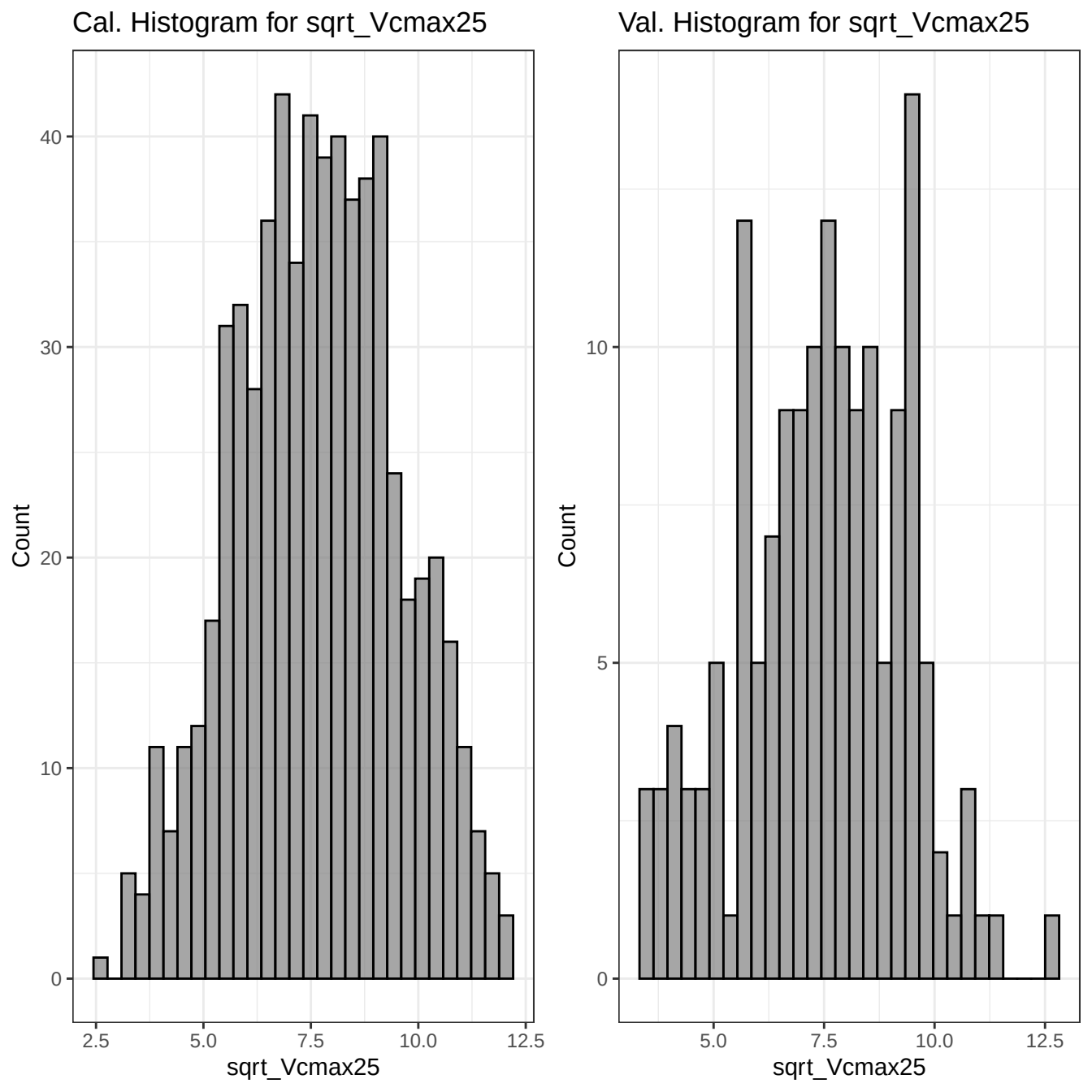
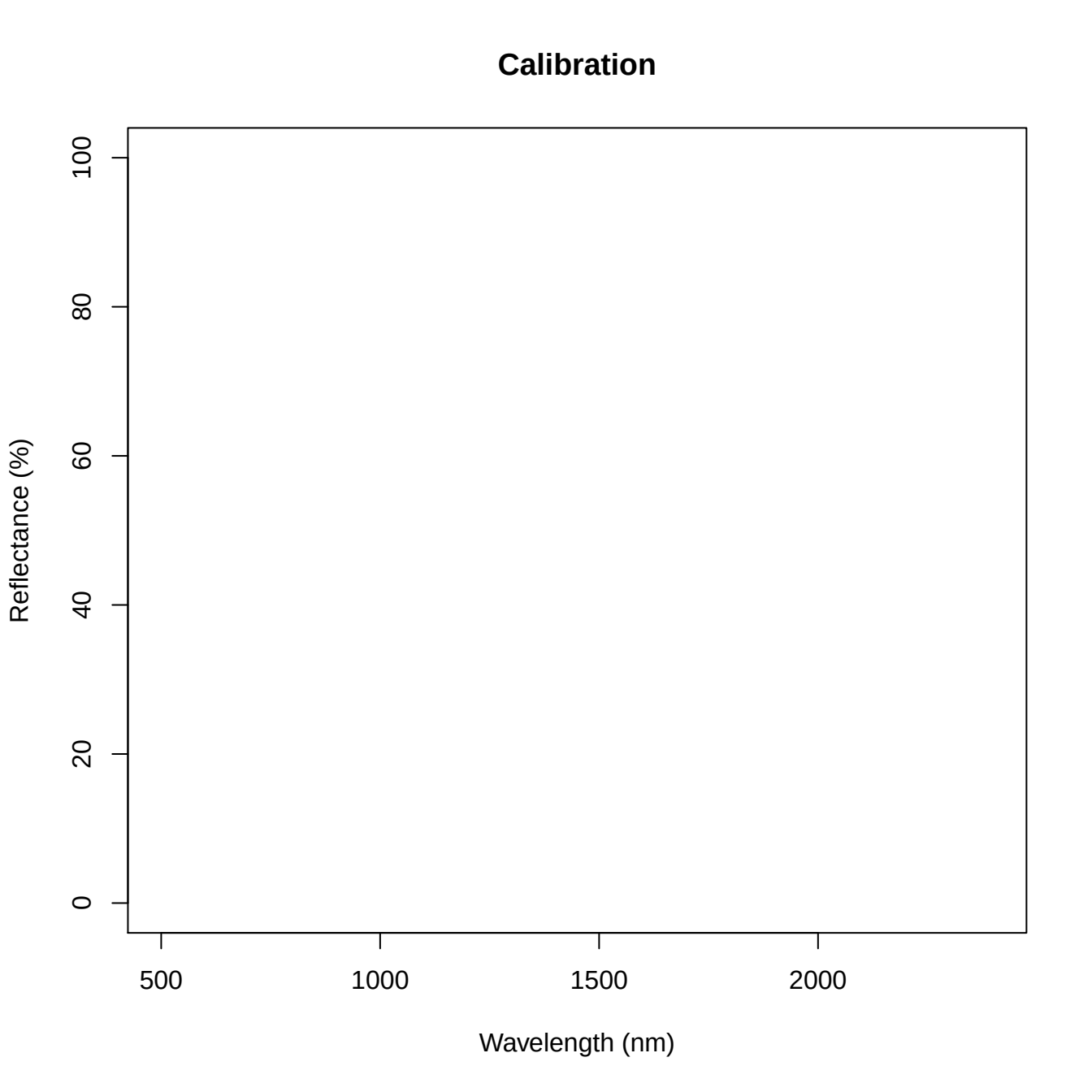
