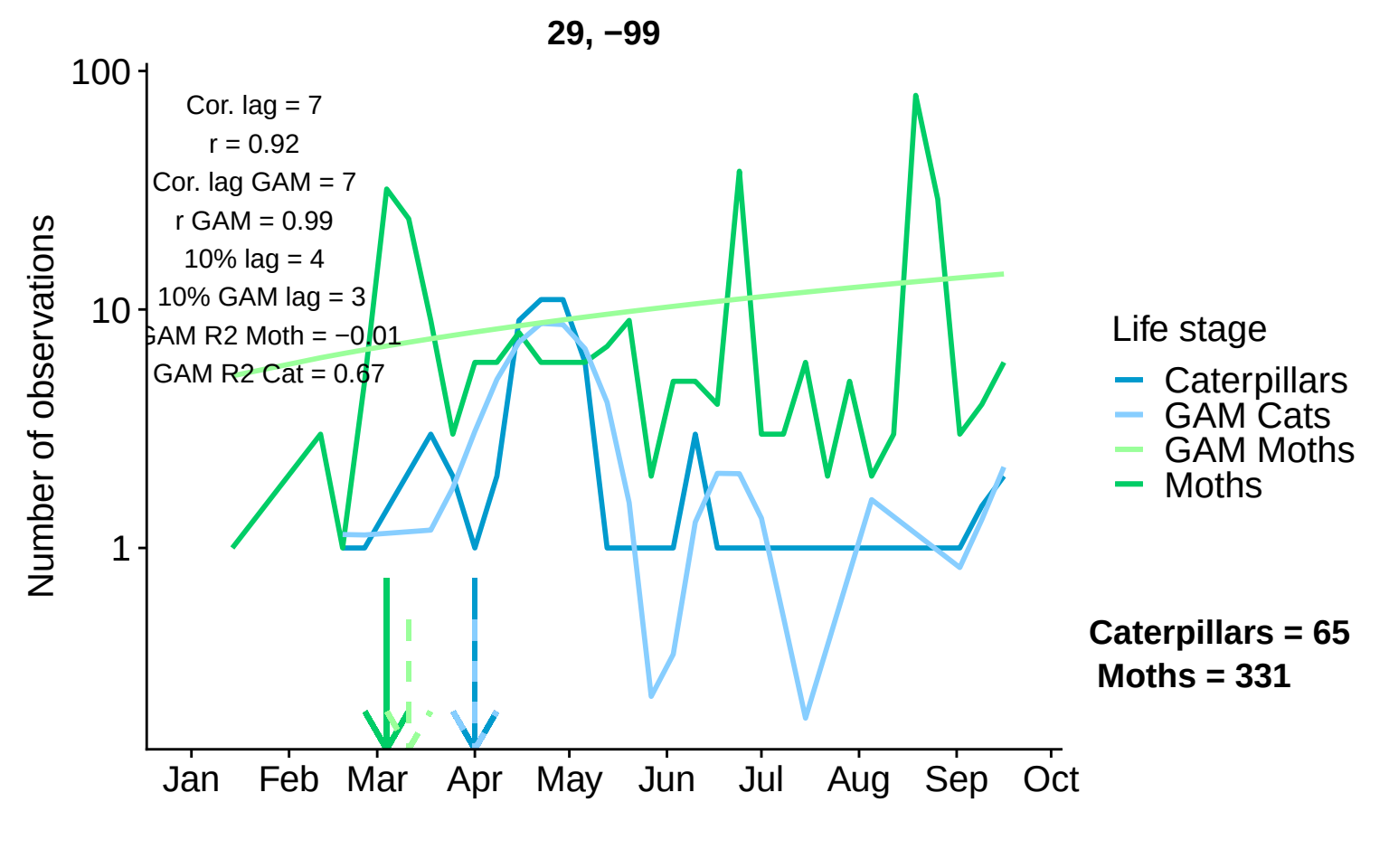
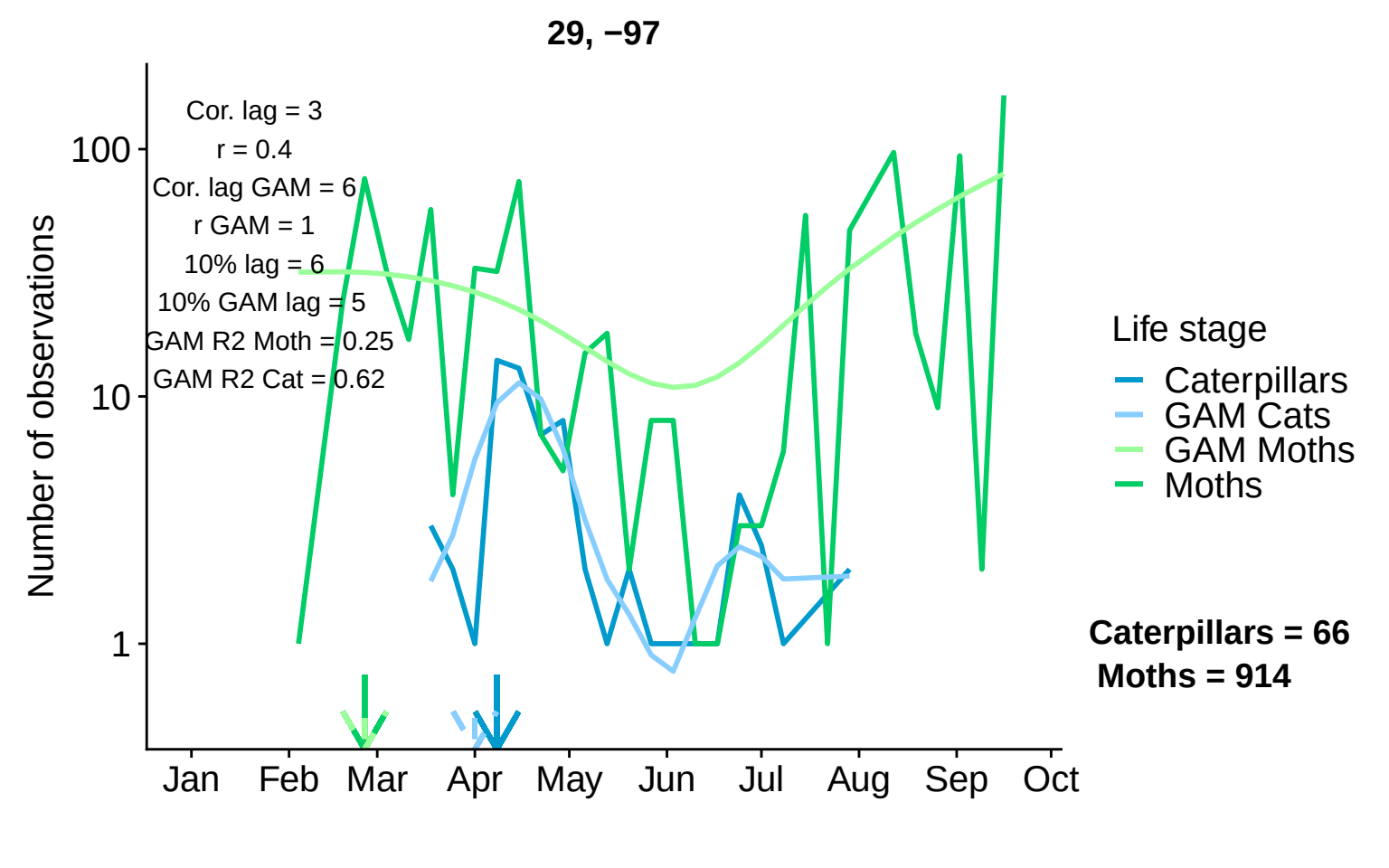
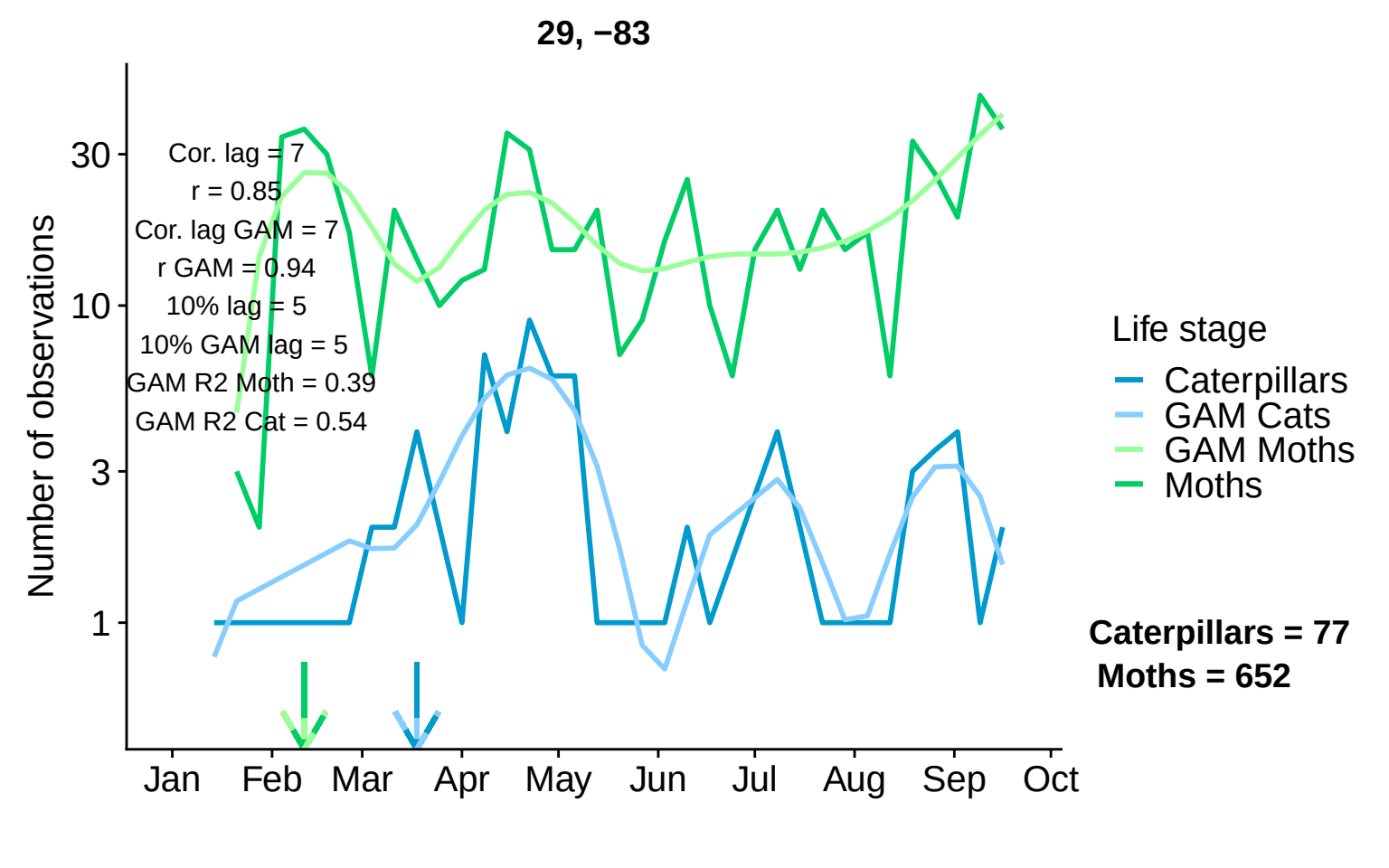
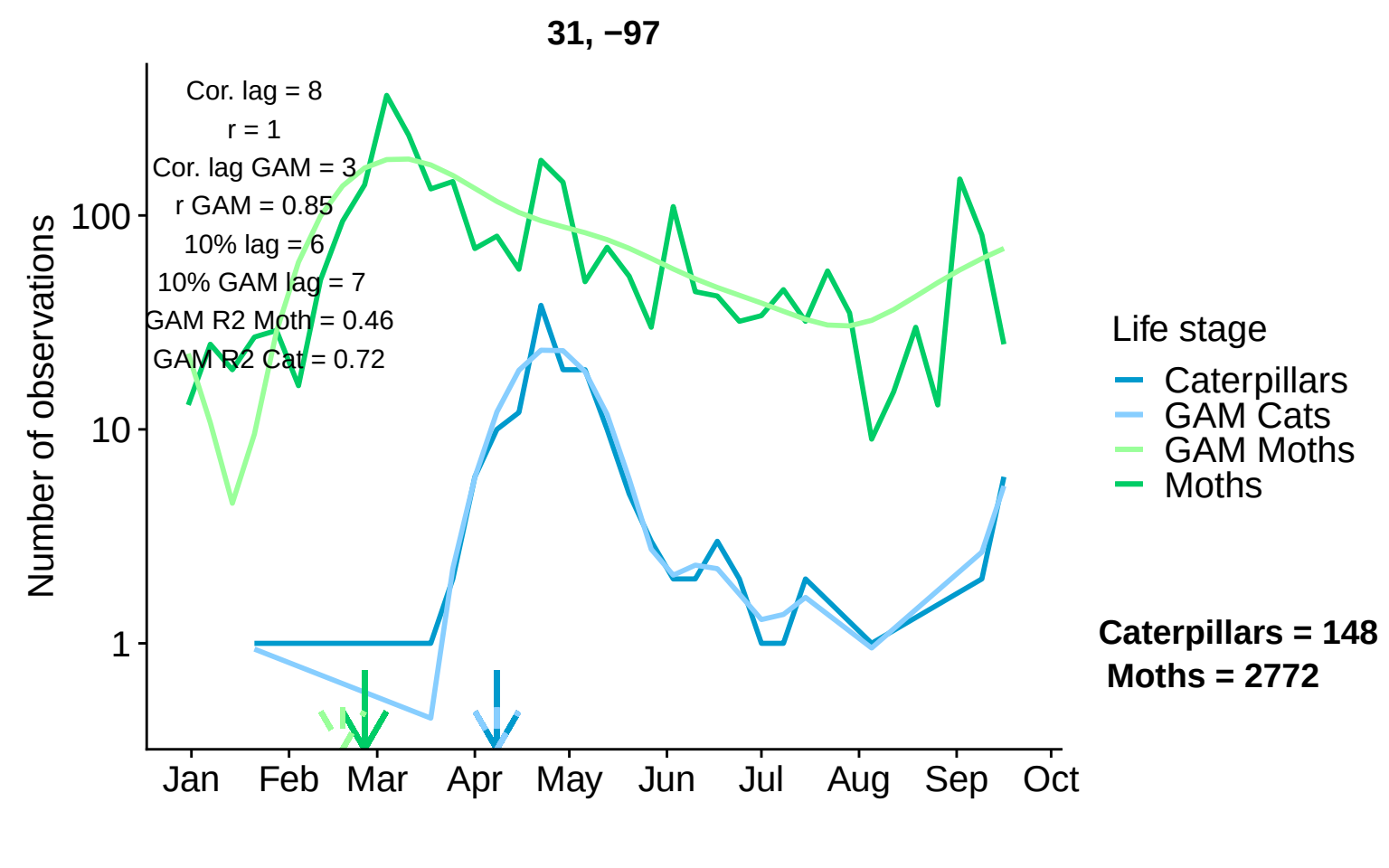
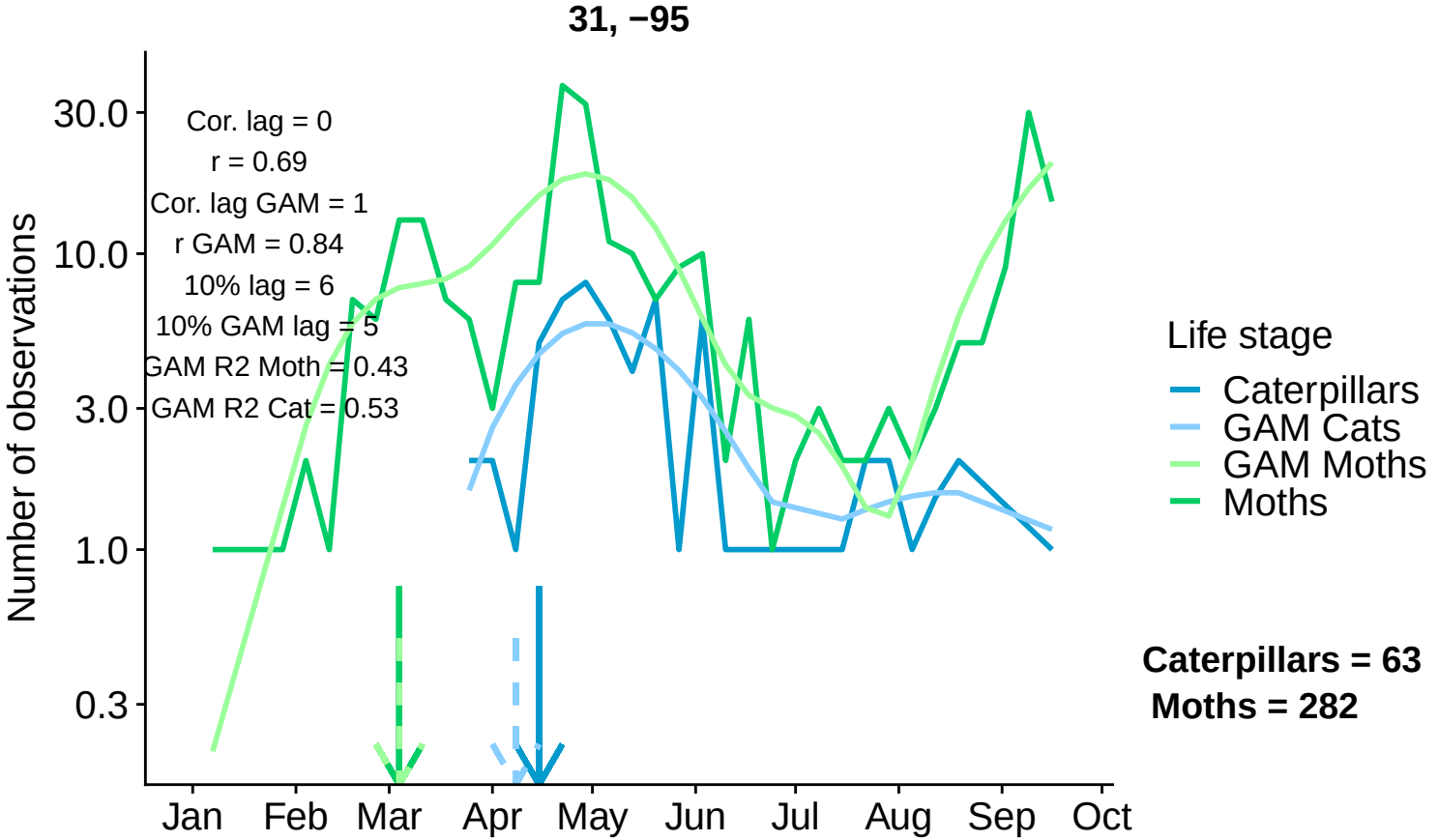
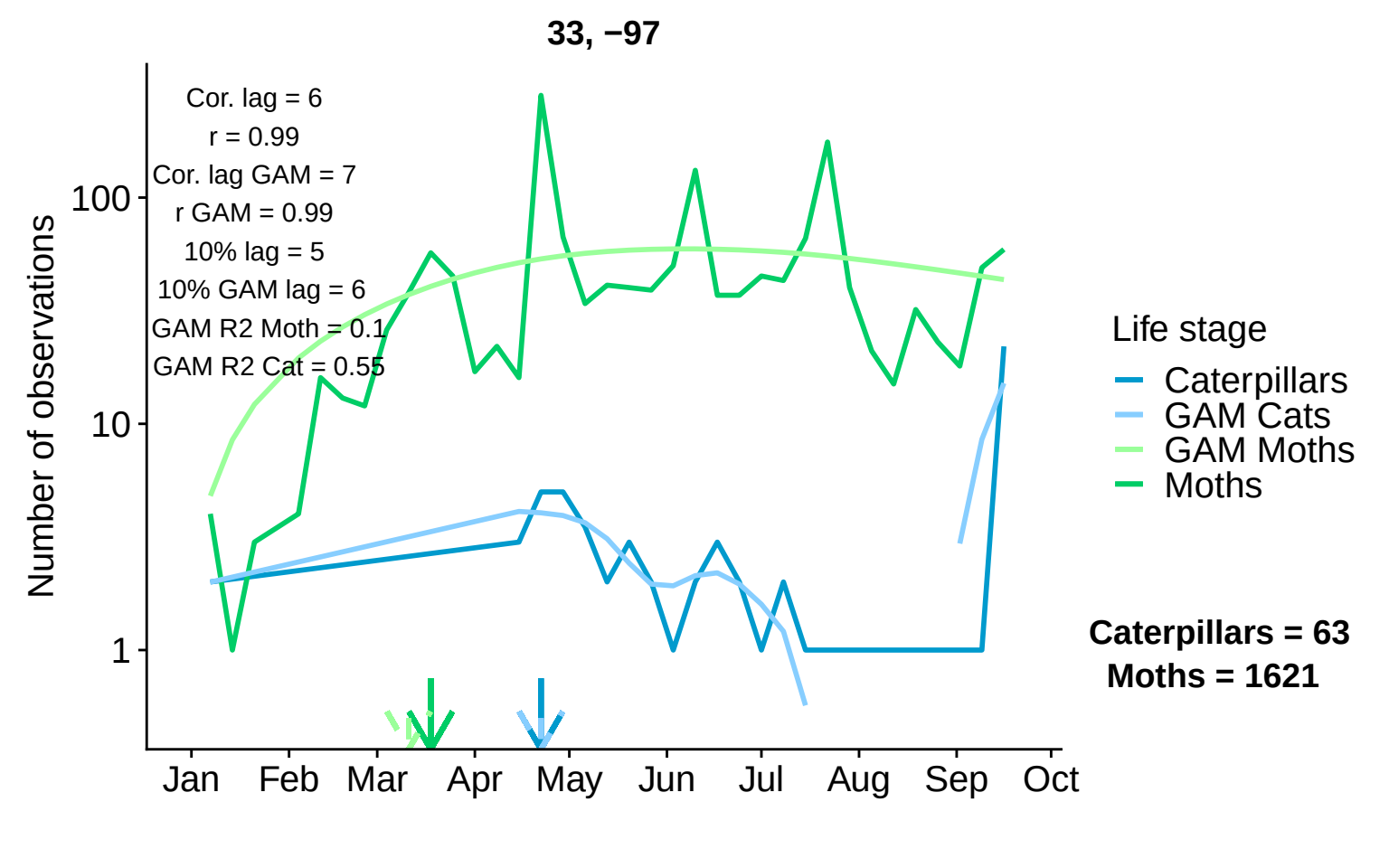

