emergence_marion
Temps emergence (hour)
600
500
400
300
200
100
0
0
1
2
N° de feuille