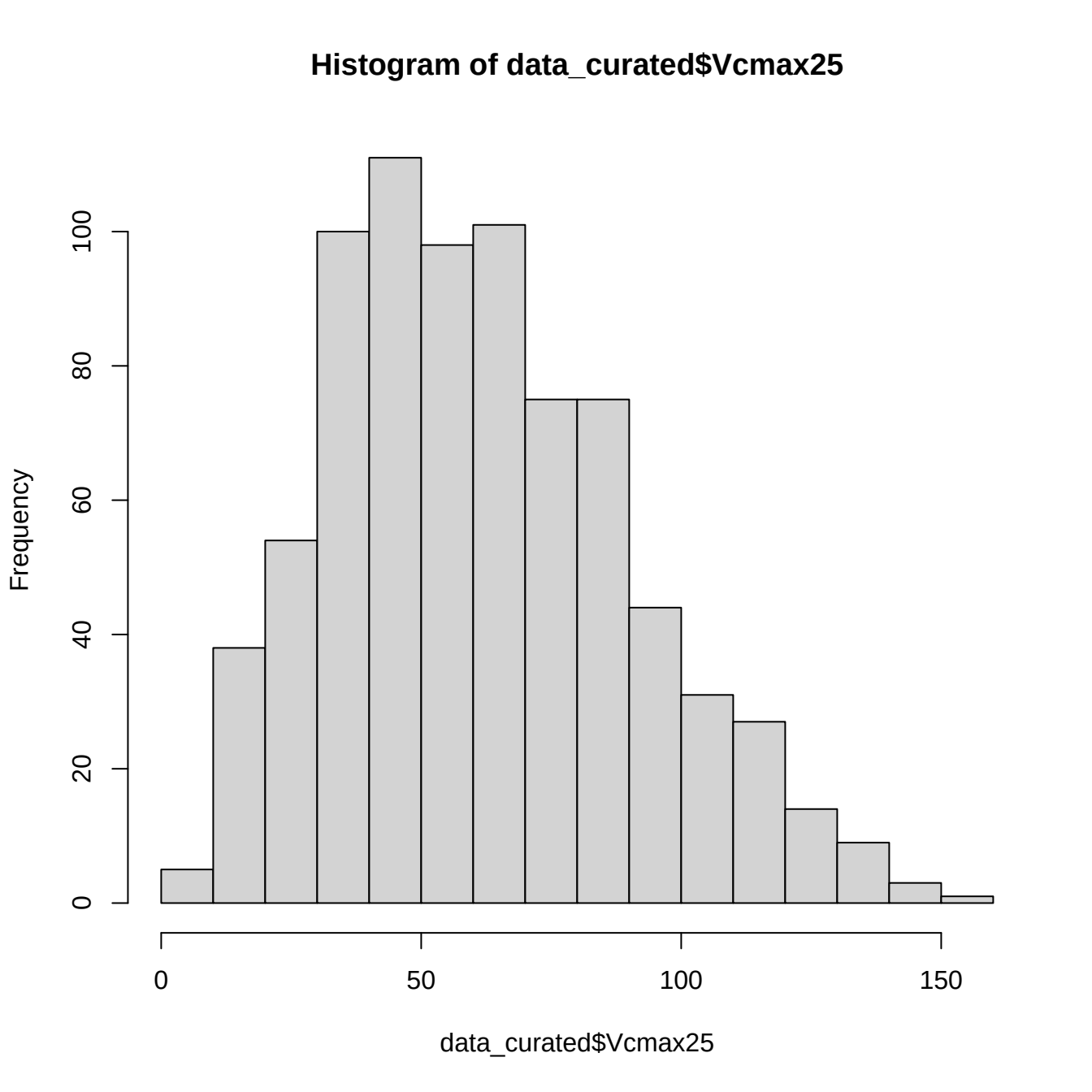
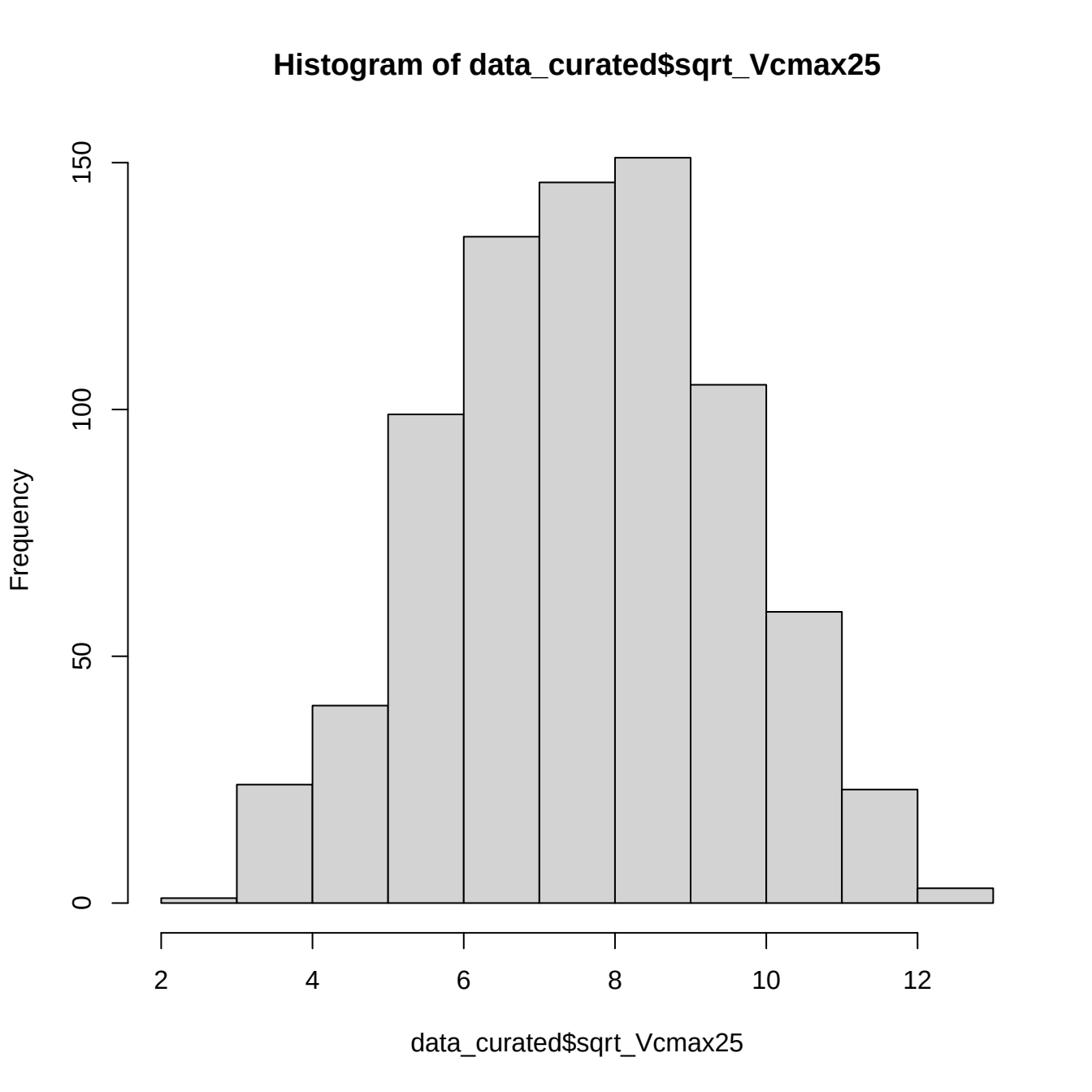