29, −99
100
10
1
Number of observations
Cor. lag = 7
r = 0.92
Cor. lag GAM = 7
r GAM = 0.99
10% lag = 4
10% GAM lag = 3
GAM R2 Moth = −0.01
GAM R2 Cat = 0.67
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Life stage
Caterpillars
GAM Cats
GAM Moths
Moths
Caterpillars = 65
Moths = 331

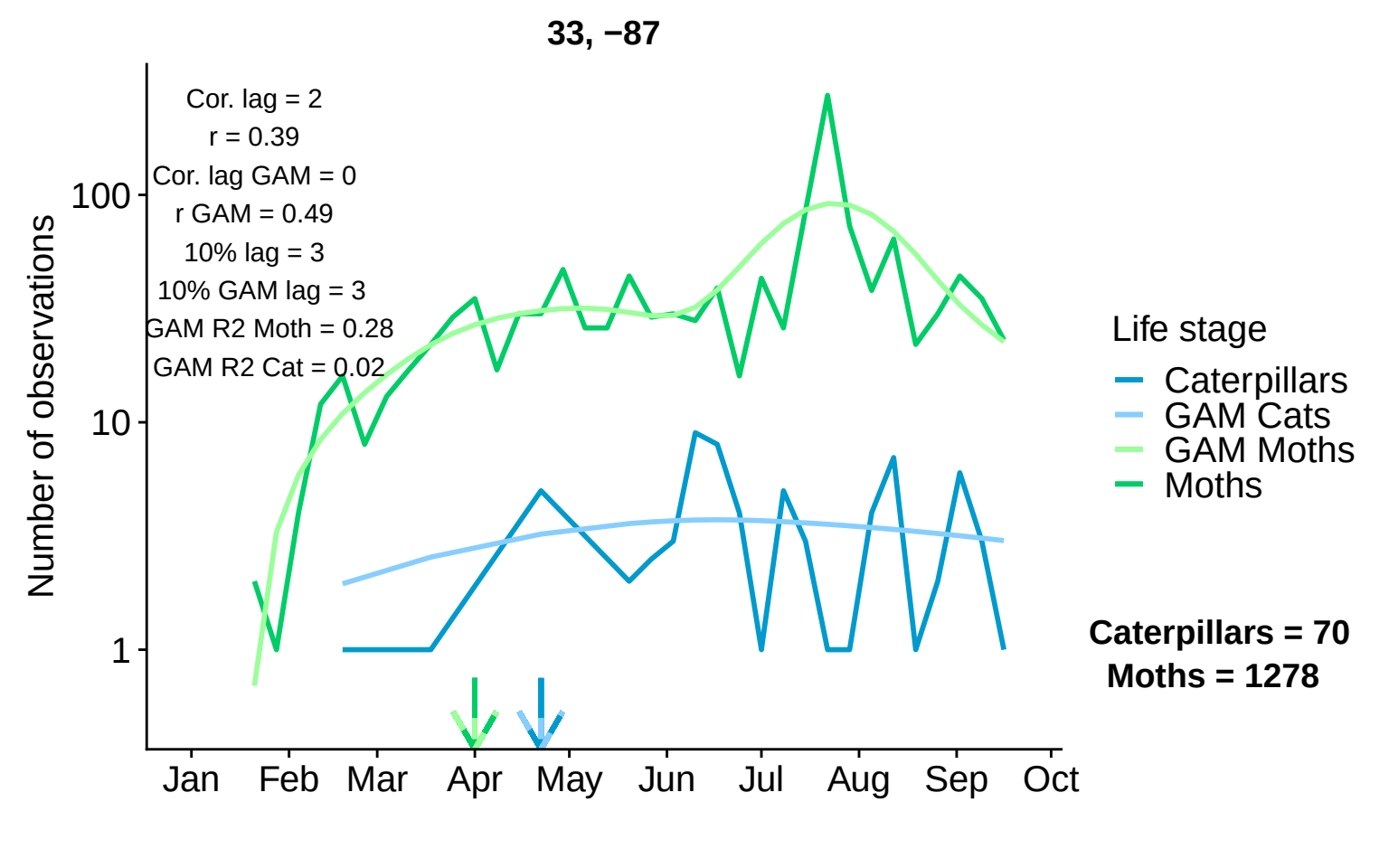

29, −97
Cor. lag = 3
r = 0.4
Cor. lag GAM = 6
r GAM = 1
10% lag = 6
10% GAM lag = 5
GAM R2 Moth = 0.25
GAM R2 Cat = 0.62
100
10
1
Number of observations
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Life stage
Caterpillars
GAM Cats
GAM Moths
Moths
Caterpillars = 66
Moths = 914

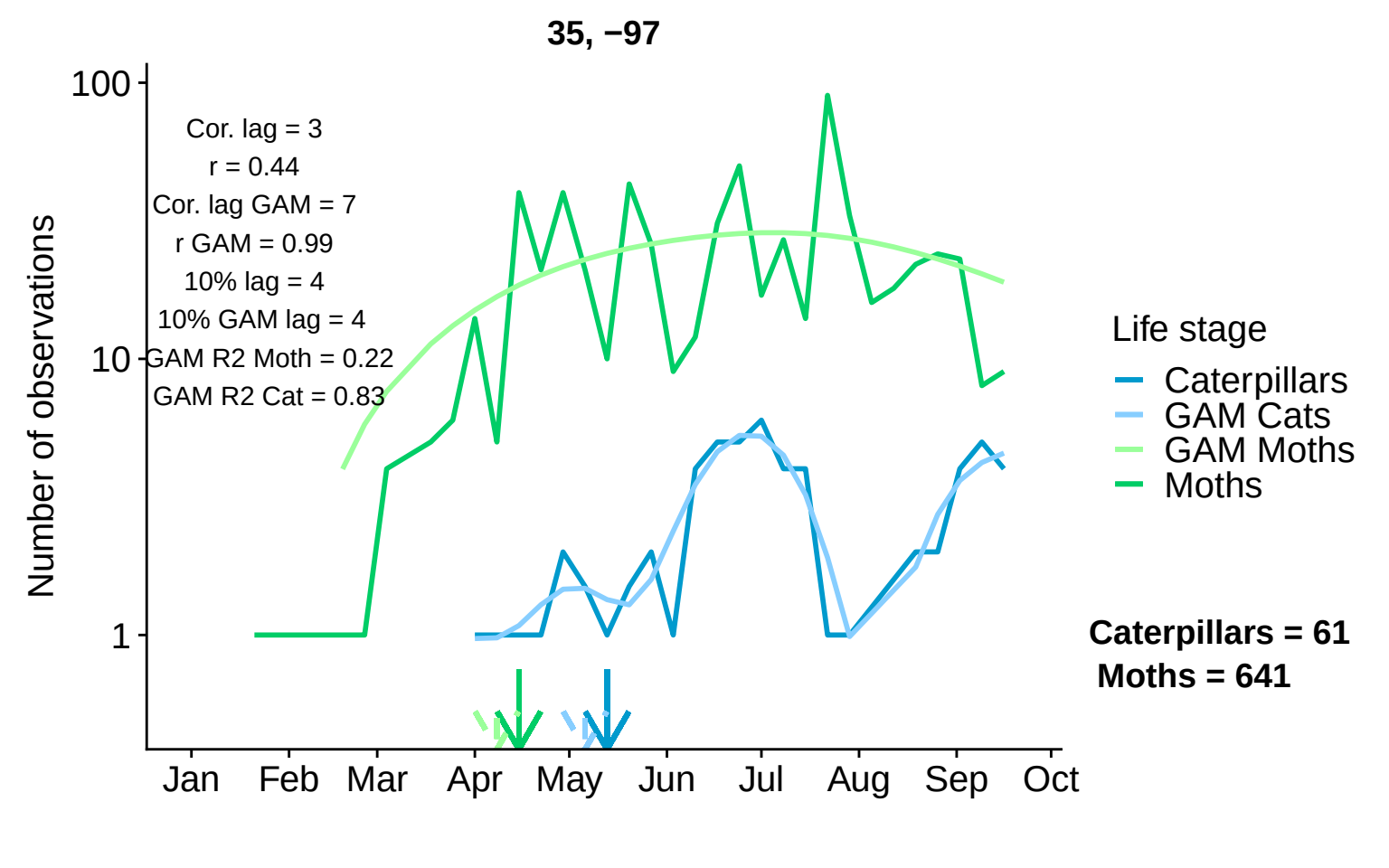

29, −83
Number of observations
30
10
3
1
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Cor. lag = 7
r = 0.85
Cor. lag GAM = 7
r GAM = 0.94
10% lag = 5
10% GAM lag = 5
GAM R2 Moth = 0.39
GAM R2 Cat = 0.54
Life stage
Caterpillars
GAM Cats
GAM Moths
Moths
Caterpillars = 77
Moths = 652

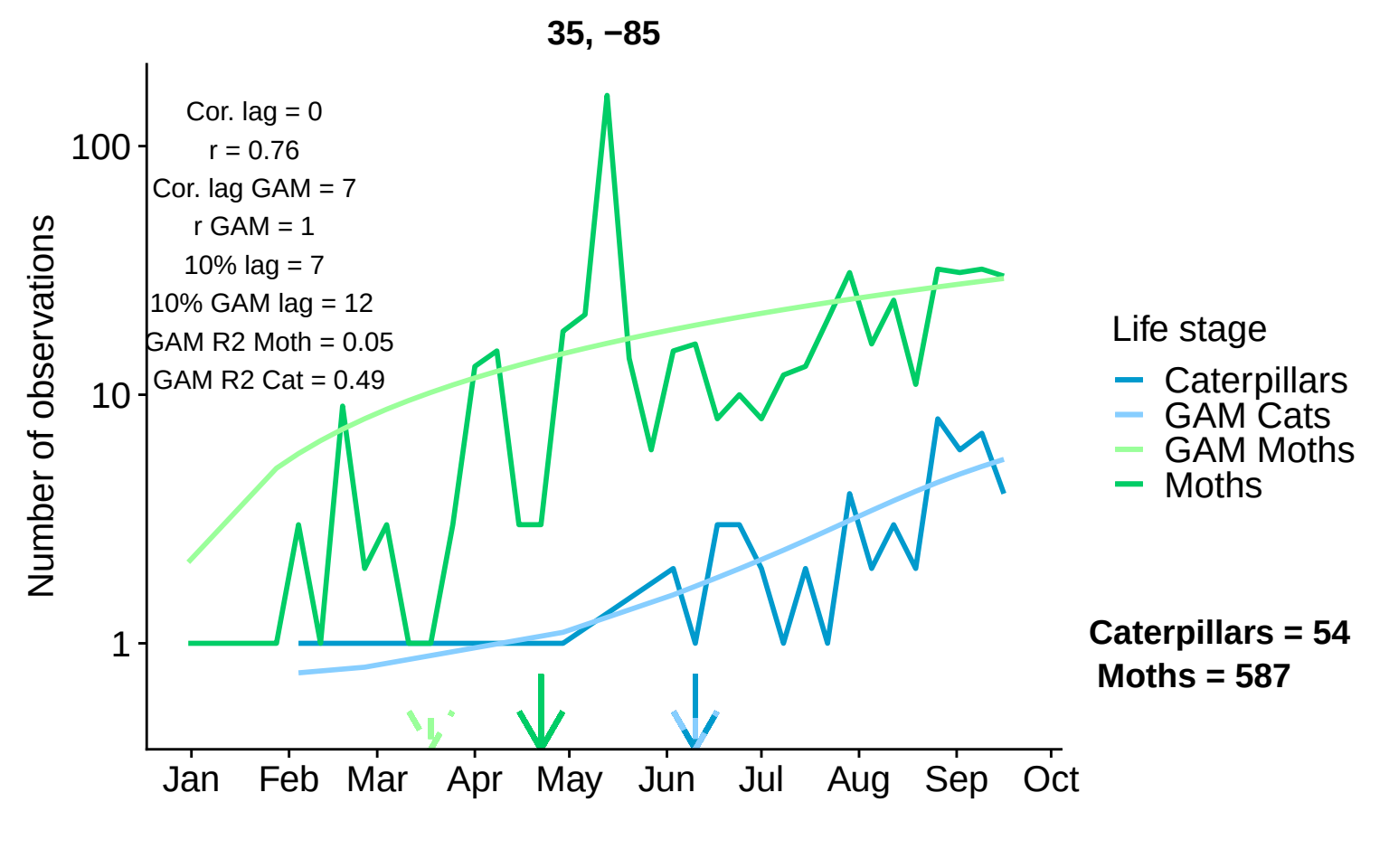

31, −97
Cor. lag = 8
r = 1
Cor. lag GAM = 3
r GAM = 0.85
10% lag = 6
10% GAM lag = 7
GAM R2 Moth = 0.46
GAM R2 Cat = 0.72
Number of observations
100
10
1
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Life stage
Caterpillars
GAM Cats
GAM Moths
Moths
Caterpillars = 148
Moths = 2772

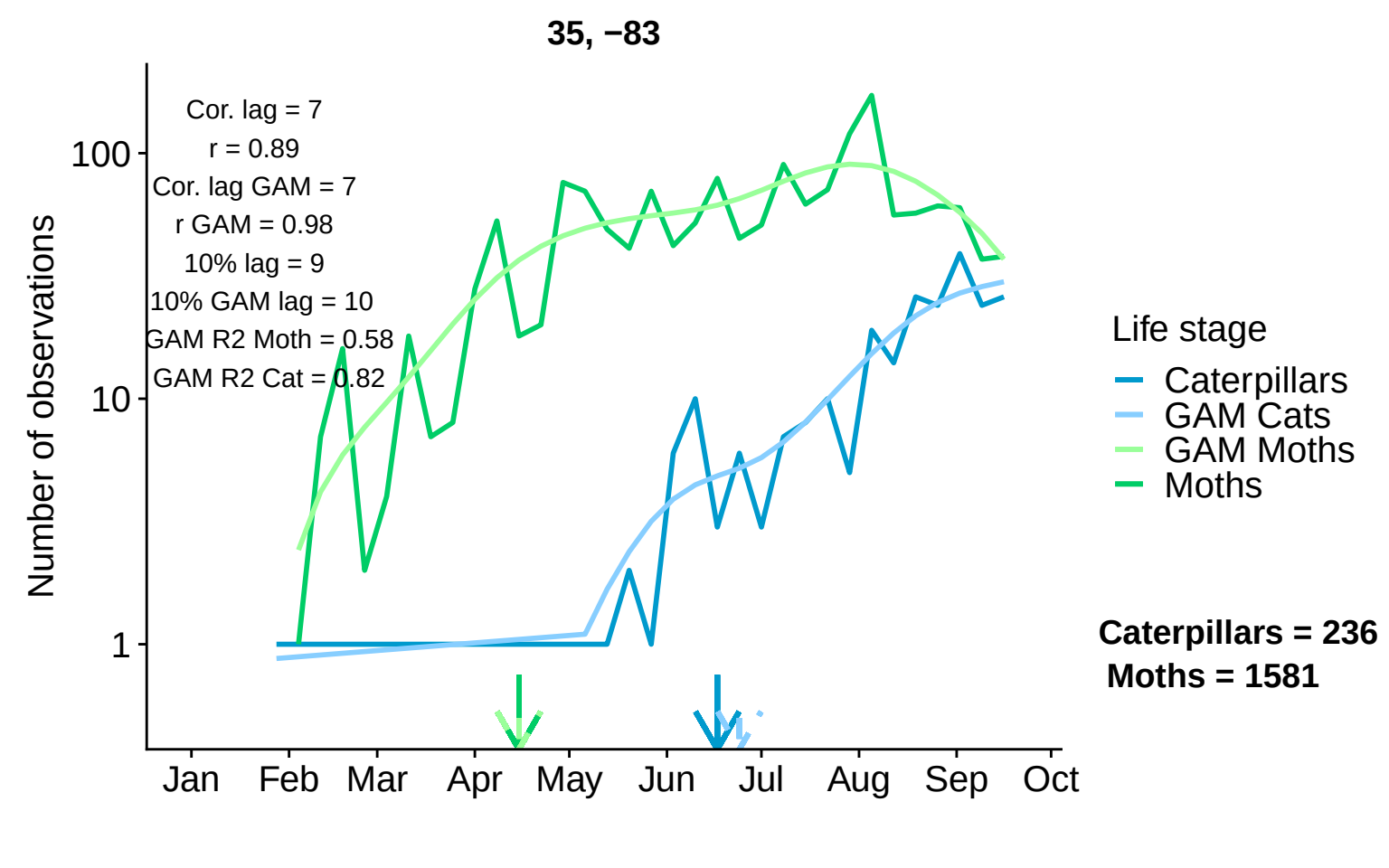

31, −95
Cor. lag = 0
r = 0.69
Cor. lag GAM = 1
r GAM = 0.84
10% lag = 6
10% GAM lag = 5
GAM R2 Moth = 0.43
GAM R2 Cat = 0.53
Number of observations
30.0
10.0
3.0
1.0
0.3
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Life stage
Caterpillars
GAM Cats
GAM Moths
Moths
Caterpillars = 63
Moths = 282