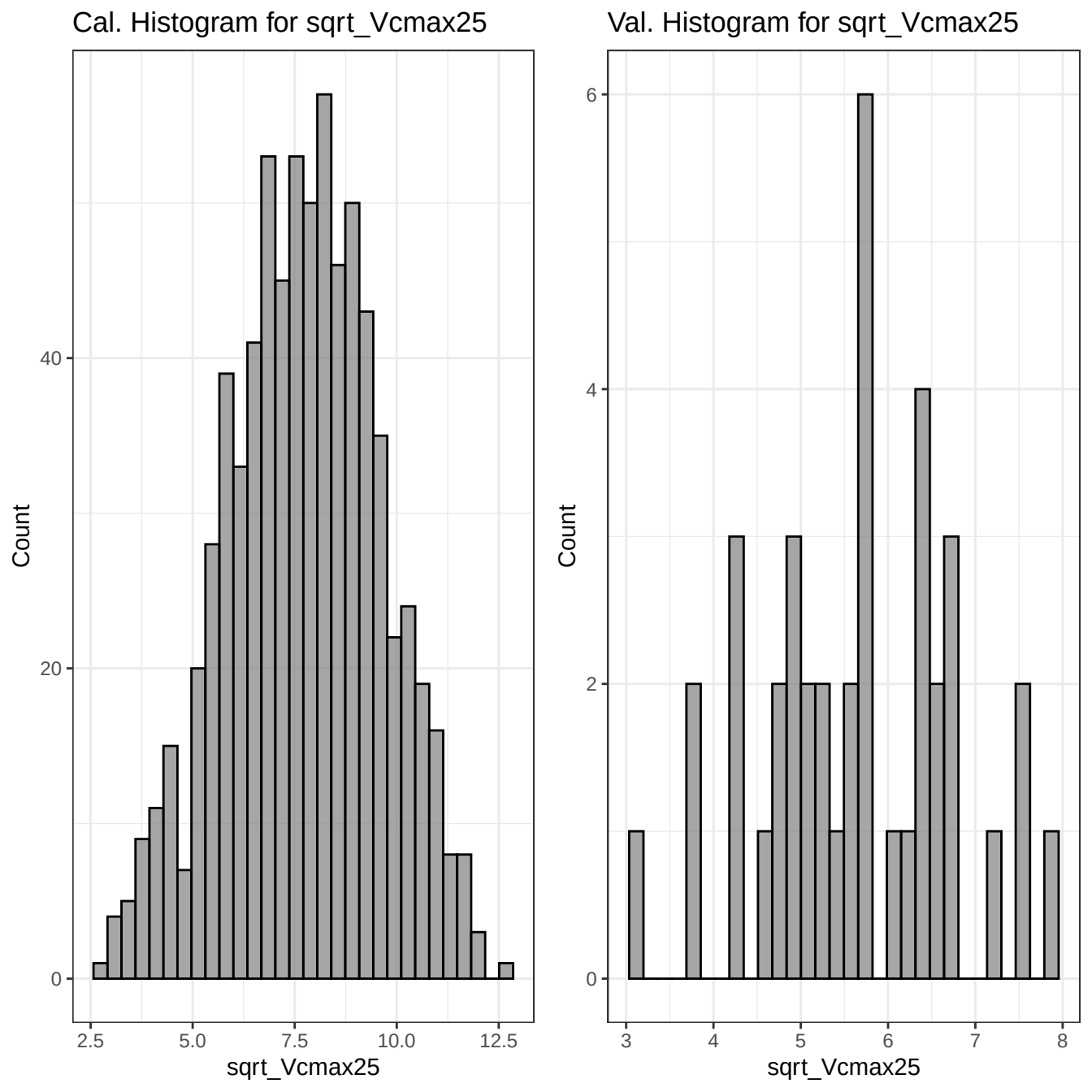
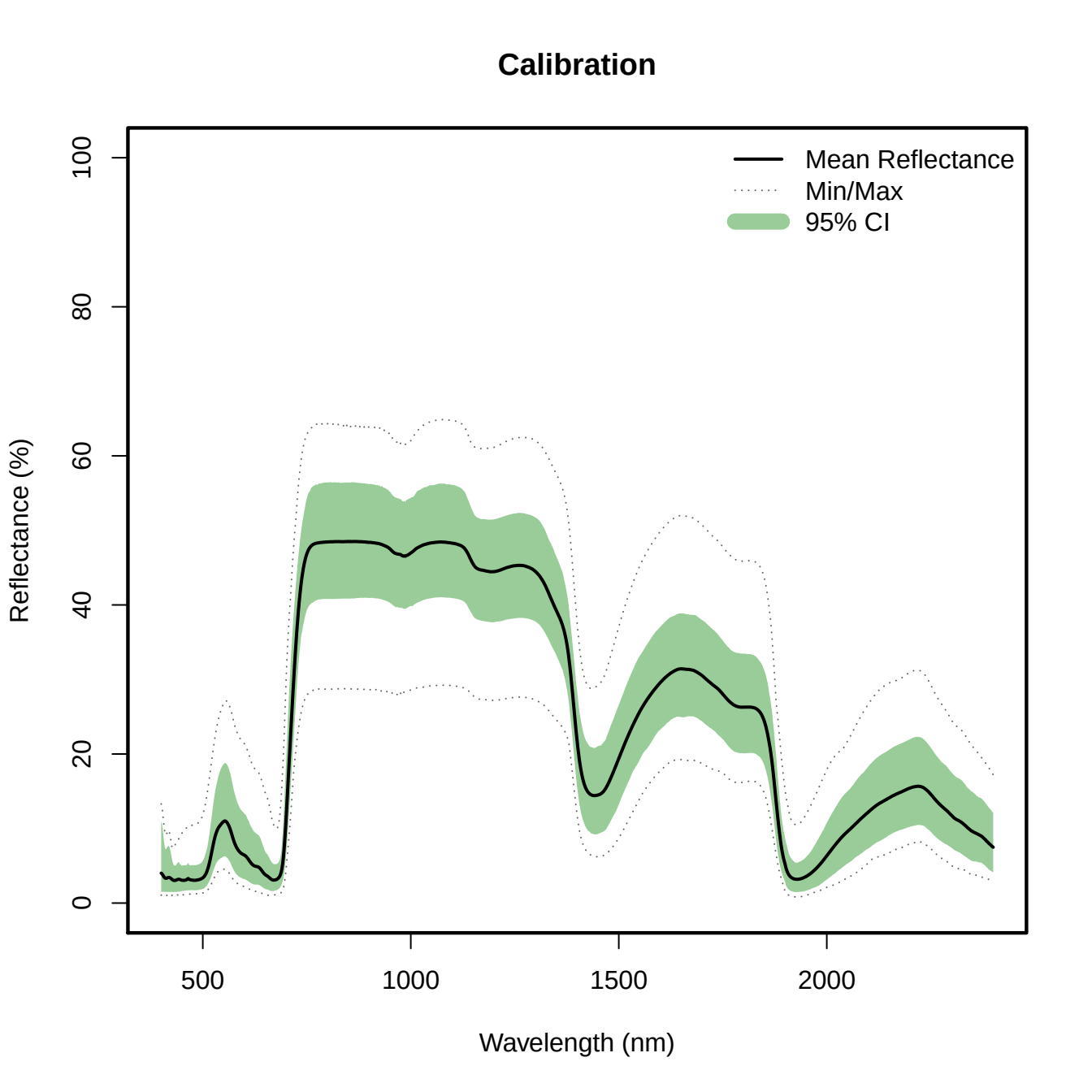