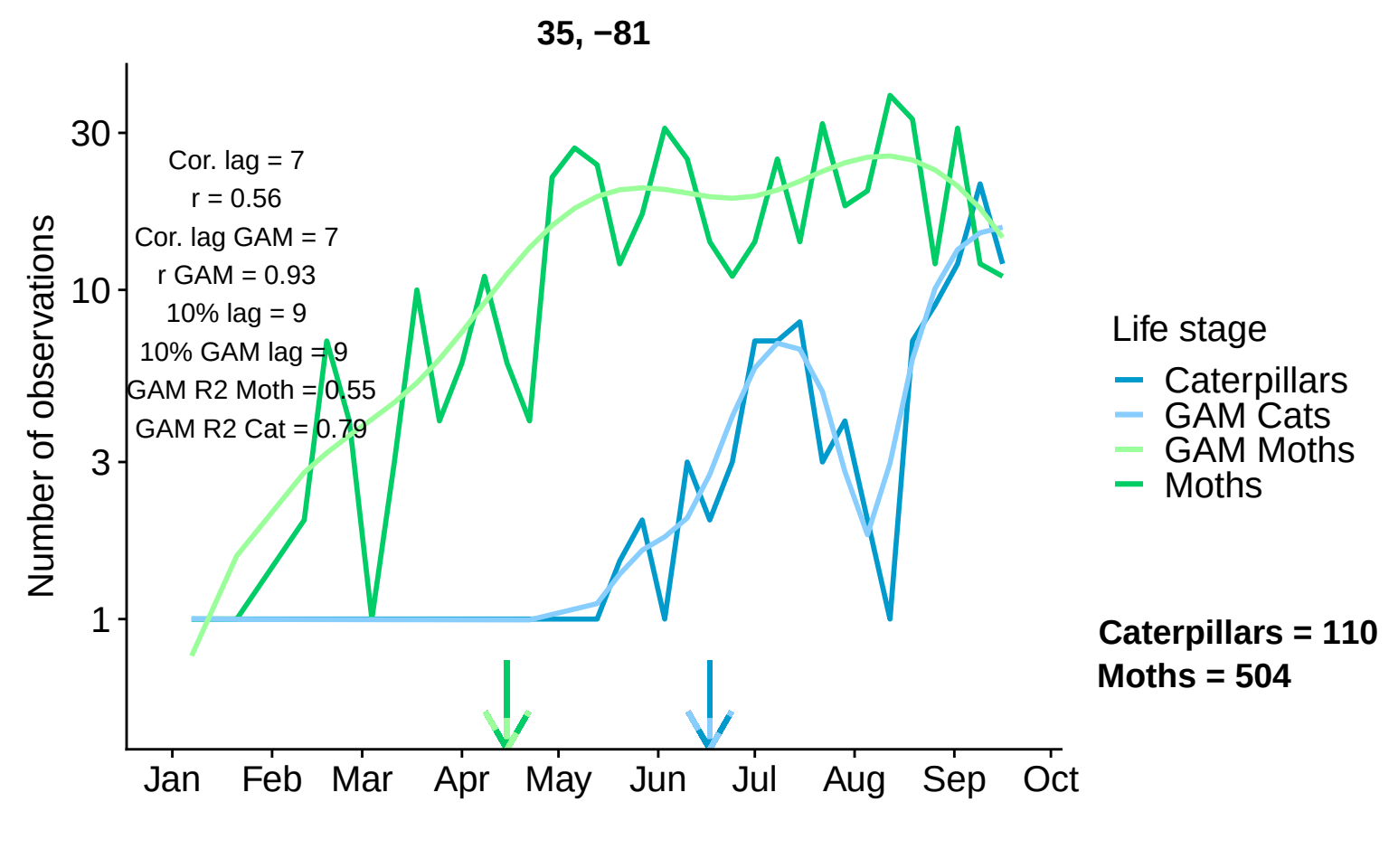

33, −97
Cor. lag = 6
r = 0.99
Cor. lag GAM = 7
r GAM = 0.99
10% lag = 5
10% GAM lag = 6
GAM R2 Moth = 0.1
GAM R2 Cat = 0.55
Number of observations
100
10
1
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Life stage
Caterpillars
GAM Cats
GAM Moths
Moths
Caterpillars = 63
Moths = 1621

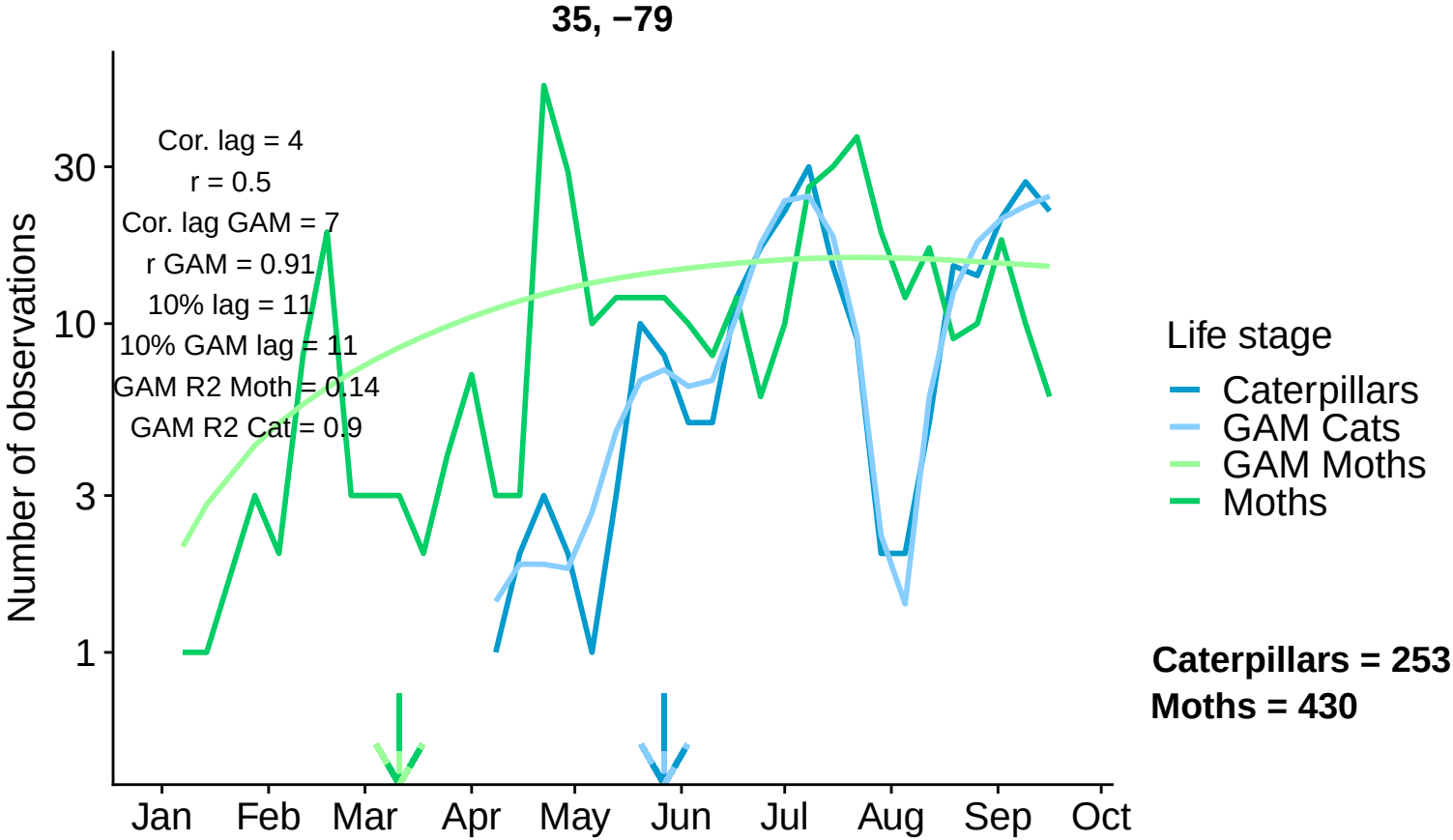

33, −87
Cor. lag = 2
r = 0.39
Cor. lag GAM = 0
r GAM = 0.49
10% lag = 3
10% GAM lag = 3
GAM R2 Moth = 0.28
GAM R2 Cat = 0.02
Number of observations
100
10
1
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Life stage
Caterpillars
GAM Cats
GAM Moths
Moths
Caterpillars = 70
Moths = 1278

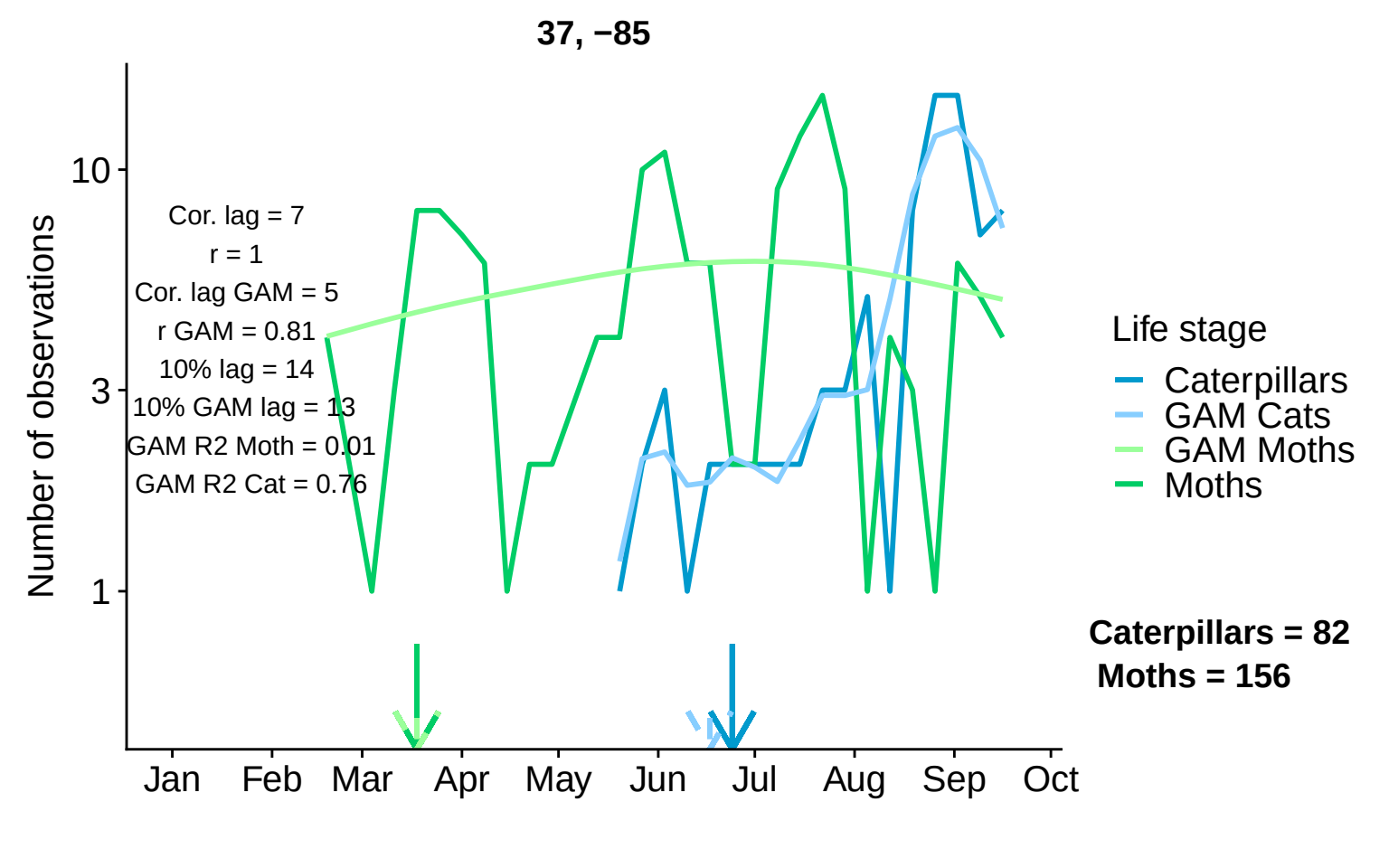

35, −97
100
10
1
Number of observations
Cor. lag = 3
r = 0.44
Cor. lag GAM = 7
r GAM = 0.99
10% lag = 4
10% GAM lag = 4
GAM R2 Moth = 0.22
GAM R2 Cat = 0.83
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Life stage
Caterpillars
GAM Cats
GAM Moths
Moths
Caterpillars = 61
Moths = 641

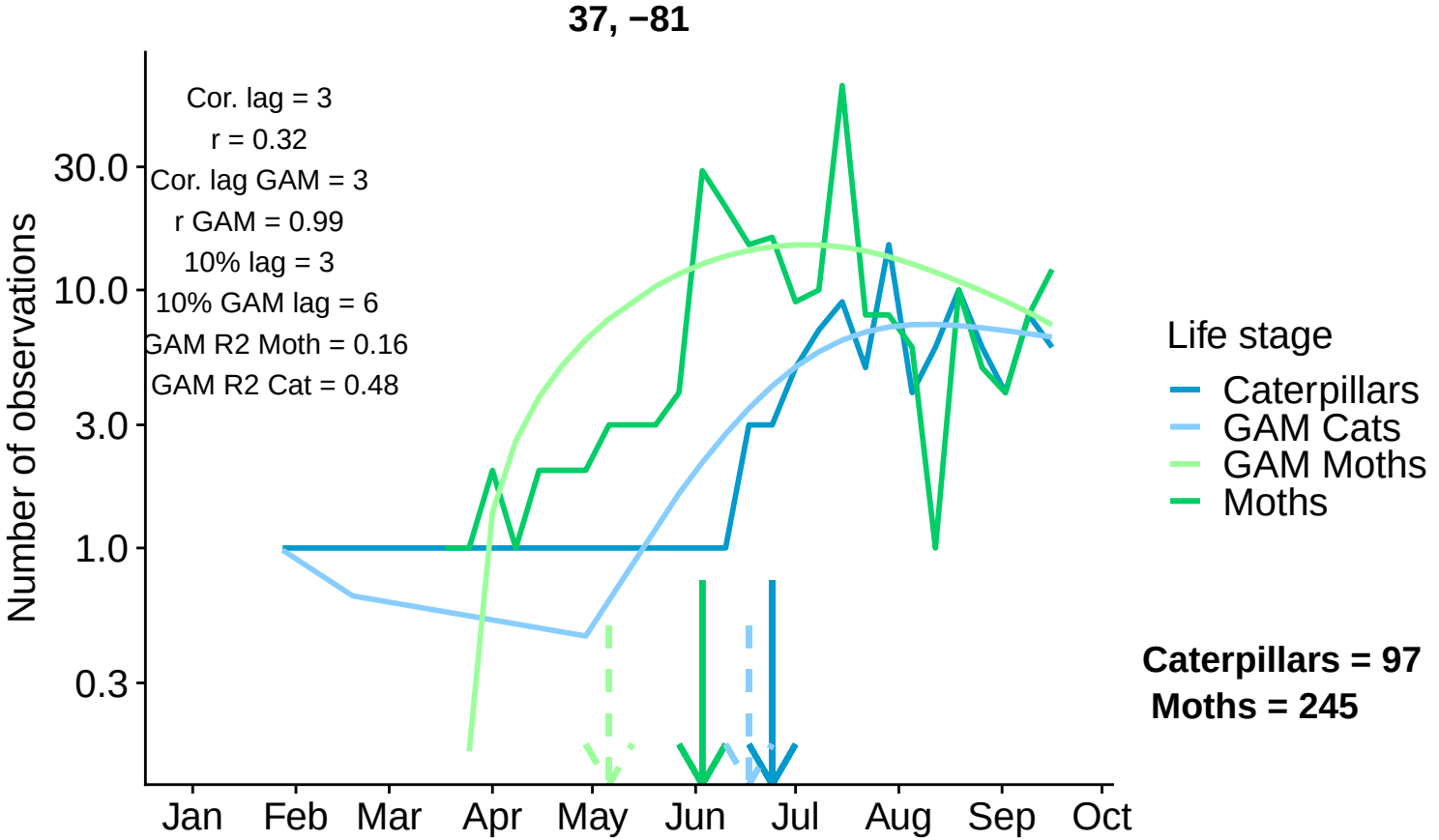

35, −85
Cor. lag = 0
r = 0.76
Cor. lag GAM = 7
r GAM = 1
10% lag = 7
10% GAM lag = 12
GAM R2 Moth = 0.05
GAM R2 Cat = 0.49
Number of observations
100
10
1
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Life stage
Caterpillars
GAM Cats
GAM Moths
Moths
Caterpillars = 54
Moths = 587

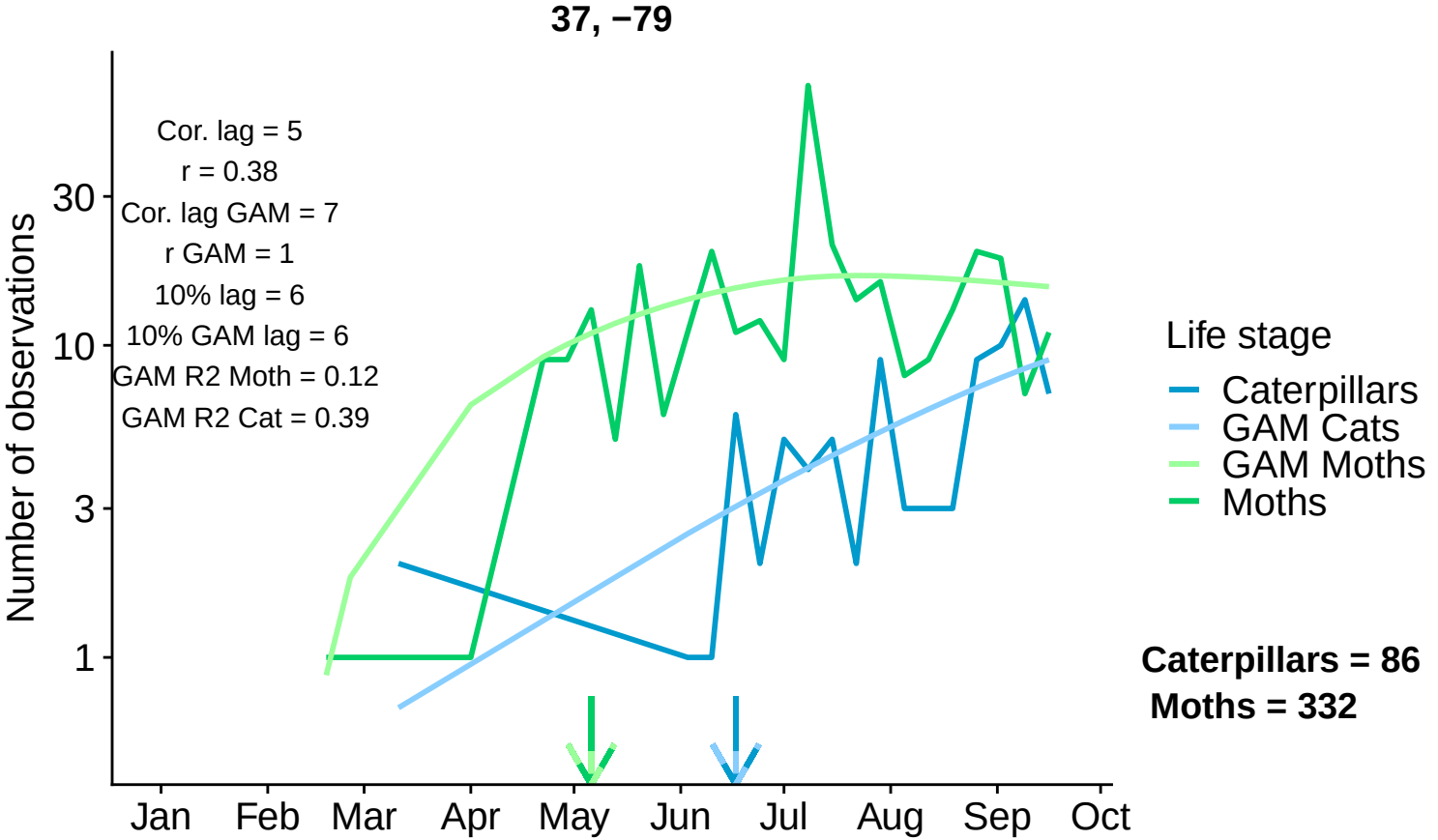

35, −83
Cor. lag = 7
r = 0.89
Cor. lag GAM = 7
r GAM = 0.98
10% lag = 9
10% GAM lag = 10
GAM R2 Moth = 0.58
GAM R2 Cat = 0.82
Number of observations
100
10
1
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Life stage
Caterpillars
GAM Cats
GAM Moths
Moths
Caterpillars = 236
Moths = 1581

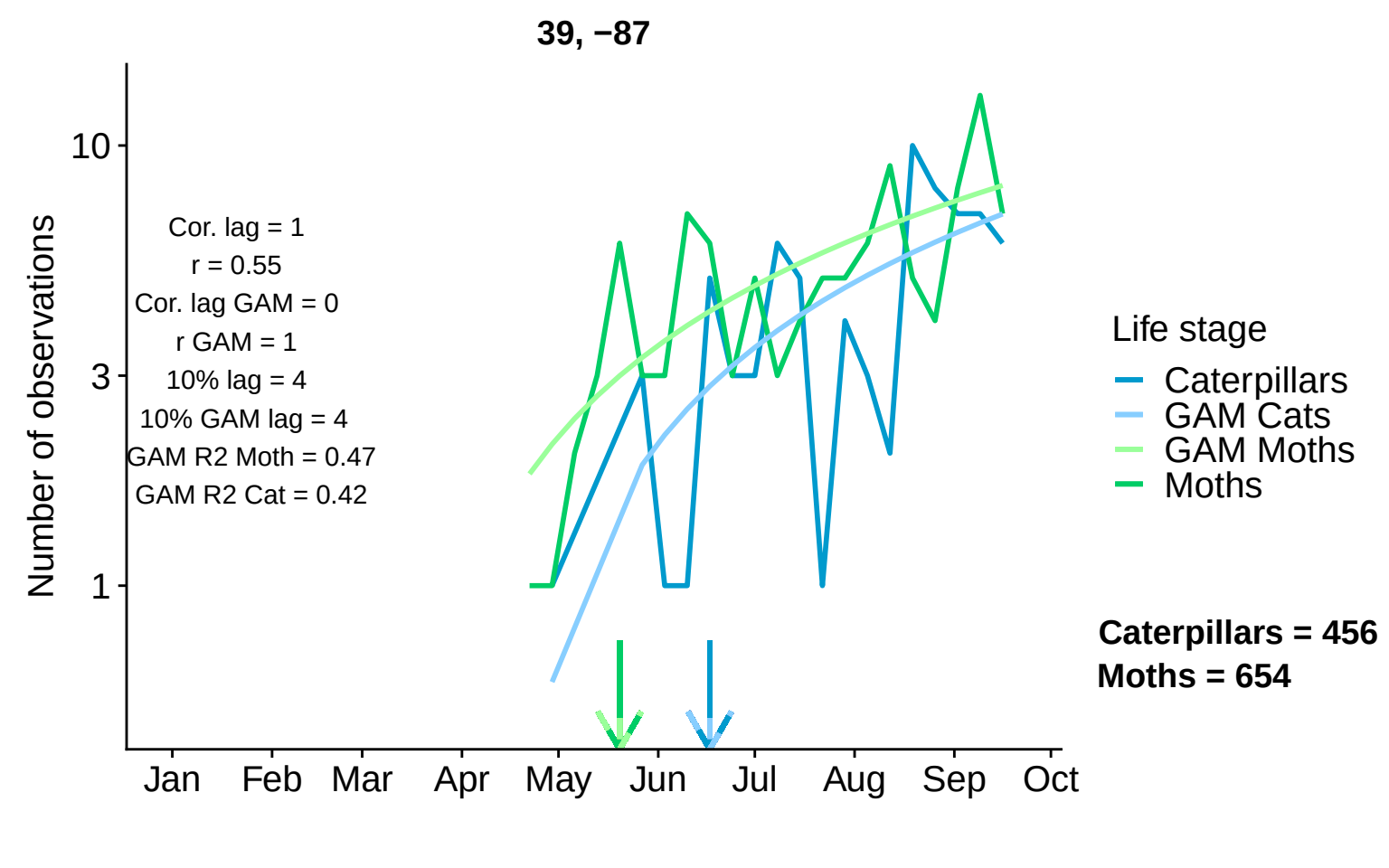

35, −81
Number of observations
30
10
3
1
Cor. lag = 7
r = 0.56
Cor. lag GAM = 7
r GAM = 0.93
10% lag = 9
10% GAM lag = 9
GAM R2 Moth = 0.55
GAM R2 Cat = 0.79
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Life stage
Caterpillars
GAM Cats
GAM Moths
Moths
Caterpillars = 110
Moths = 504

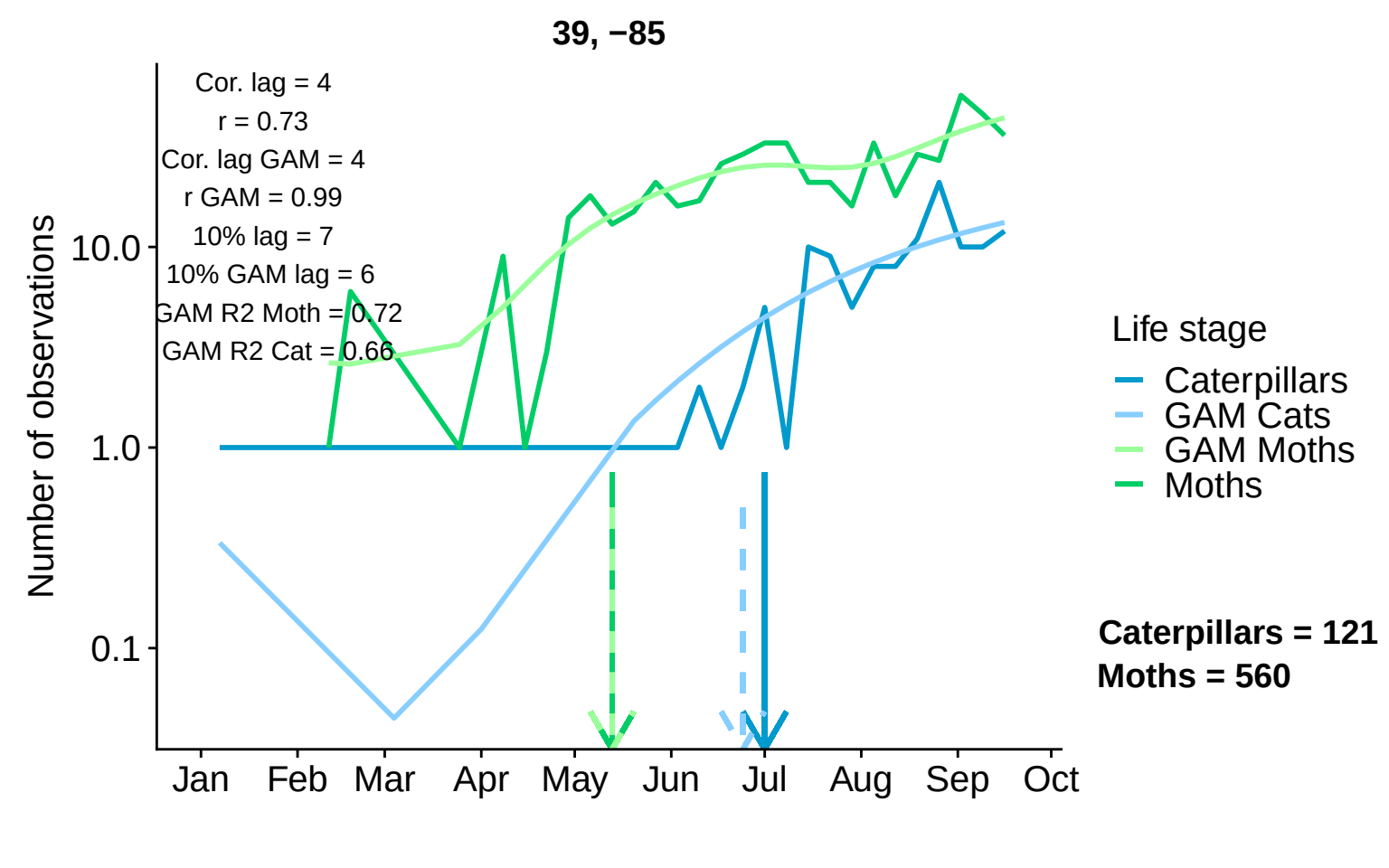

35, −79
Cor. lag = 4
r = 0.5
Cor. lag GAM = 7
r GAM = 0.91
10% lag = 11
10% GAM lag = 11
GAM R2 Moth = 0.14
GAM R2 Cat = 0.9
Number of observations
30
10
3
1
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Life stage
Caterpillars
GAM Cats
GAM Moths
Moths
Caterpillars = 253
Moths = 430

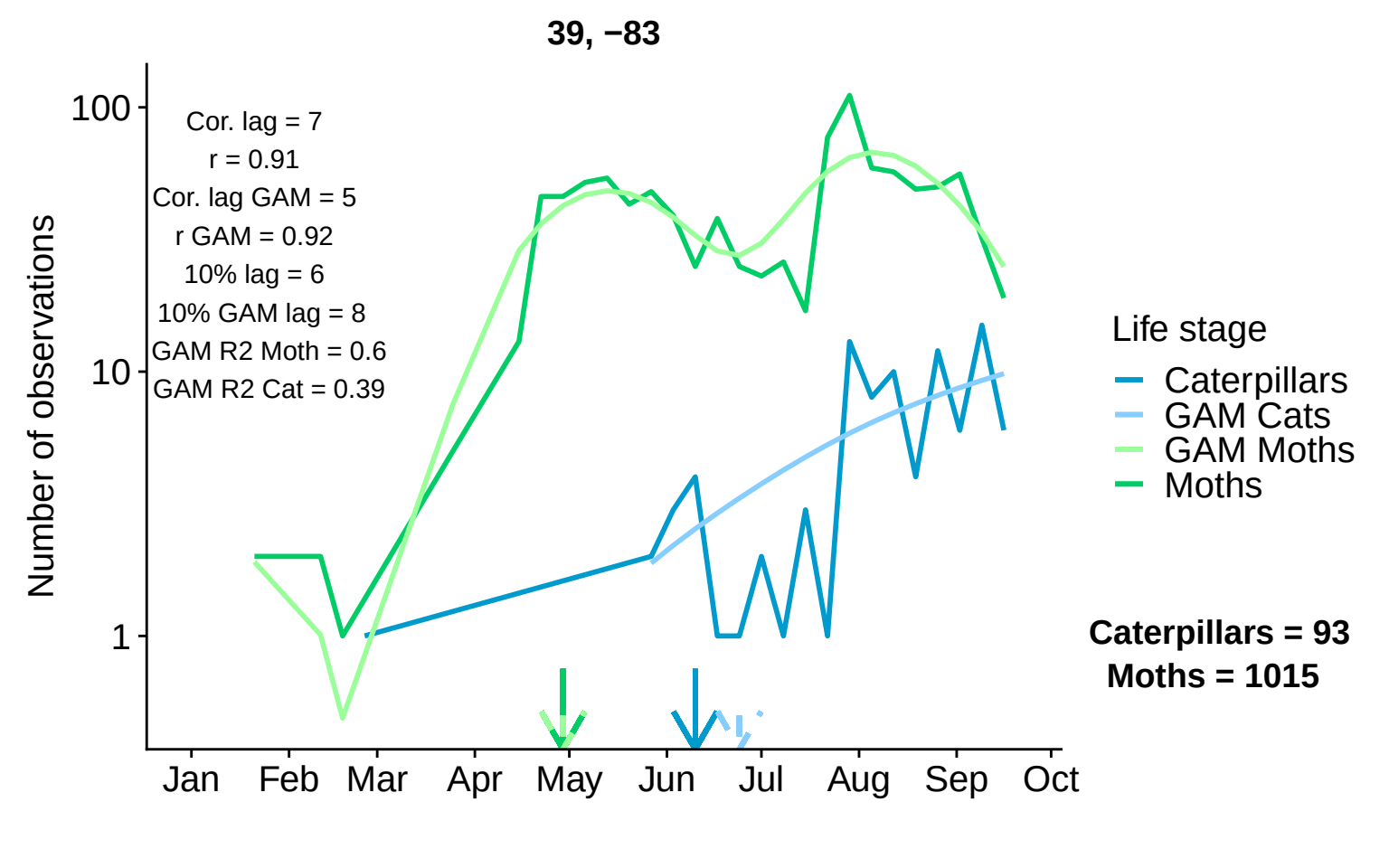

37, −85
Number of observations
10
3
1
Cor. lag = 7
r = 1
Cor. lag GAM = 5
r GAM = 0.81
10% lag = 14
10% GAM lag = 13
GAM R2 Moth = 0.01
GAM R2 Cat = 0.76
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Life stage
Caterpillars
GAM Cats
GAM Moths
Moths
Caterpillars = 82
Moths = 156

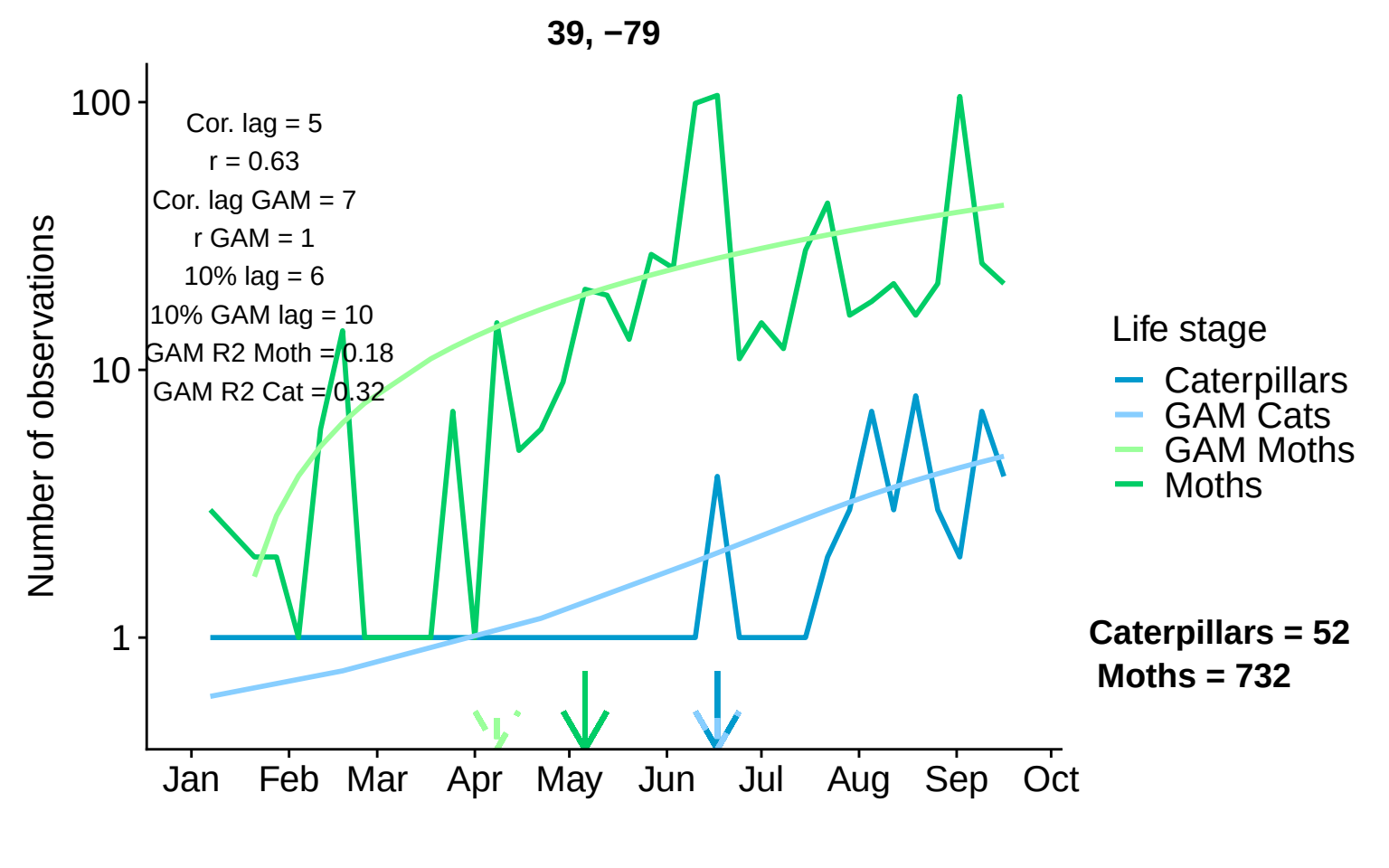

37, −81
Cor. lag = 3
r = 0.32
Cor. lag GAM = 3
r GAM = 0.99
10% lag = 3
10% GAM lag = 6
GAM R2 Moth = 0.16
GAM R2 Cat = 0.48
Number of observations
30.0
10.0
3.0
1.0
0.3
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Life stage
Caterpillars
GAM Cats
GAM Moths
Moths
Caterpillars = 97
Moths = 245