Cal. Histogram for sqrt_Vcmax25
Count
40
30
20
10
0
2.5
5.0
7.5
10.0
12.5
sqrt_Vcmax25
Val. Histogram for sqrt_Vcmax25
Count
10
5
0
5.0
7.5
10.0
12.5
sqrt_Vcmax25

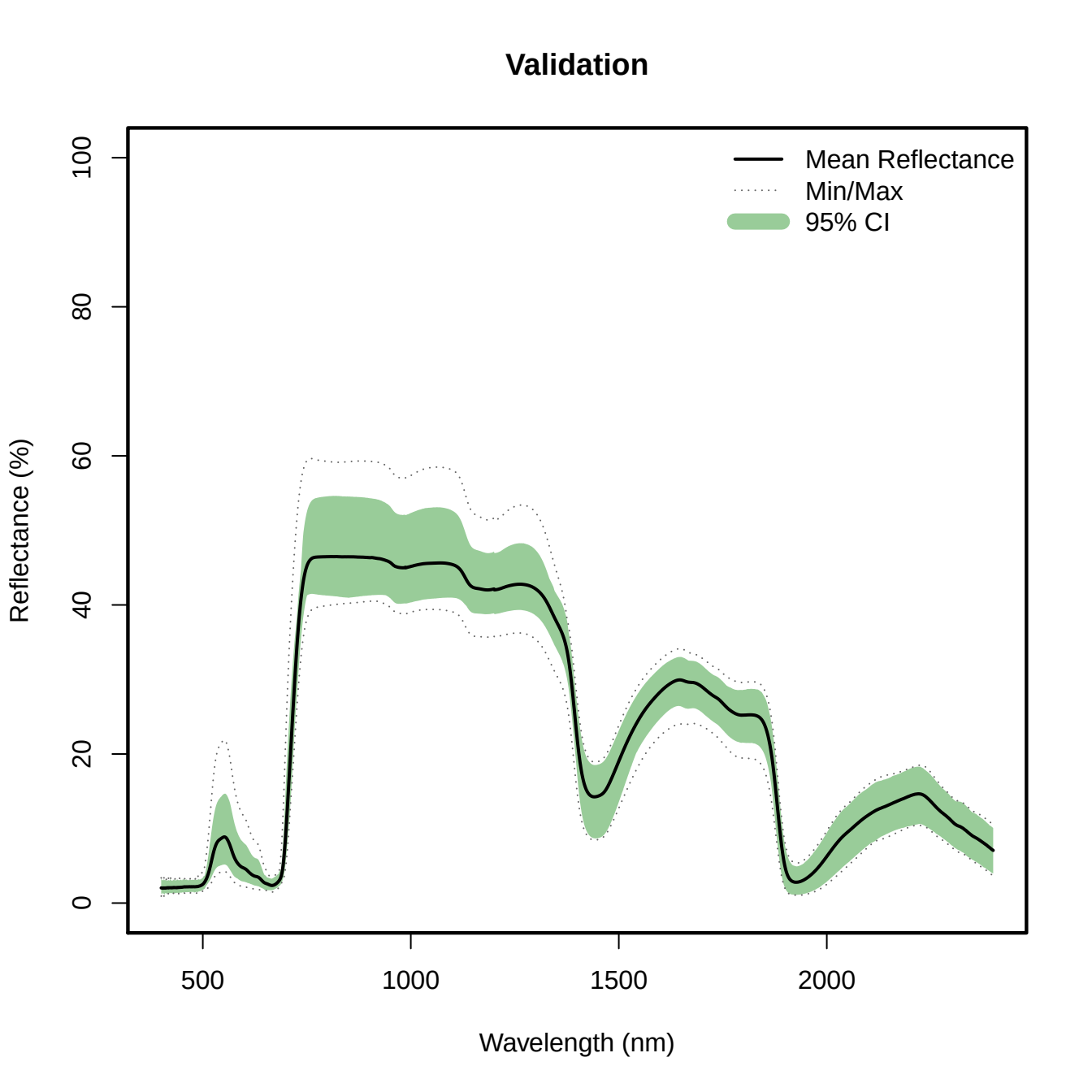

Calibration
Reflectance (%)
0
20
40
60
80
100
500
1000
1500
2000
Wavelength (nm)

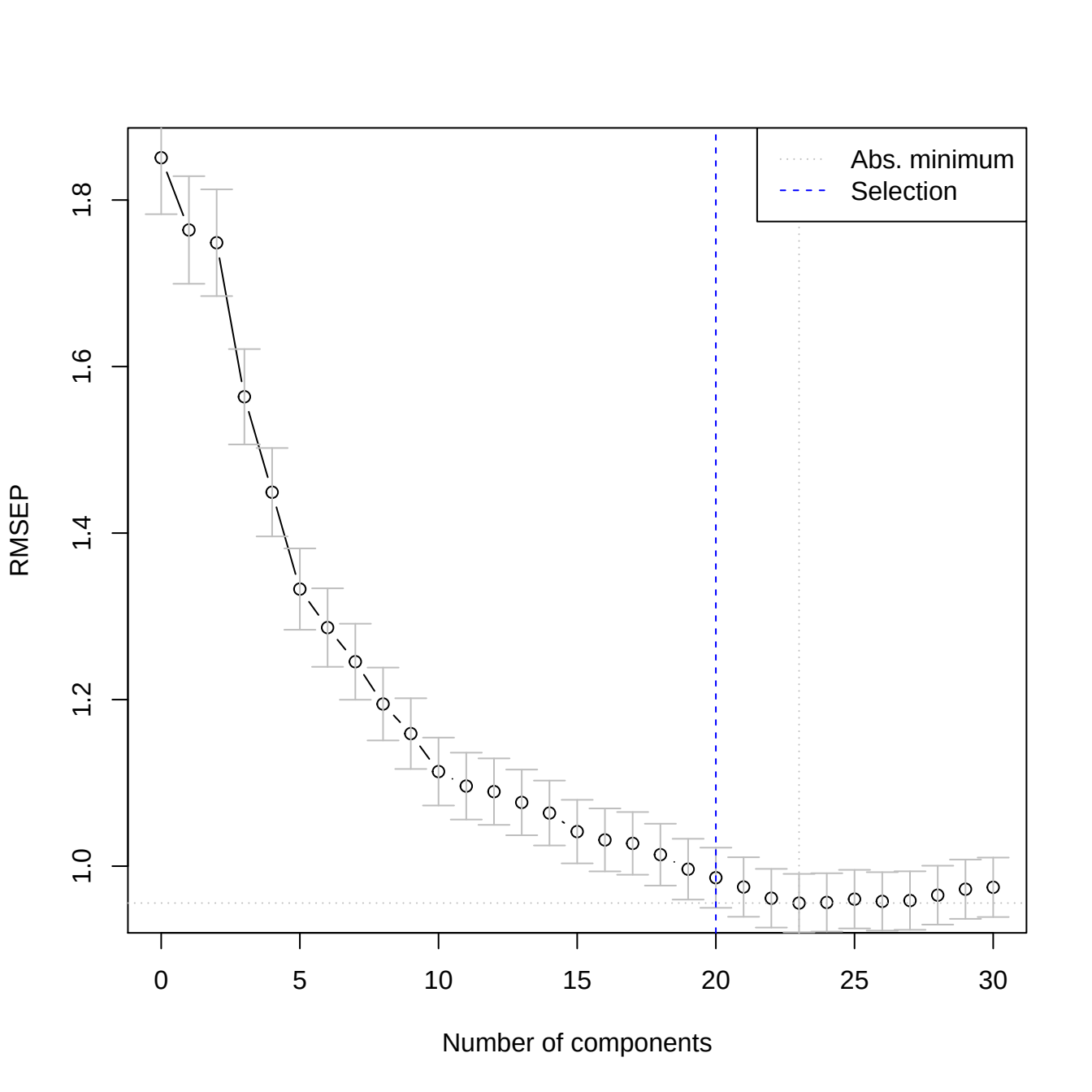

Histogram of data_curated$Vcmax25
Frequency
0
20
40
60
80
100
0
50
100
150
data_curated$Vcmax25