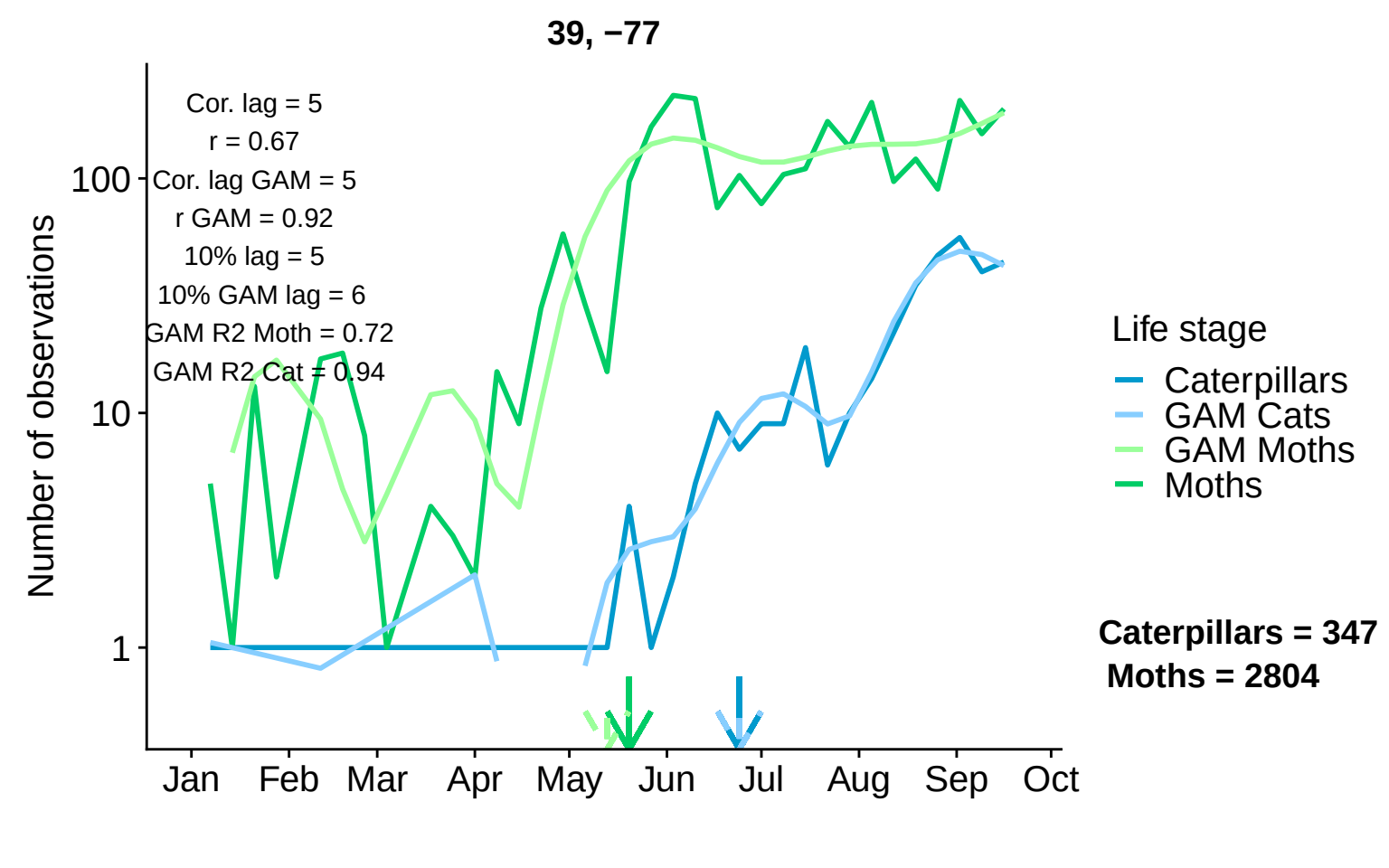

37, −79
Cor. lag = 5
r = 0.38
Cor. lag GAM = 7
r GAM = 1
10% lag = 6
10% GAM lag = 6
GAM R2 Moth = 0.12
GAM R2 Cat = 0.39
Number of observations
30
10
3
1
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Life stage
Caterpillars
GAM Cats
GAM Moths
Moths
Caterpillars = 86
Moths = 332

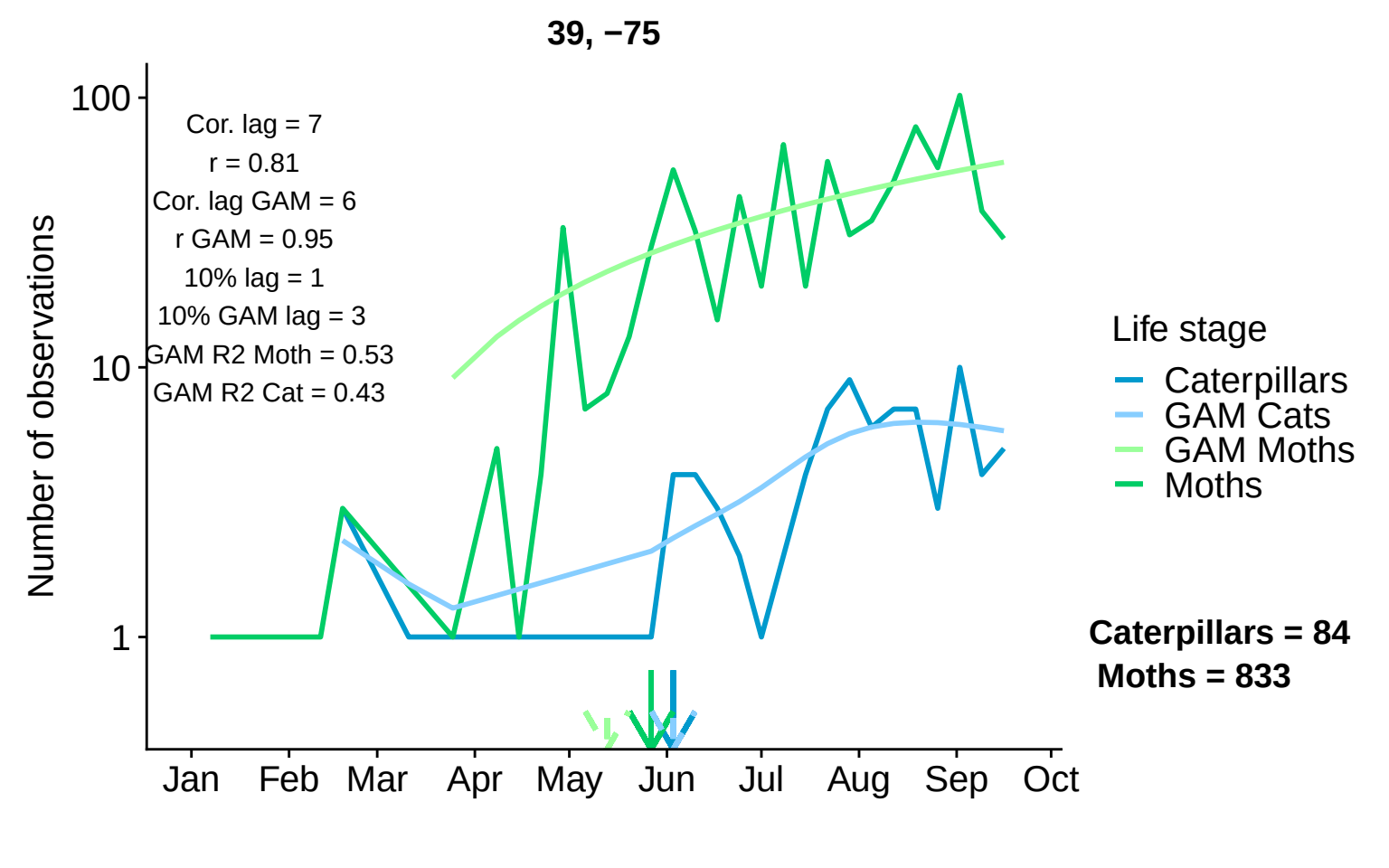

39, −87
Number of observations
10
3
1
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Cor. lag = 1
r = 0.55
Cor. lag GAM = 0
r GAM = 1
10% lag = 4
10% GAM lag = 4
GAM R2 Moth = 0.47
GAM R2 Cat = 0.42
Life stage
Caterpillars
GAM Cats
GAM Moths
Moths
Caterpillars = 456
Moths = 654

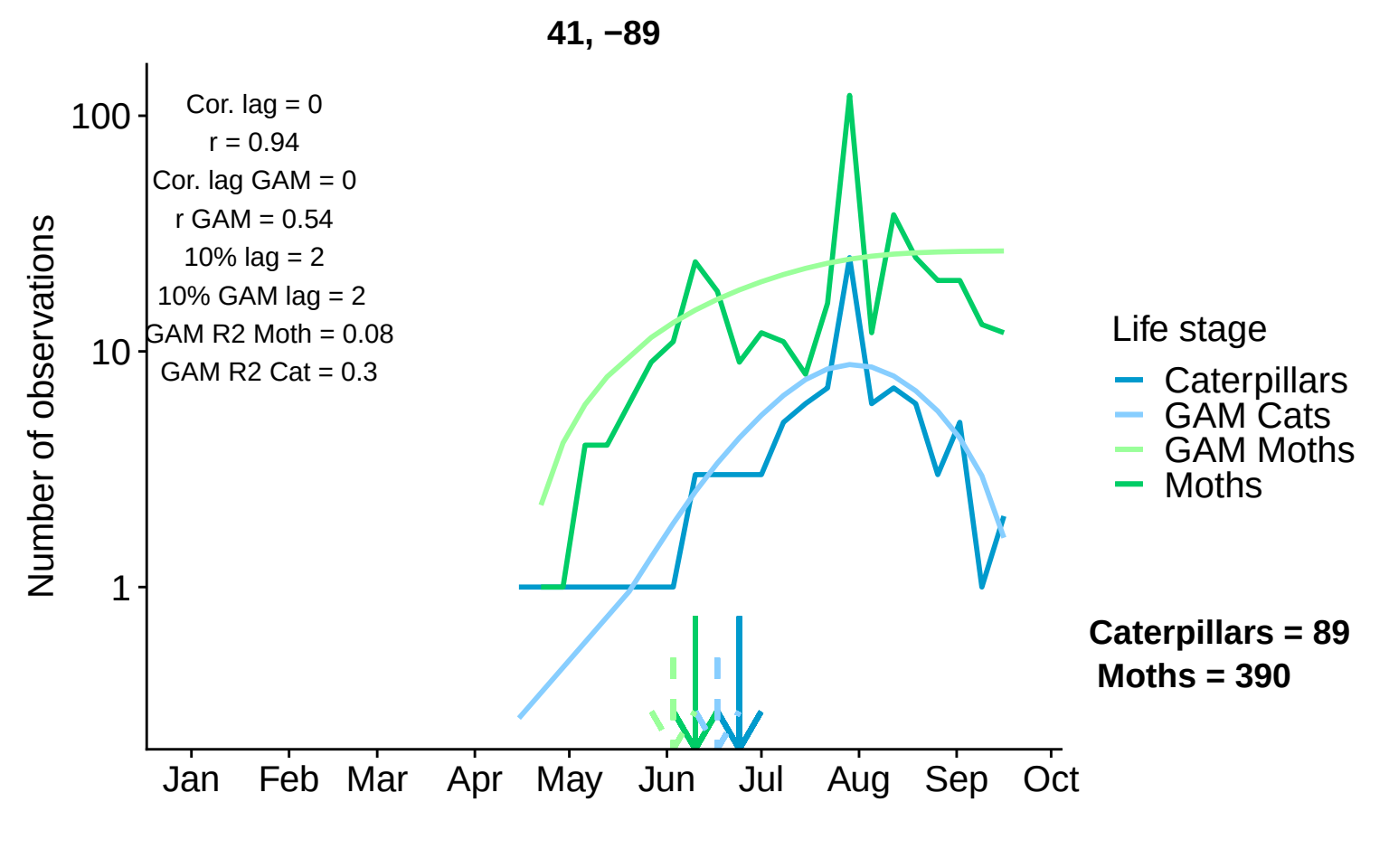

39, −85
Cor. lag = 4
r = 0.73
Cor. lag GAM = 4
r GAM = 0.99
10% lag = 7
10% GAM lag = 6
GAM R2 Moth = 0.72
GAM R2 Cat = 0.66
Number of observations
10.0
1.0
0.1
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Life stage
Caterpillars
GAM Cats
GAM Moths
Moths
Caterpillars = 121
Moths = 560

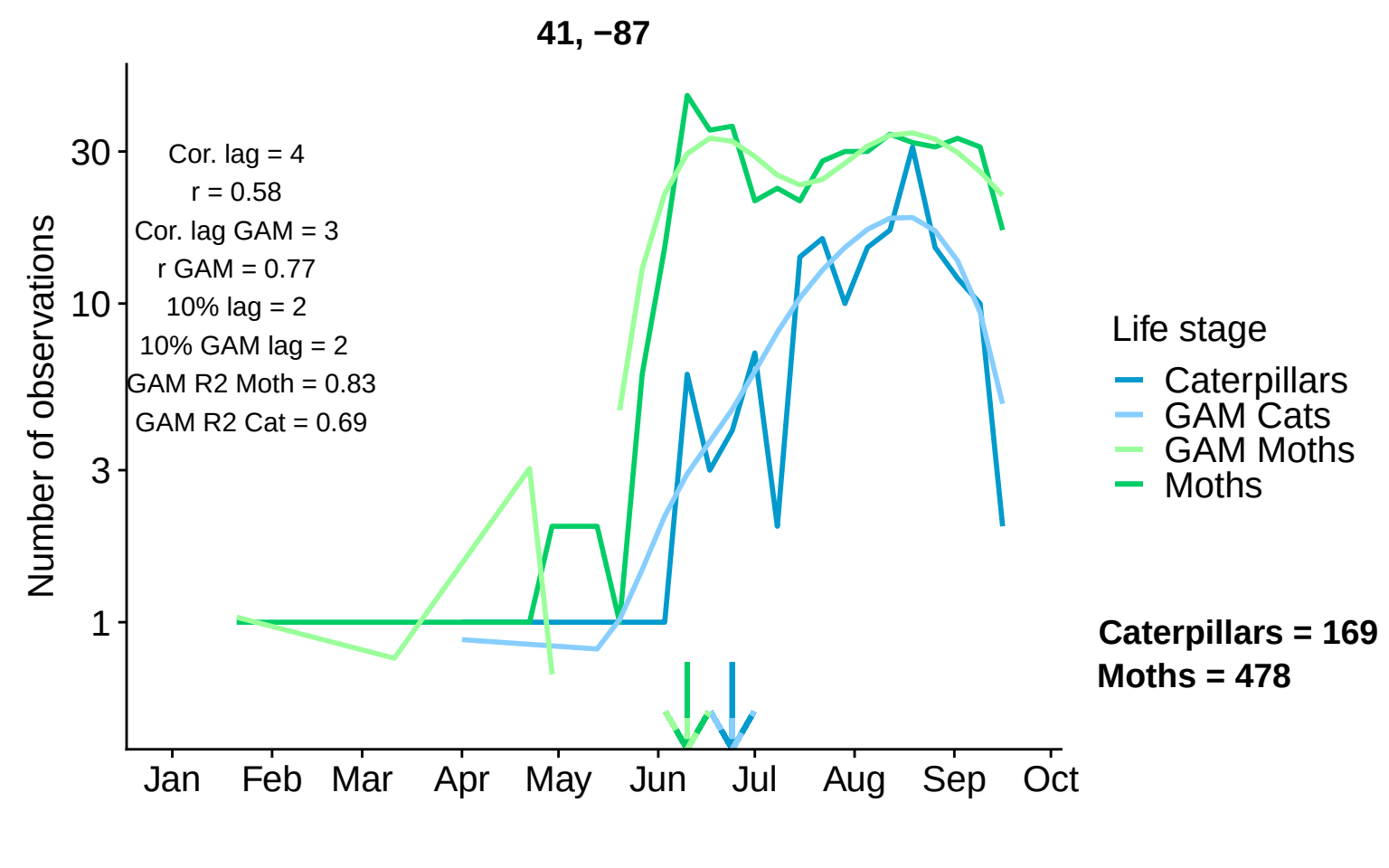

39, −83
Cor. lag = 7
r = 0.91
Cor. lag GAM = 5
r GAM = 0.92
10% lag = 6
10% GAM lag = 8
GAM R2 Moth = 0.6
GAM R2 Cat = 0.39
Number of observations
100
10
1
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Life stage
Caterpillars
GAM Cats
GAM Moths
Moths
Caterpillars = 93
Moths = 1015

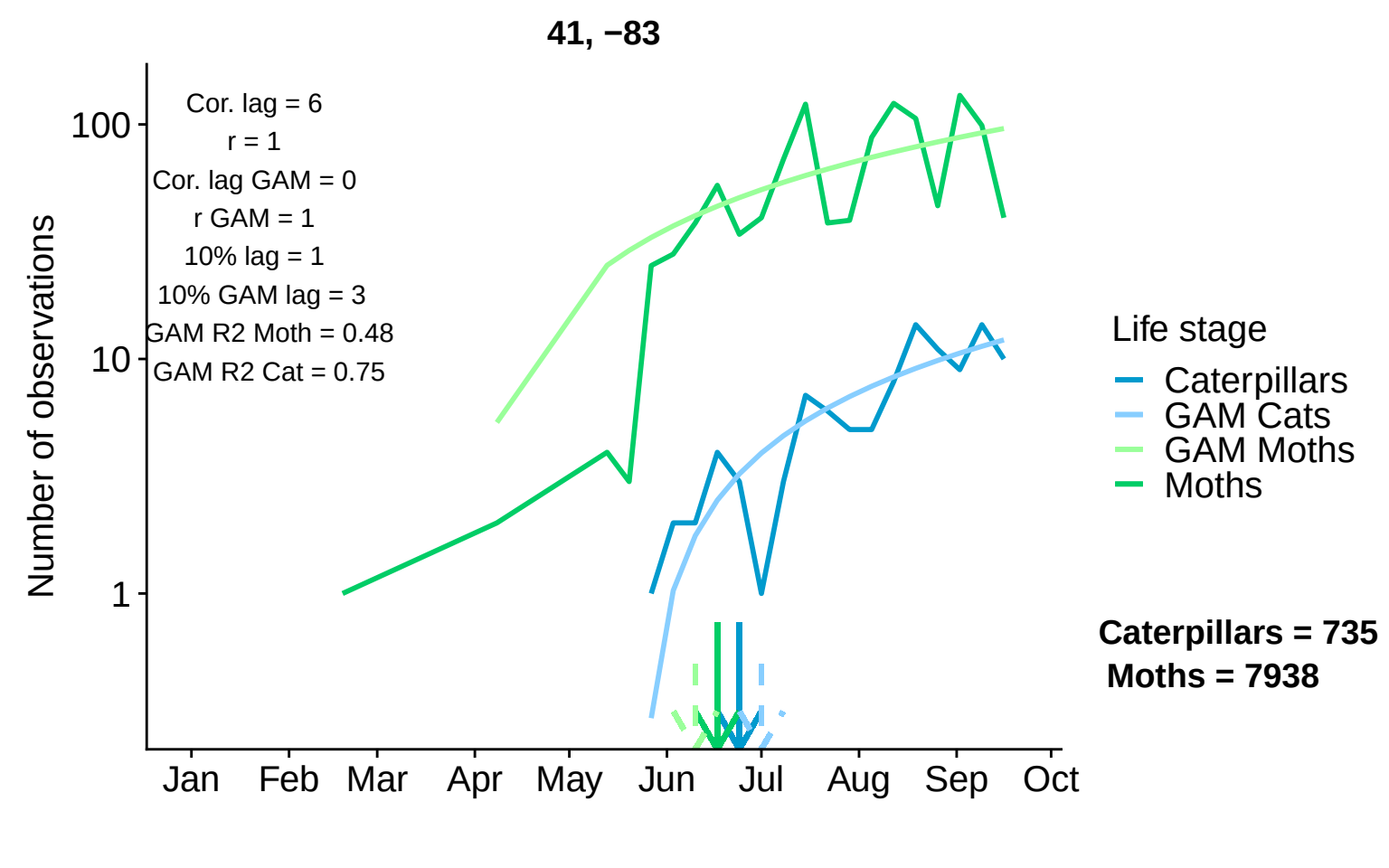

39, −79
Number of observations
100
10
1
Cor. lag = 5
r = 0.63
Cor. lag GAM = 7
r GAM = 1
10% lag = 6
10% GAM lag = 10
GAM R2 Moth = 0.18
GAM R2 Cat = 0.32
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Life stage
Caterpillars
GAM Cats
GAM Moths
Moths
Caterpillars = 52
Moths = 732