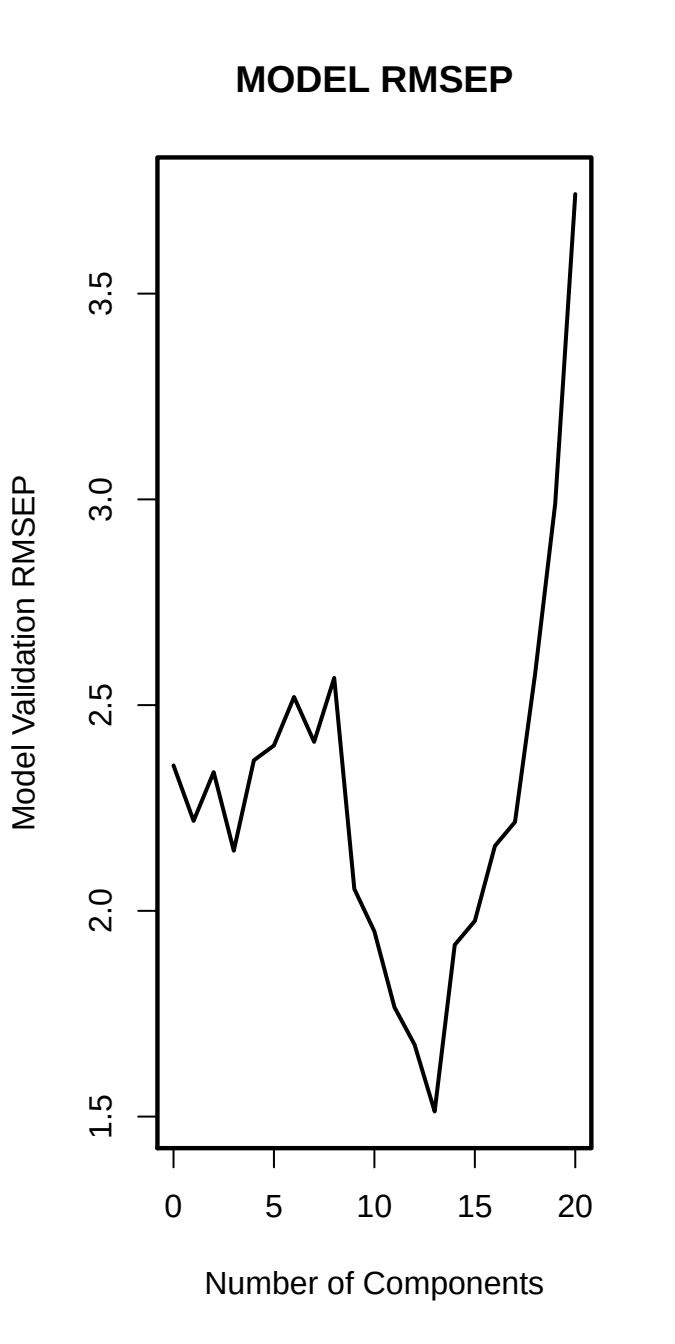

Histogram of data_curated$sqrt_Vcmax25
Frequency
0
50
100
150
2
4
6
8
10
12
data_curated$sqrt_Vcmax25

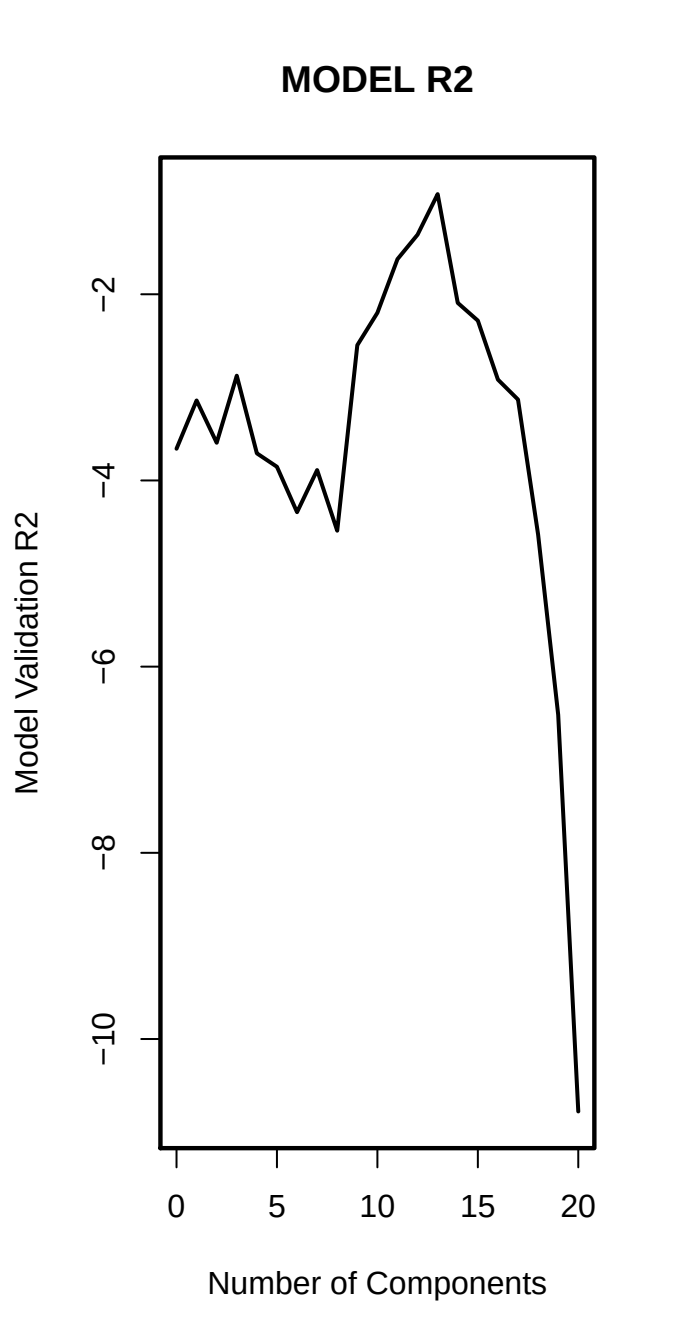

Cal. Histogram for sqrt_Vcmax25
Count
0
20
40
2.5
5.0
7.5
10.0
12.5
sqrt_Vcmax25
Val. Histogram for sqrt_Vcmax25
Count
0
2
4
6
3
4
5
6
7
8
sqrt_Vcmax25

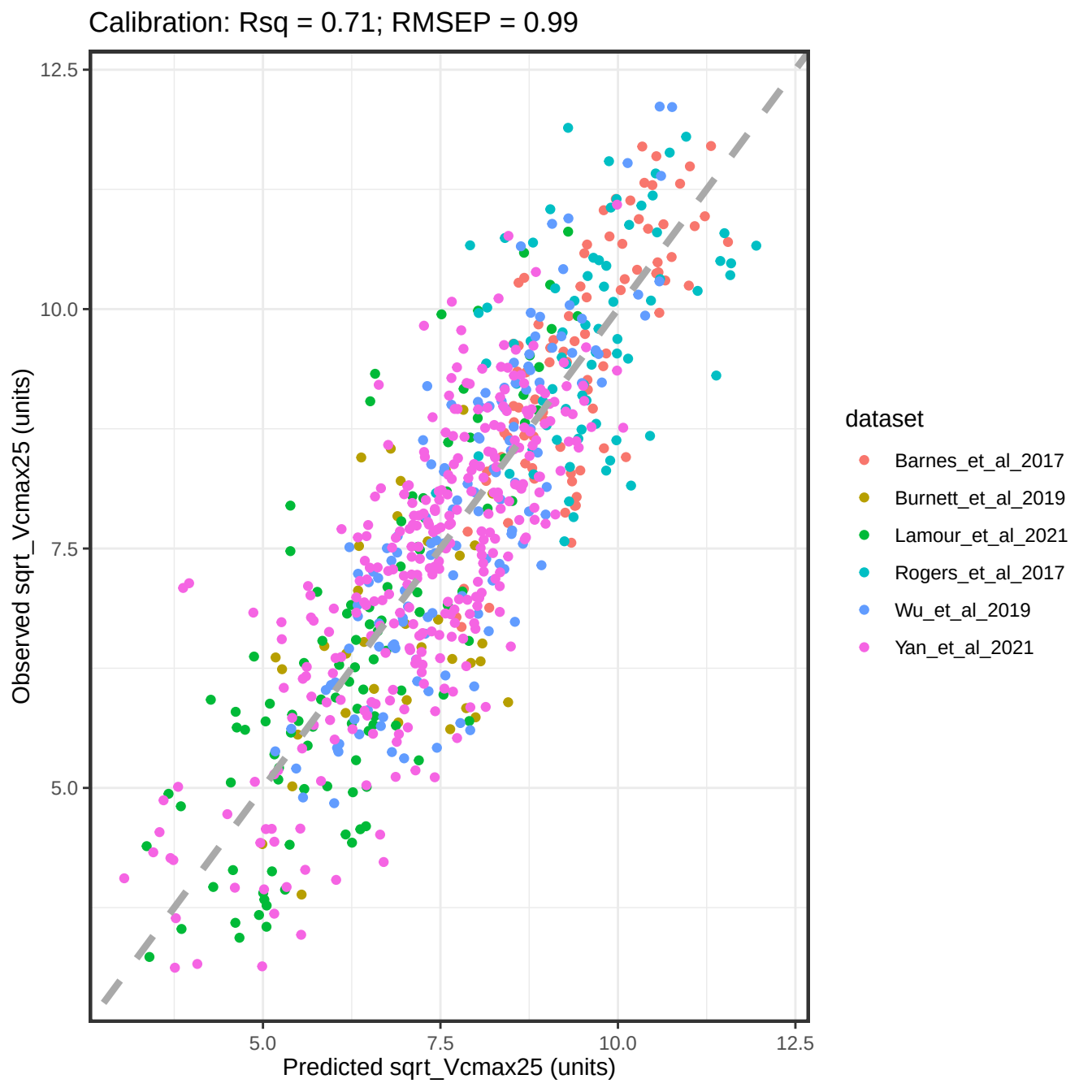

Calibration
Mean Reflectance
Min/Max
95% CI
Reflectance (%)
0
20
40
60
80
100
500
1000
1500
2000
Wavelength (nm)

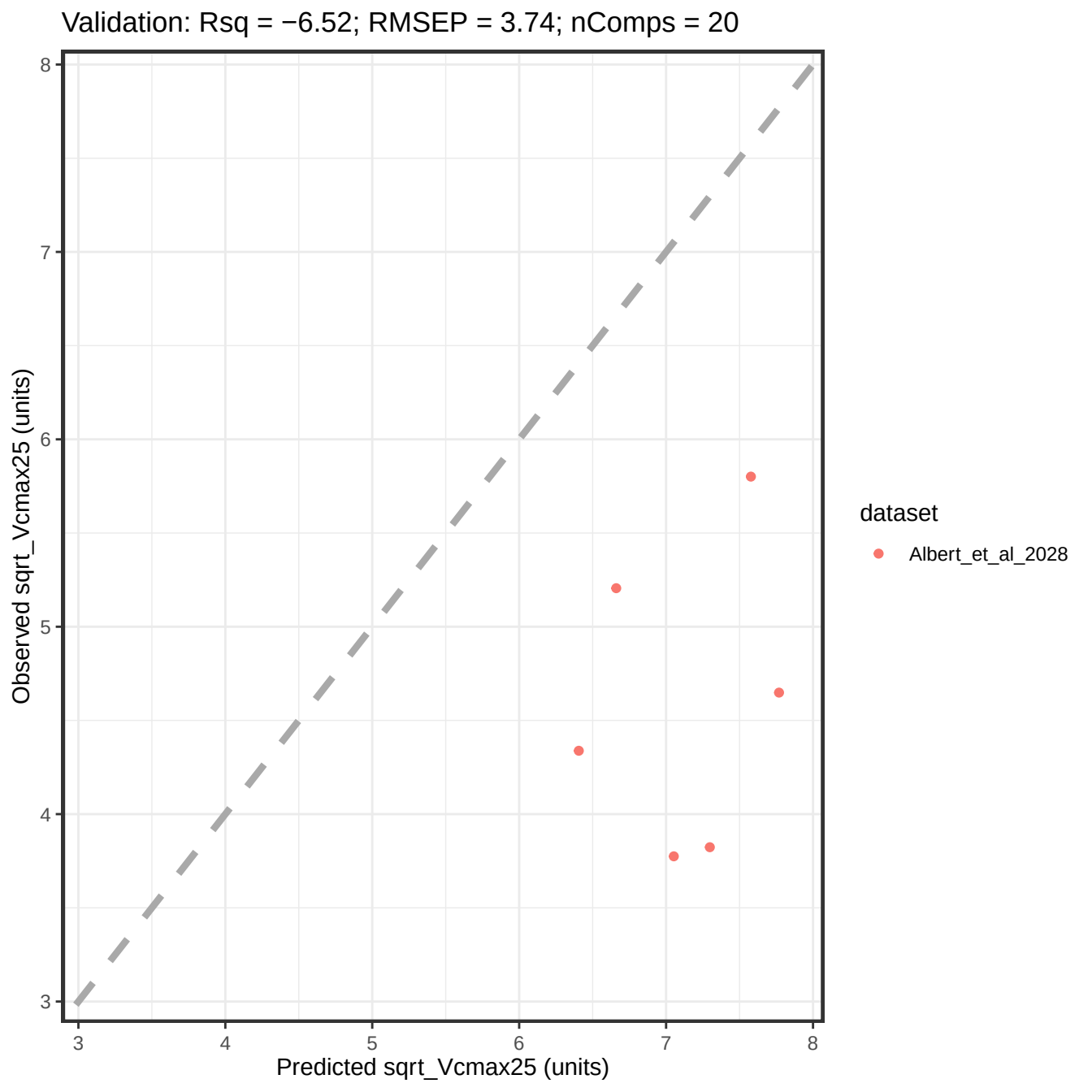

Validation
Mean Reflectance
Min/Max
95% CI
Reflectance (%)
0
20
40
60
80
100
500
1000
1500
2000
Wavelength (nm)