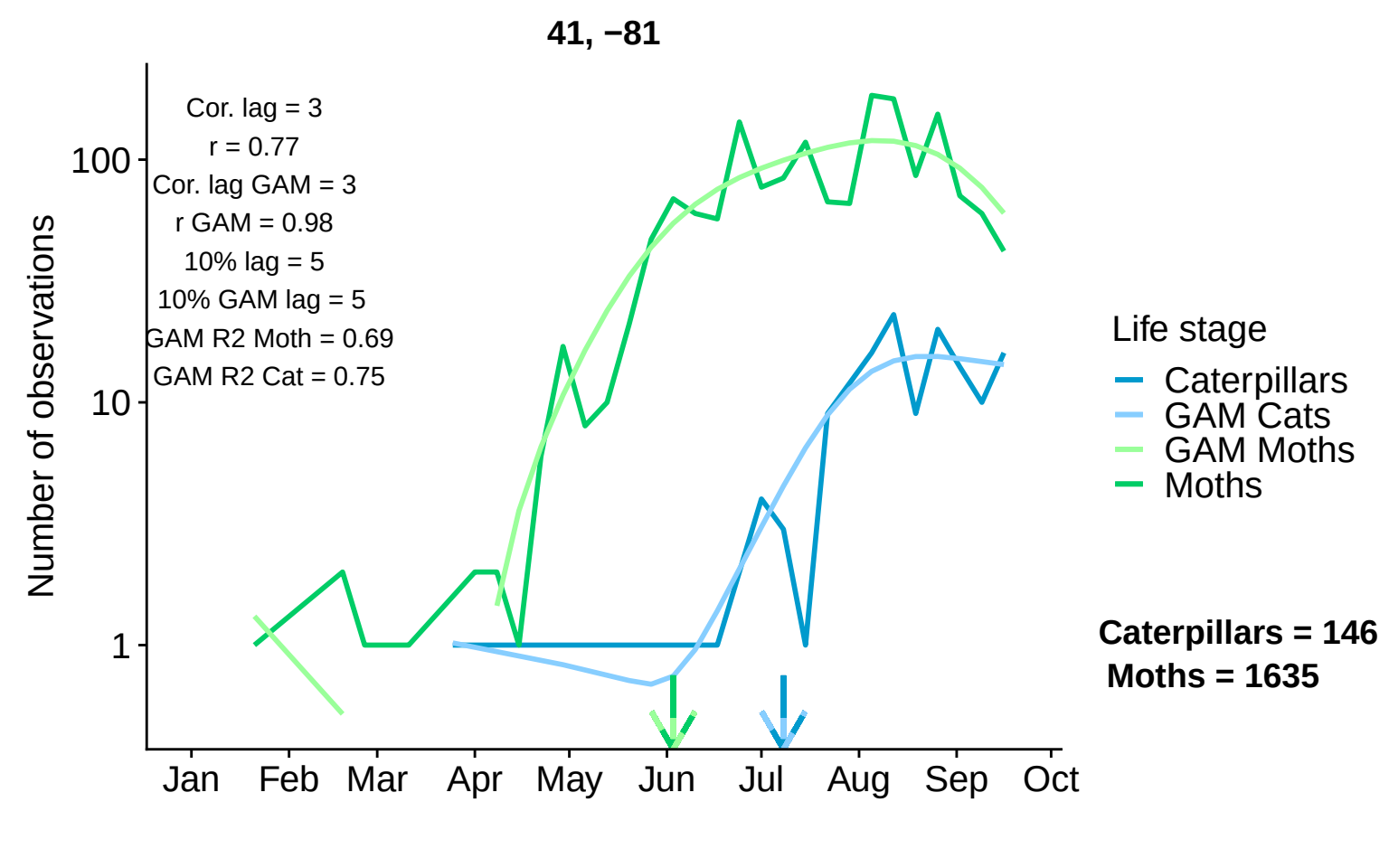

39, −77
Cor. lag = 5
r = 0.67
Cor. lag GAM = 5
r GAM = 0.92
10% lag = 5
10% GAM lag = 6
GAM R2 Moth = 0.72
GAM R2 Cat = 0.94
Number of observations
100
10
1
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Life stage
Caterpillars
GAM Cats
GAM Moths
Moths
Caterpillars = 347
Moths = 2804

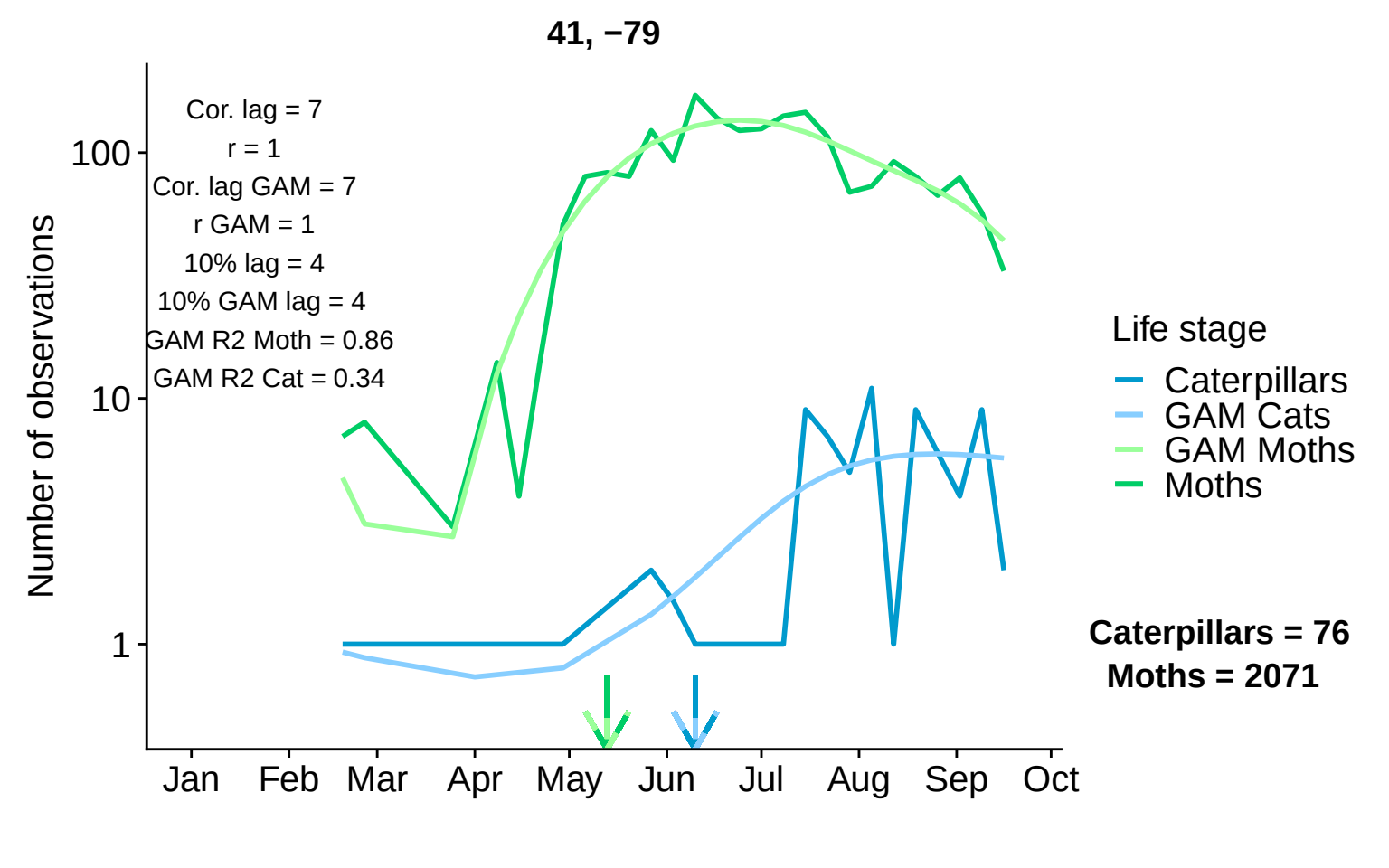

39, −75
Cor. lag = 7
r = 0.81
Cor. lag GAM = 6
r GAM = 0.95
10% lag = 1
10% GAM lag = 3
GAM R2 Moth = 0.53
GAM R2 Cat = 0.43
Number of observations
100
10
1
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Life stage
Caterpillars
GAM Cats
GAM Moths
Moths
Caterpillars = 84
Moths = 833

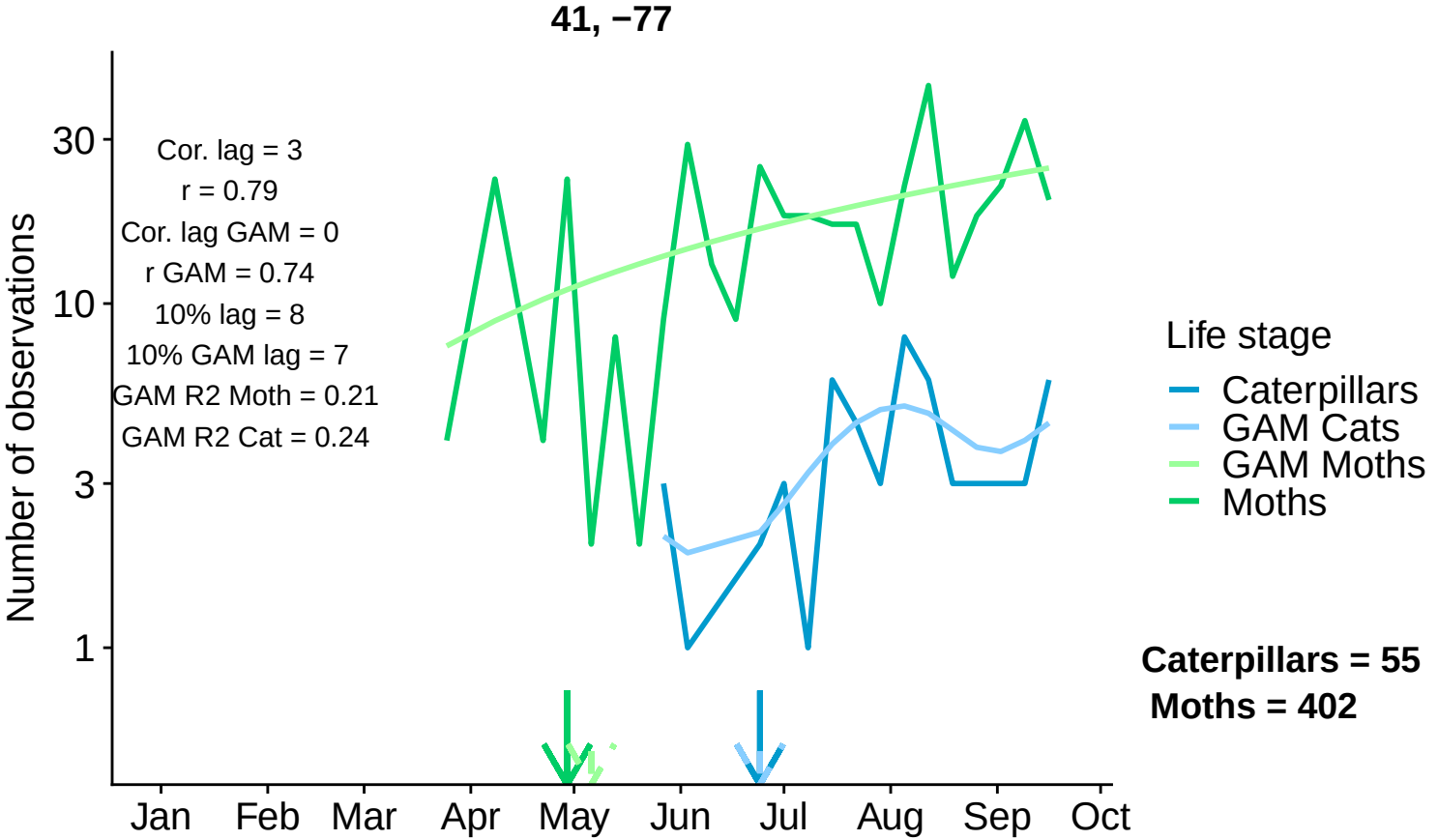

41, −89
Cor. lag = 0
r = 0.94
Cor. lag GAM = 0
r GAM = 0.54
10% lag = 2
10% GAM lag = 2
GAM R2 Moth = 0.08
GAM R2 Cat = 0.3
Number of observations
100
10
1
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Life stage
Caterpillars
GAM Cats
GAM Moths
Moths
Caterpillars = 89
Moths = 390

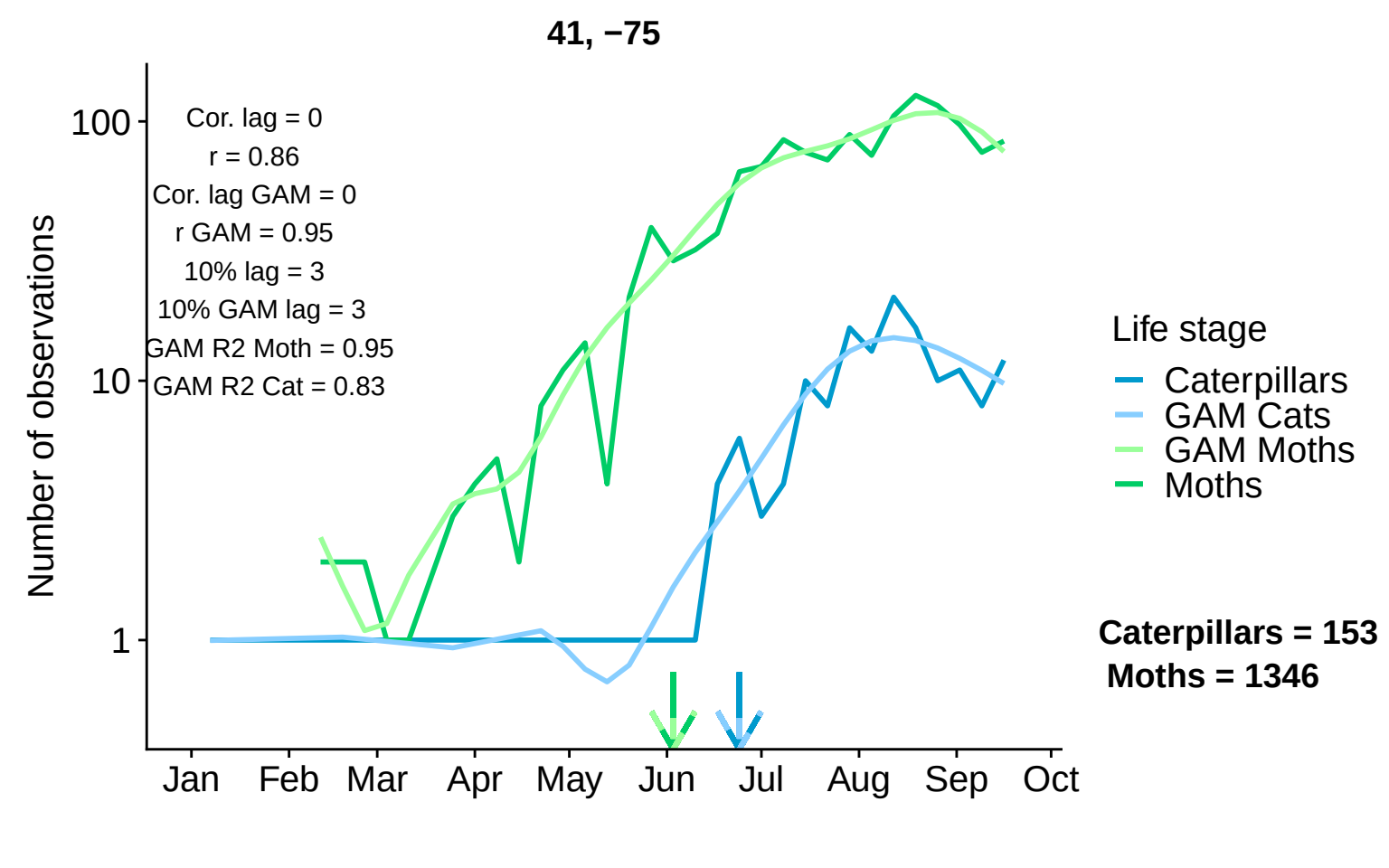

41, −87
Cor. lag = 4
r = 0.58
Cor. lag GAM = 3
r GAM = 0.77
10% lag = 2
10% GAM lag = 2
GAM R2 Moth = 0.83
GAM R2 Cat = 0.69
Number of observations
30
10
3
1
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Life stage
Caterpillars
GAM Cats
GAM Moths
Moths
Caterpillars = 169
Moths = 478

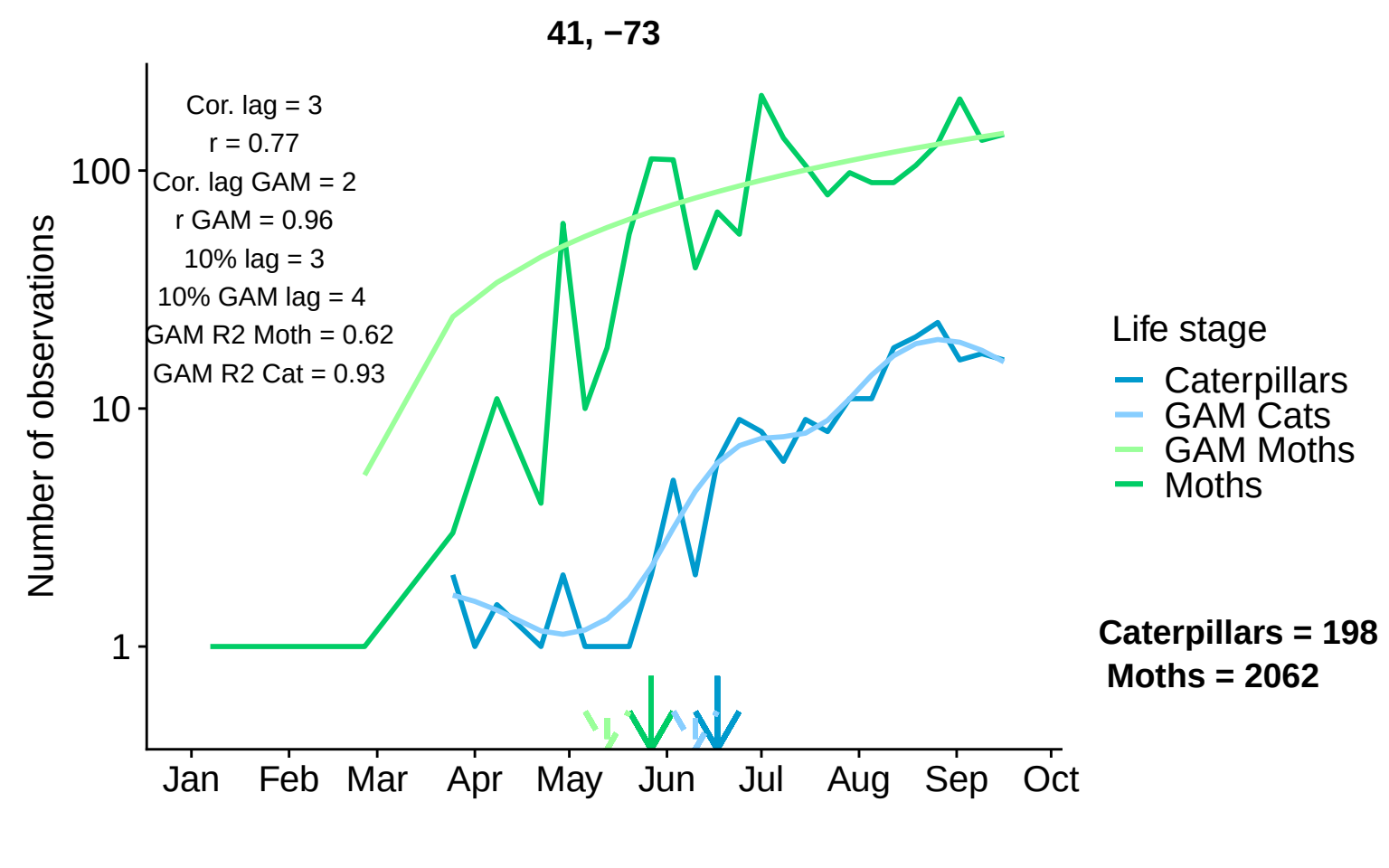

41, −83
Cor. lag = 6
r = 1
Cor. lag GAM = 0
r GAM = 1
10% lag = 1
10% GAM lag = 3
GAM R2 Moth = 0.48
GAM R2 Cat = 0.75
Number of observations
100
10
1
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Life stage
Caterpillars
GAM Cats
GAM Moths
Moths
Caterpillars = 735
Moths = 7938