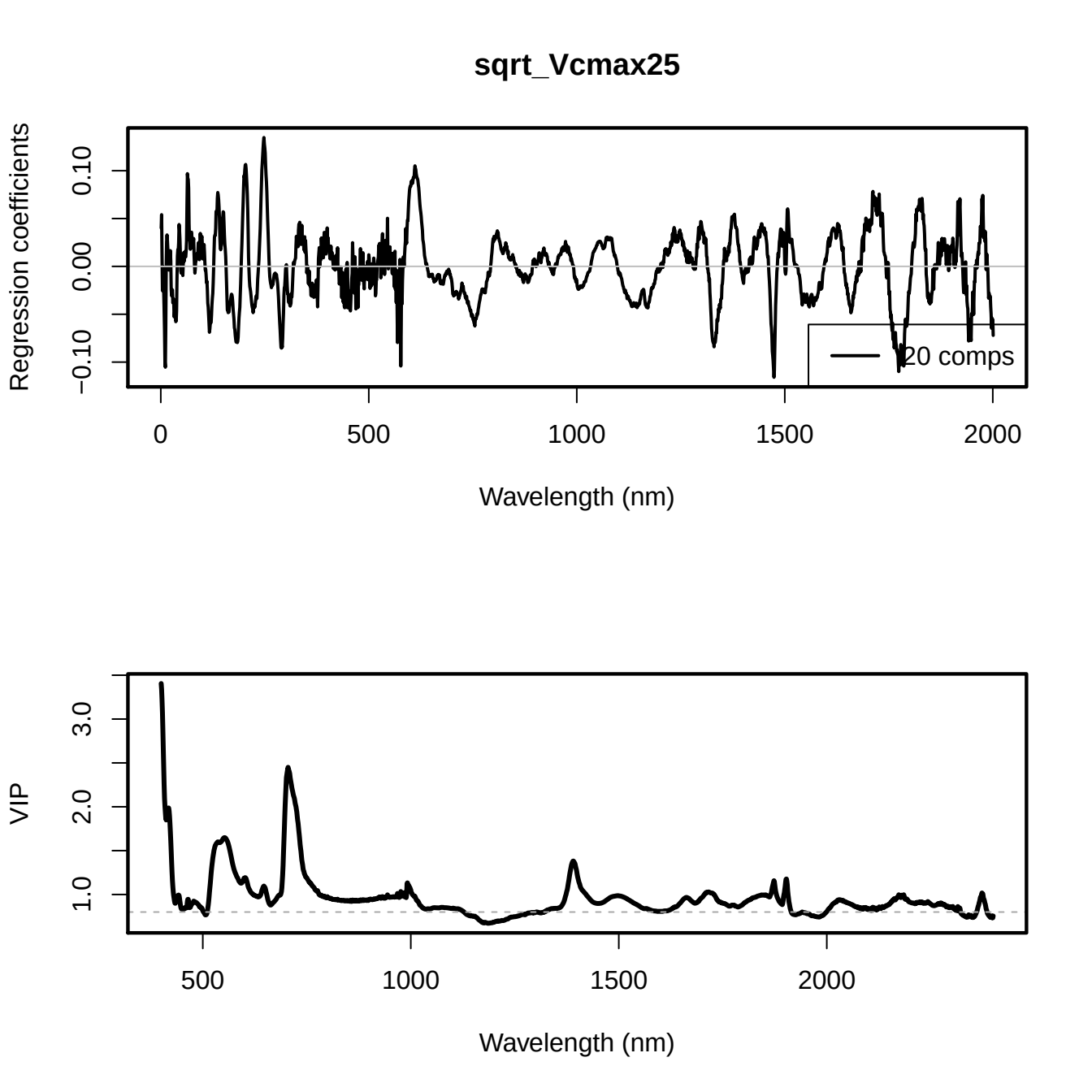

Abs. minimum
Selection
RMSEP
1.0
1.2
1.4
1.6
1.8
0
5
10
15
20
25
30
Number of components

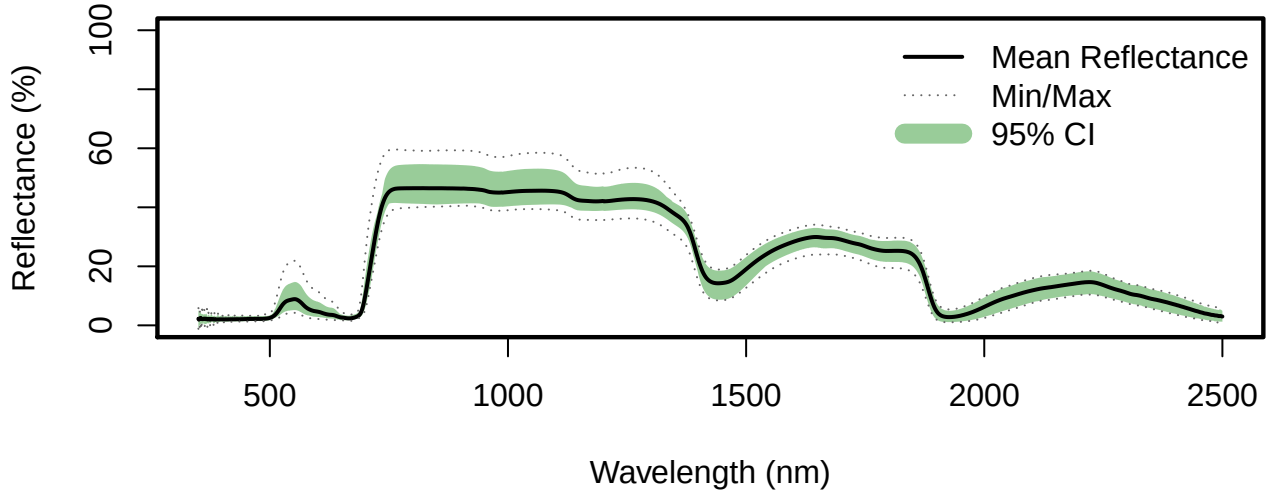

MODEL RMSEP
Model Validation RMSEP
1.5
2.0
2.5
3.0
3.5
0
5
10
15
20
Number of Components

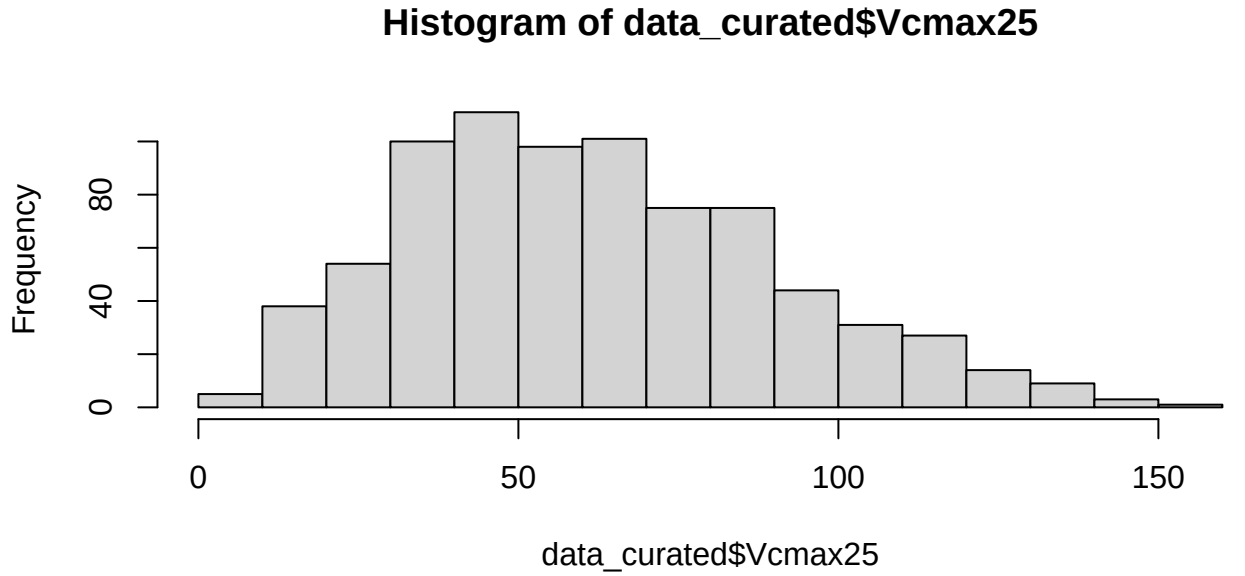

MODEL R2
Model Validation R2
−2
−4
−6
−8
−10
0
5
10
15
20
Number of Components

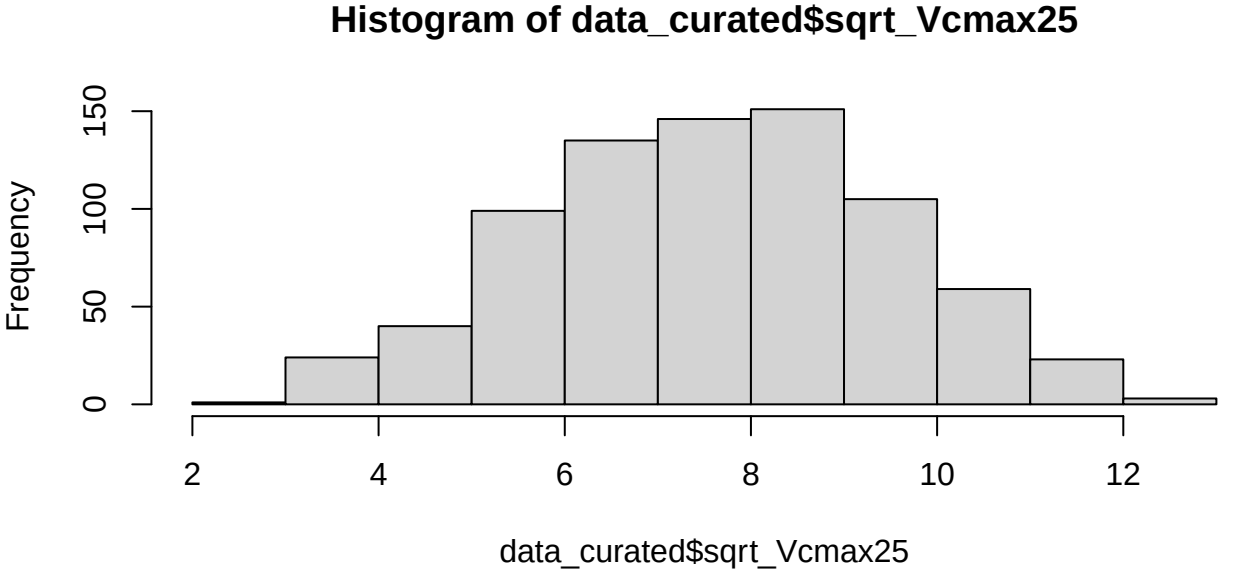

Calibration: Rsq = 0.71; RMSEP = 0.99
Observed sqrt_Vcmax25 (units)
Predicted sqrt_Vcmax25 (units)
12.5
10.0
7.5
5.0
5.0
7.5
10.0
12.5
dataset
Barnes_et_al_2017
Burnett_et_al_2019
Lamour_et_al_2021
Rogers_et_al_2017
Wu_et_al_2019
Yan_et_al_2021

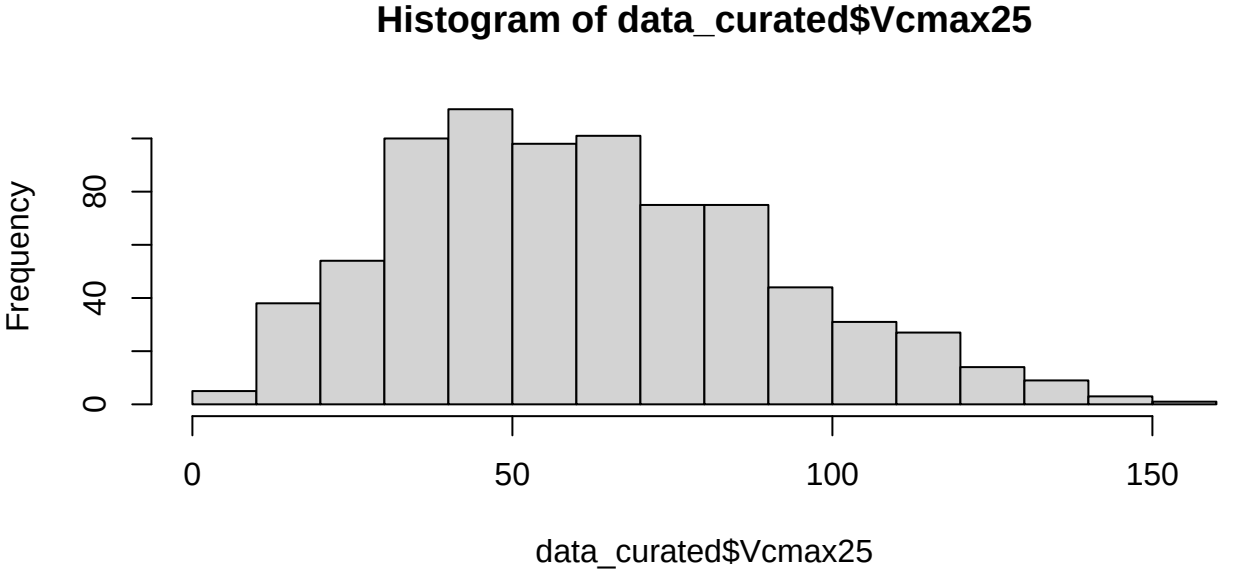

Validation: Rsq = −6.52; RMSEP = 3.74; nComps = 20
Observed sqrt_Vcmax25 (units)
Predicted sqrt_Vcmax25 (units)
3
4
5
6
7
8
dataset
Albert_et_al_2028

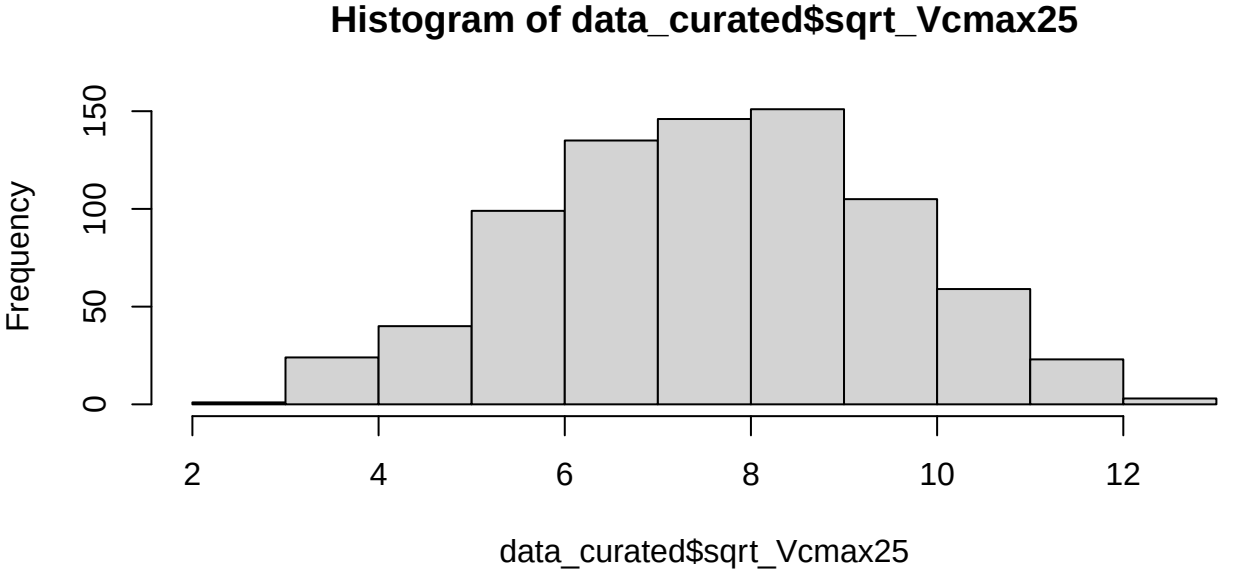

sqrt_Vcmax25
Regression coefficients
0.10
0.00
−0.10
20 comps
0
500
1000
1500
2000
Wavelength (nm)
VIP
3.0
2.0
1.0
500
1000
1500
2000
Wavelength (nm)


Reflectance (%)
0
20
60
100
500
1000
1500
2000
2500
Wavelength (nm)
Mean Reflectance
Min/Max
95% CI


Histogram of data_curated$Vcmax25
Frequency
0
40
80
0
50
100
150
data_curated$Vcmax25


Histogram of data_curated$sqrt_Vcmax25
Frequency
0
50
100
150
2
4
6
8
10
12
data_curated$sqrt_Vcmax25


Histogram of data_curated$Vcmax25
Frequency
0
40
80
0
50
100
150
data_curated$Vcmax25


Histogram of data_curated$sqrt_Vcmax25
Frequency
0
50
100
150
2
4
6
8
10
12
data_curated$sqrt_Vcmax25