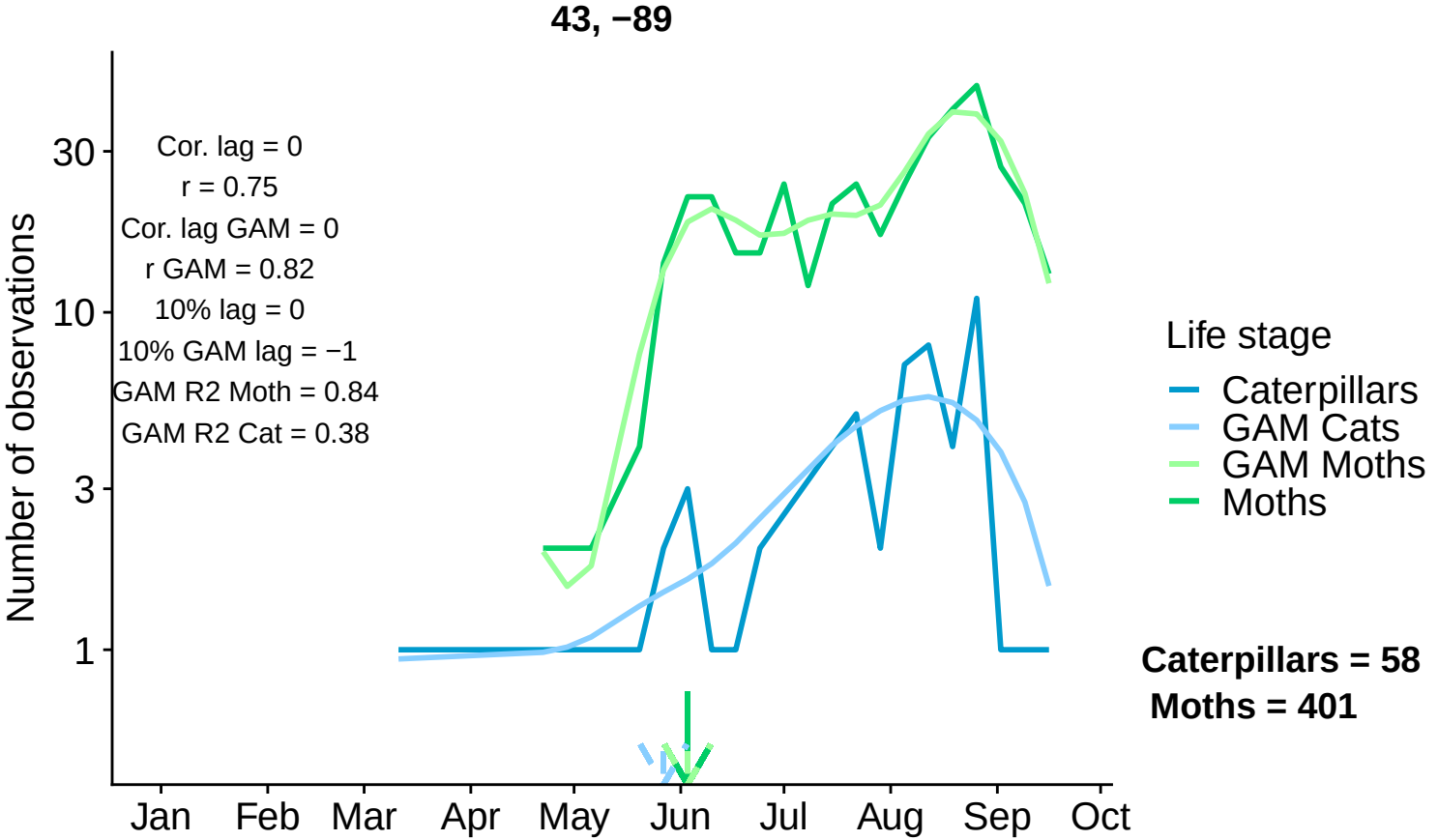

41, −81
Cor. lag = 3
r = 0.77
Cor. lag GAM = 3
r GAM = 0.98
10% lag = 5
10% GAM lag = 5
GAM R2 Moth = 0.69
GAM R2 Cat = 0.75
Number of observations
100
10
1
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Life stage
Caterpillars
GAM Cats
GAM Moths
Moths
Caterpillars = 146
Moths = 1635

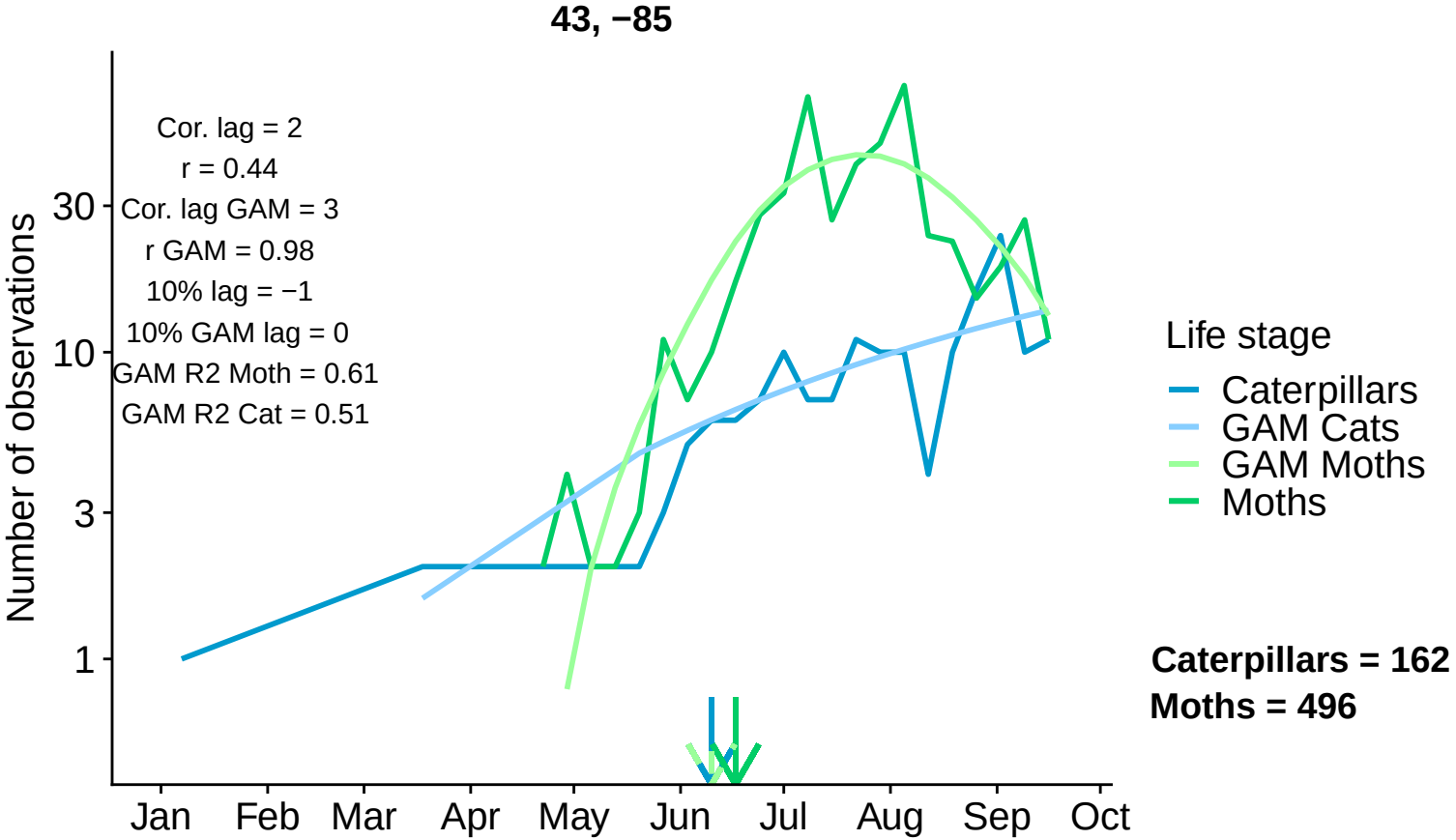

41, −79
Cor. lag = 7
r = 1
Cor. lag GAM = 7
r GAM = 1
10% lag = 4
10% GAM lag = 4
GAM R2 Moth = 0.86
GAM R2 Cat = 0.34
Number of observations
100
10
1
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Life stage
Caterpillars
GAM Cats
GAM Moths
Moths
Caterpillars = 76
Moths = 2071

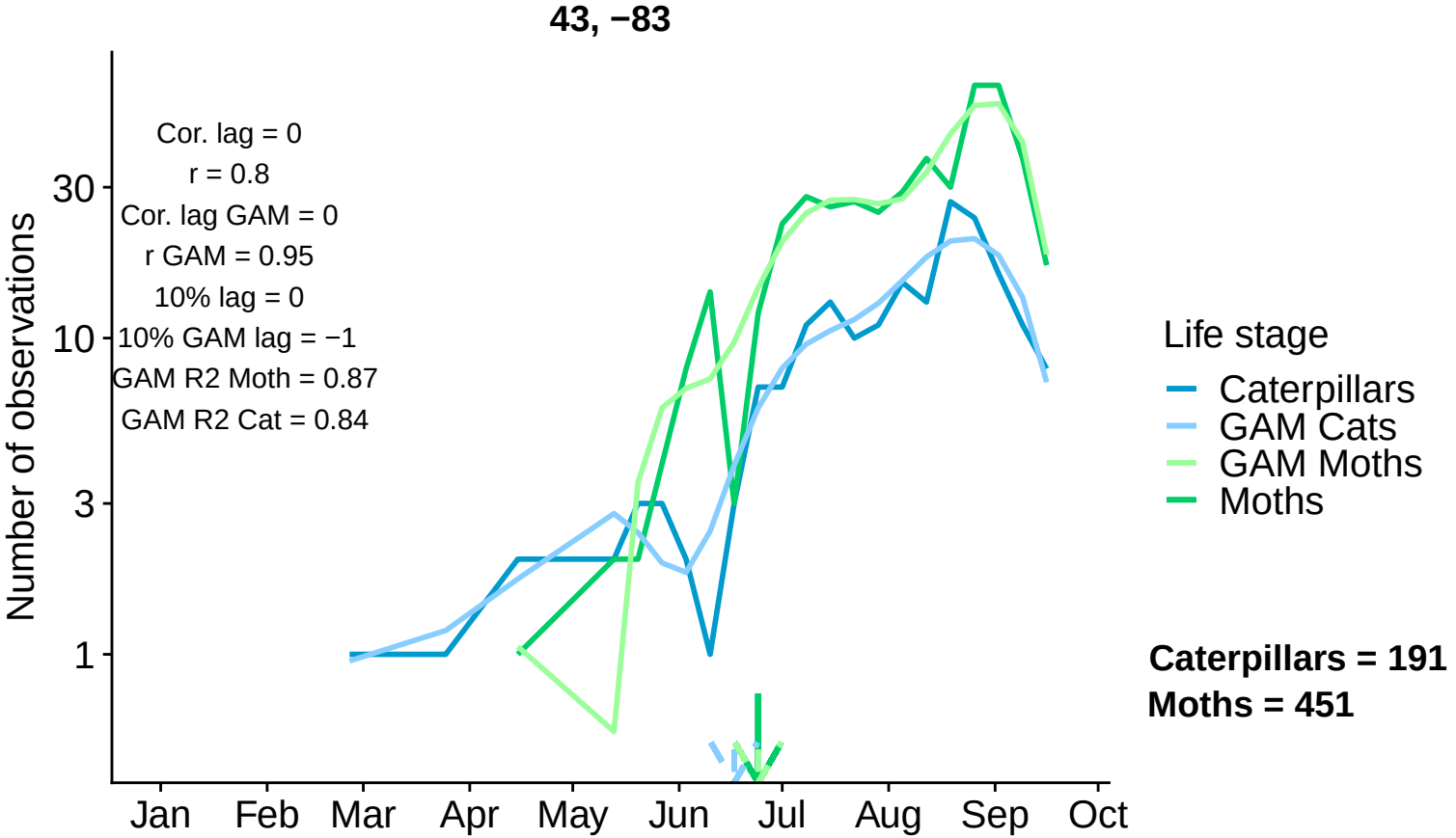

41, −77
Cor. lag = 3
r = 0.79
Cor. lag GAM = 0
r GAM = 0.74
10% lag = 8
10% GAM lag = 7
GAM R2 Moth = 0.21
GAM R2 Cat = 0.24
Number of observations
30
10
3
1
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Life stage
Caterpillars
GAM Cats
GAM Moths
Moths
Caterpillars = 55
Moths = 402

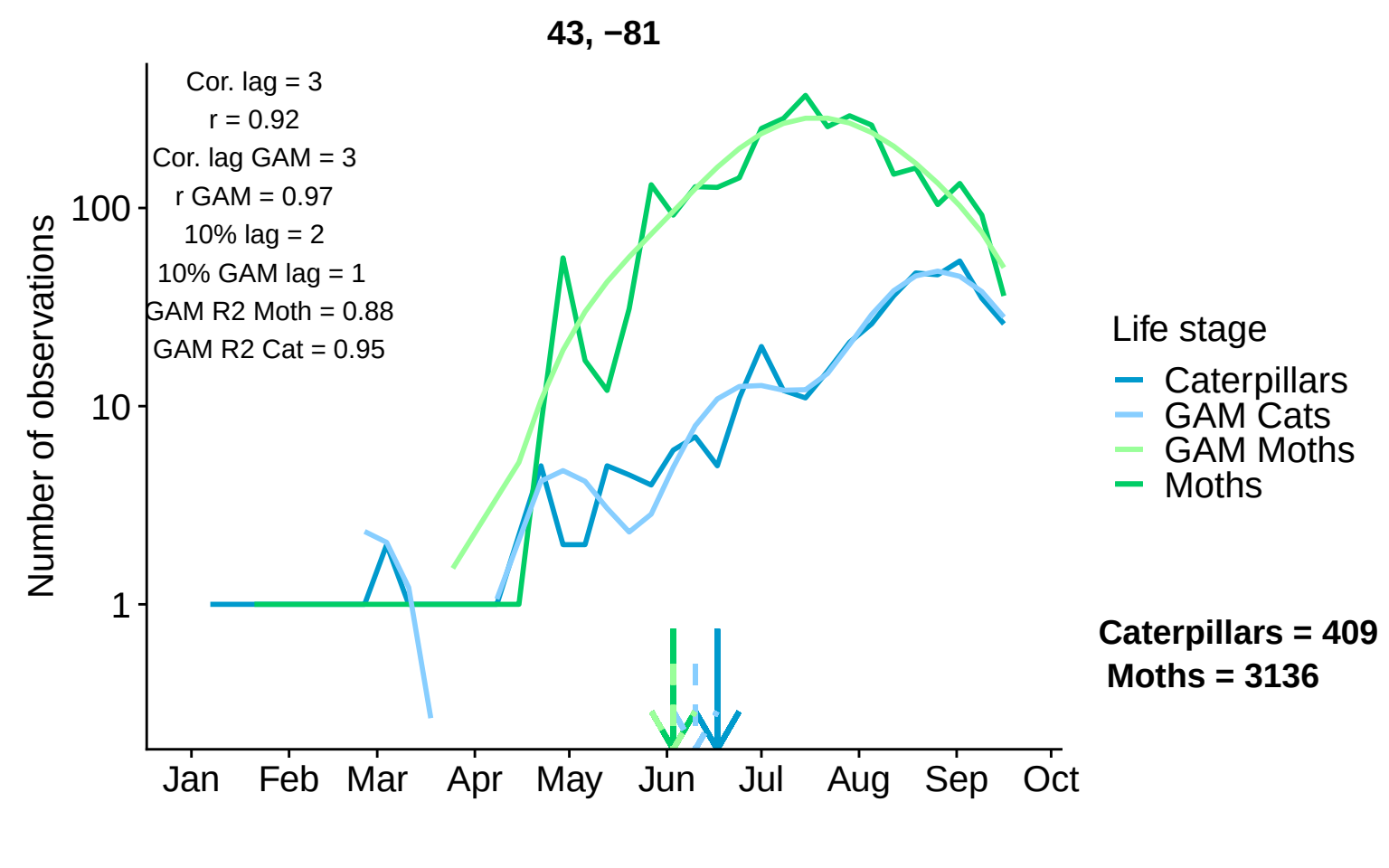

41, −75
Cor. lag = 0
r = 0.86
Cor. lag GAM = 0
r GAM = 0.95
10% lag = 3
10% GAM lag = 3
GAM R2 Moth = 0.95
GAM R2 Cat = 0.83
Number of observations
100
10
1
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Life stage
Caterpillars
GAM Cats
GAM Moths
Moths
Caterpillars = 153
Moths = 1346

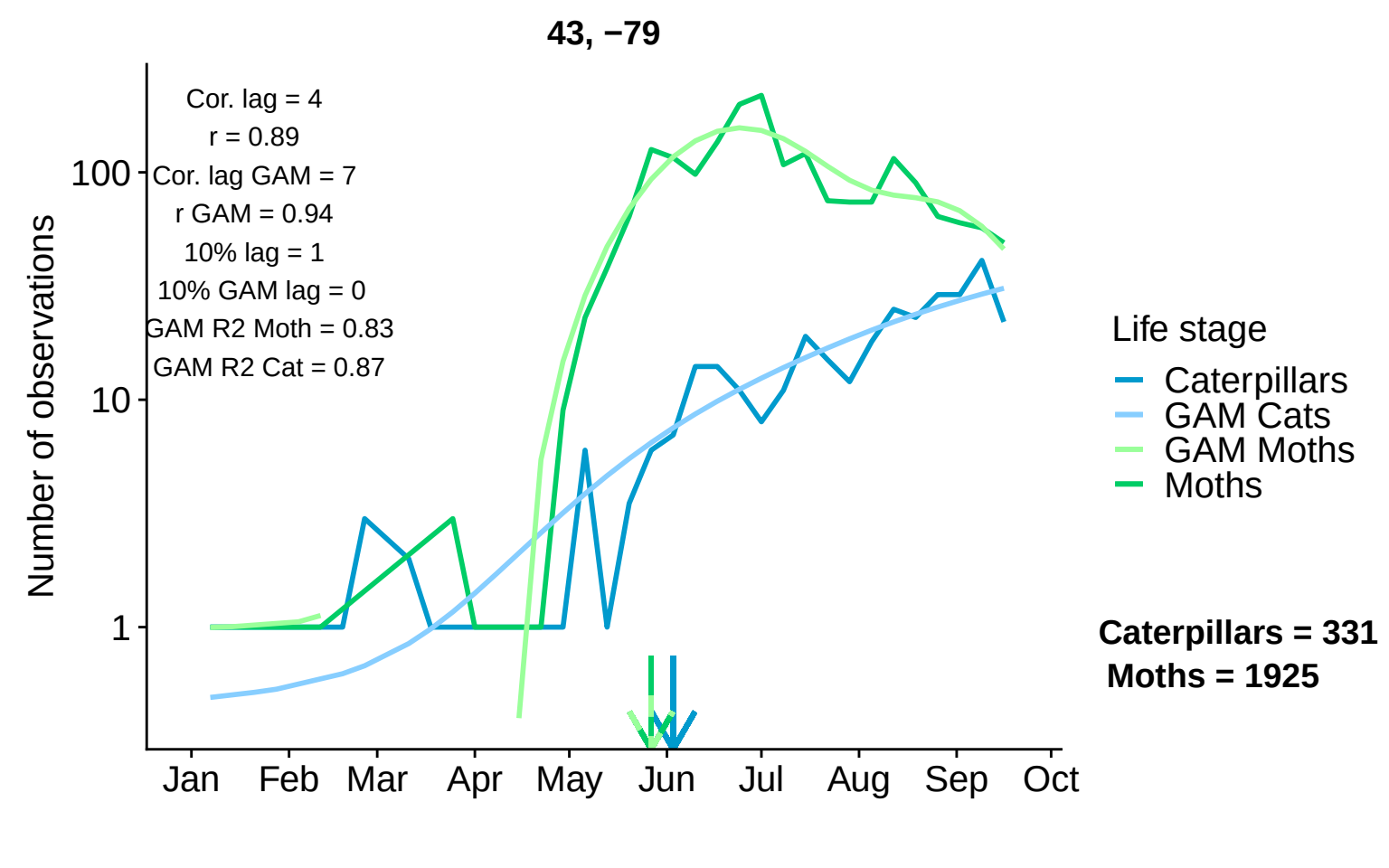

41, −73
Cor. lag = 3
r = 0.77
Cor. lag GAM = 2
r GAM = 0.96
10% lag = 3
10% GAM lag = 4
GAM R2 Moth = 0.62
GAM R2 Cat = 0.93
Number of observations
100
10
1
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Life stage
Caterpillars
GAM Cats
GAM Moths
Moths
Caterpillars = 198
Moths = 2062

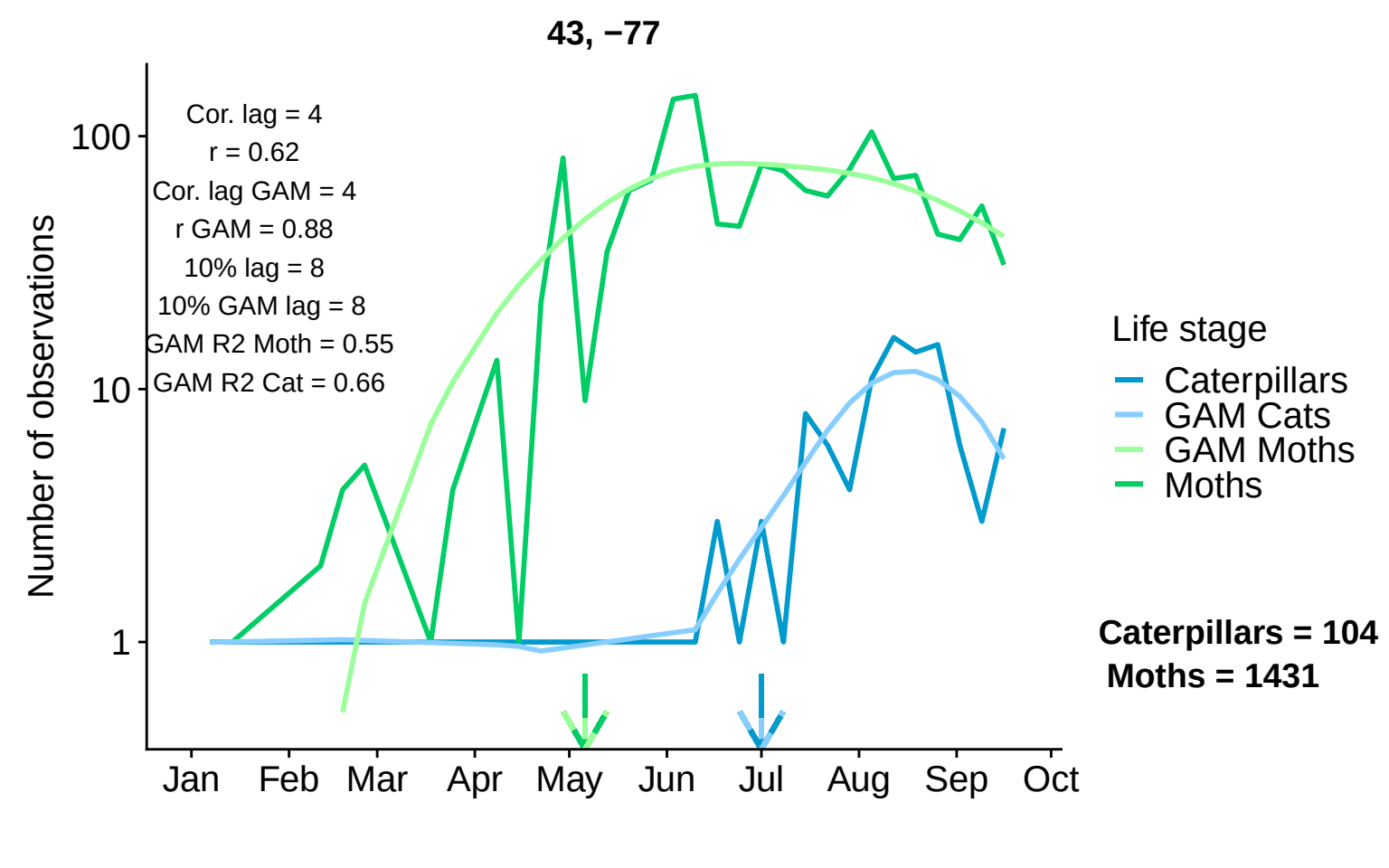

43, −89
Cor. lag = 0
r = 0.75
Cor. lag GAM = 0
r GAM = 0.82
10% lag = 0
10% GAM lag = −1
GAM R2 Moth = 0.84
GAM R2 Cat = 0.38
Number of observations
30
10
3
1
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Life stage
Caterpillars
GAM Cats
GAM Moths
Moths
Caterpillars = 58
Moths = 401

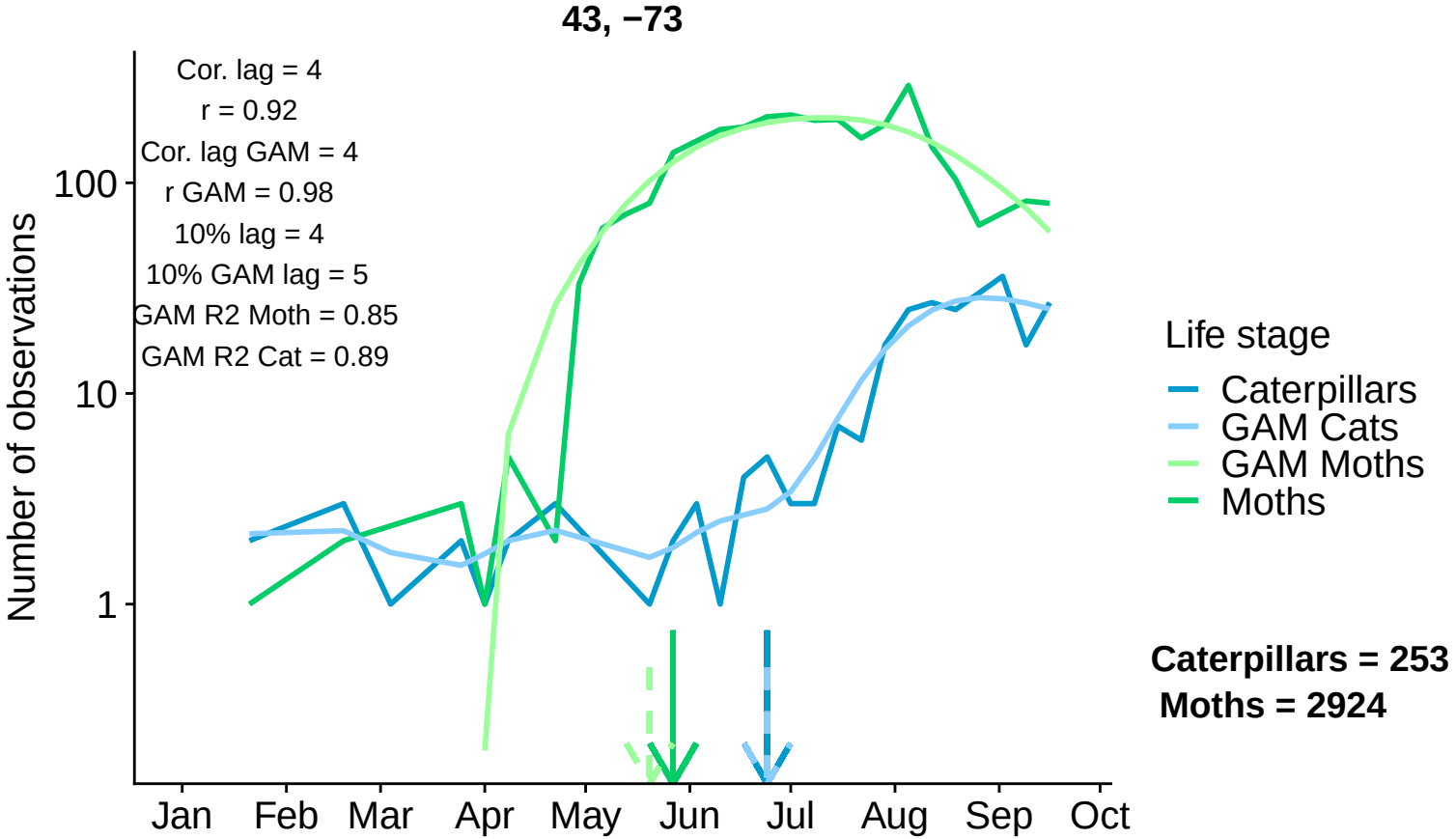

43, −85
Cor. lag = 2
r = 0.44
Cor. lag GAM = 3
r GAM = 0.98
10% lag = −1
10% GAM lag = 0
GAM R2 Moth = 0.61
GAM R2 Cat = 0.51
Number of observations
30
10
3
1
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Life stage
Caterpillars
GAM Cats
GAM Moths
Moths
Caterpillars = 162
Moths = 496

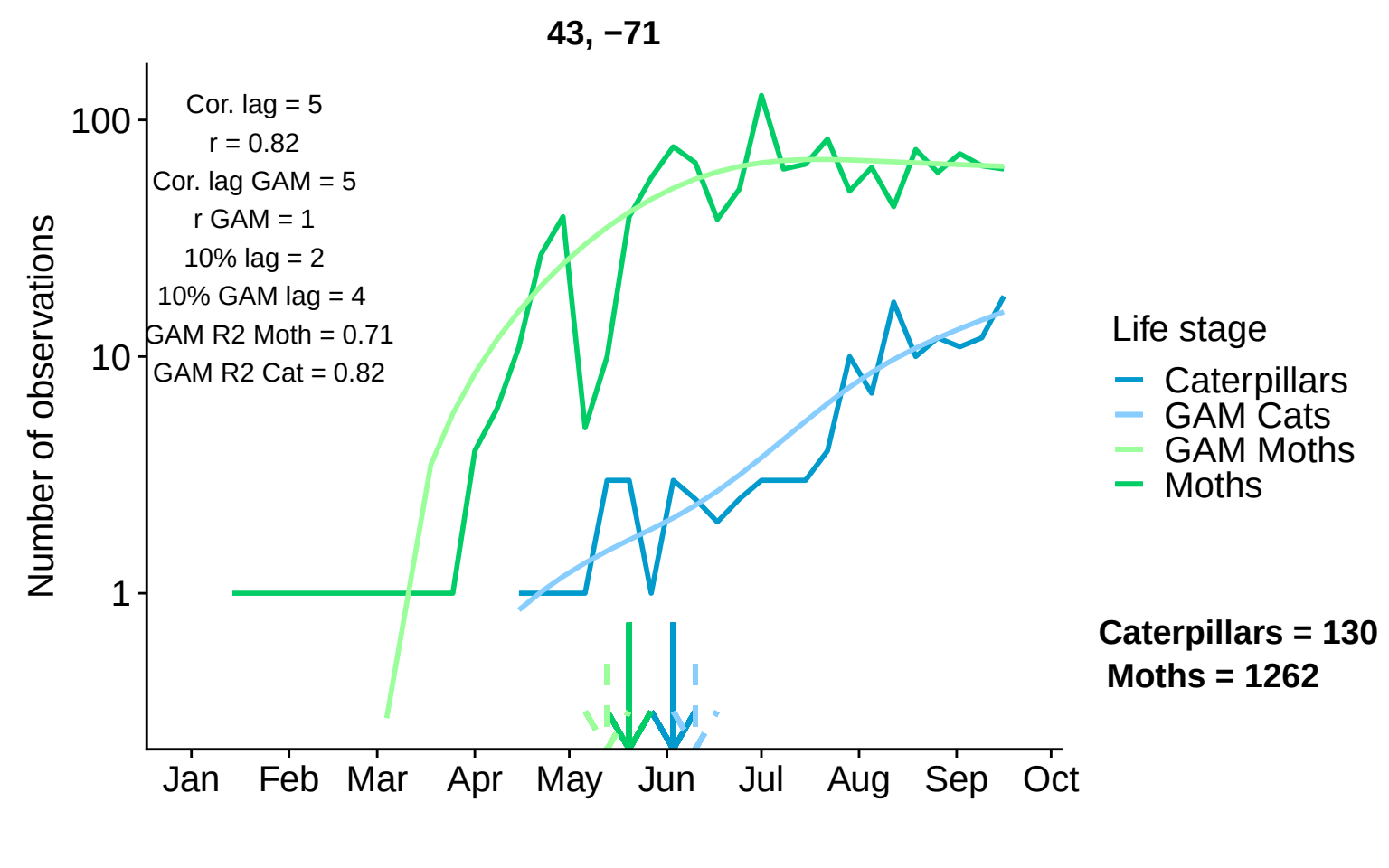

43, −83
Cor. lag = 0
r = 0.8
Cor. lag GAM = 0
r GAM = 0.95
10% lag = 0
10% GAM lag = −1
GAM R2 Moth = 0.87
GAM R2 Cat = 0.84
Number of observations
30
10
3
1
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Life stage
Caterpillars
GAM Cats
GAM Moths
Moths
Caterpillars = 191
Moths = 451

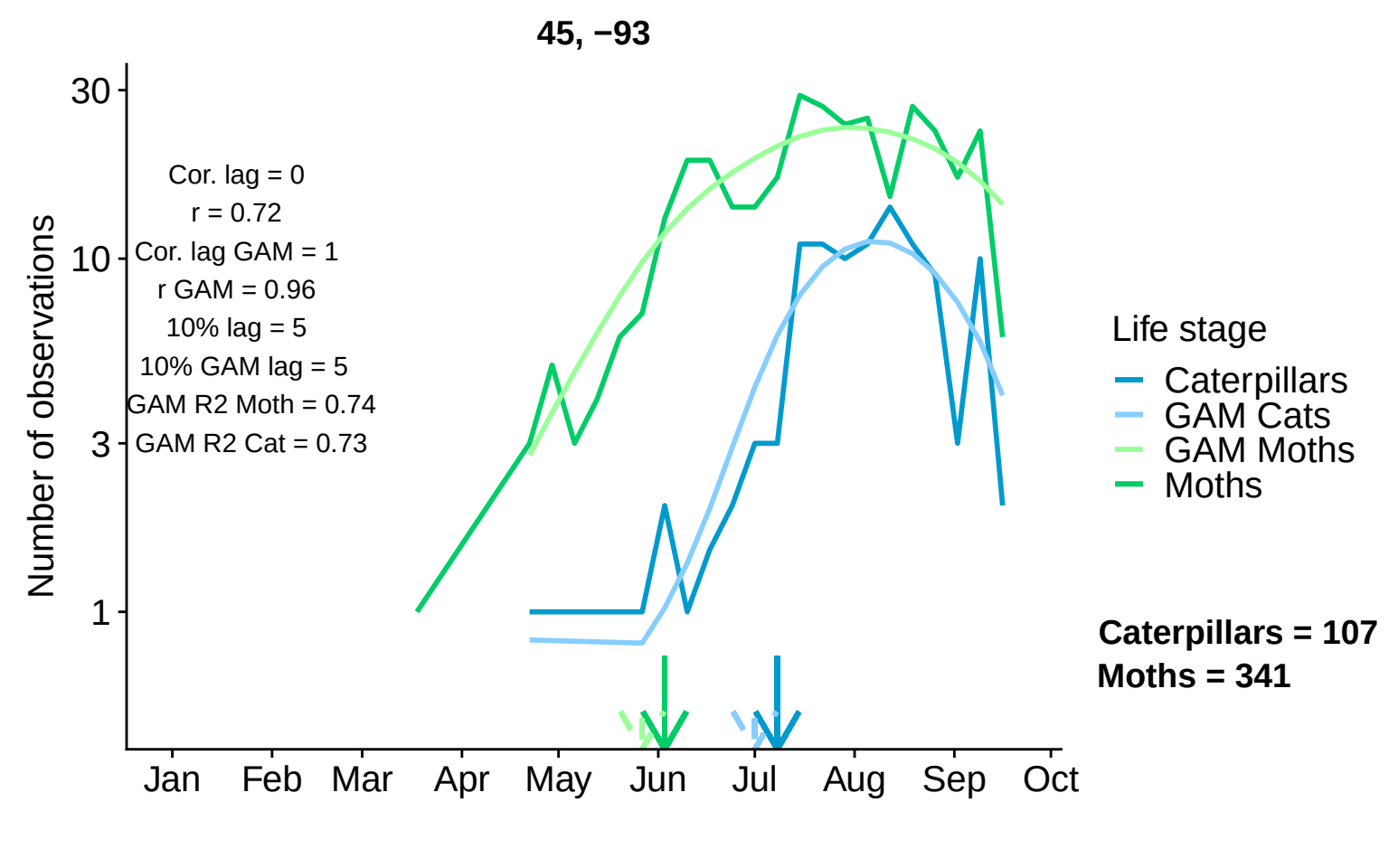

43, −81
Cor. lag = 3
r = 0.92
Cor. lag GAM = 3
r GAM = 0.97
10% lag = 2
10% GAM lag = 1
GAM R2 Moth = 0.88
GAM R2 Cat = 0.95
Number of observations
100
10
1
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Life stage
Caterpillars
GAM Cats
GAM Moths
Moths
Caterpillars = 409
Moths = 3136

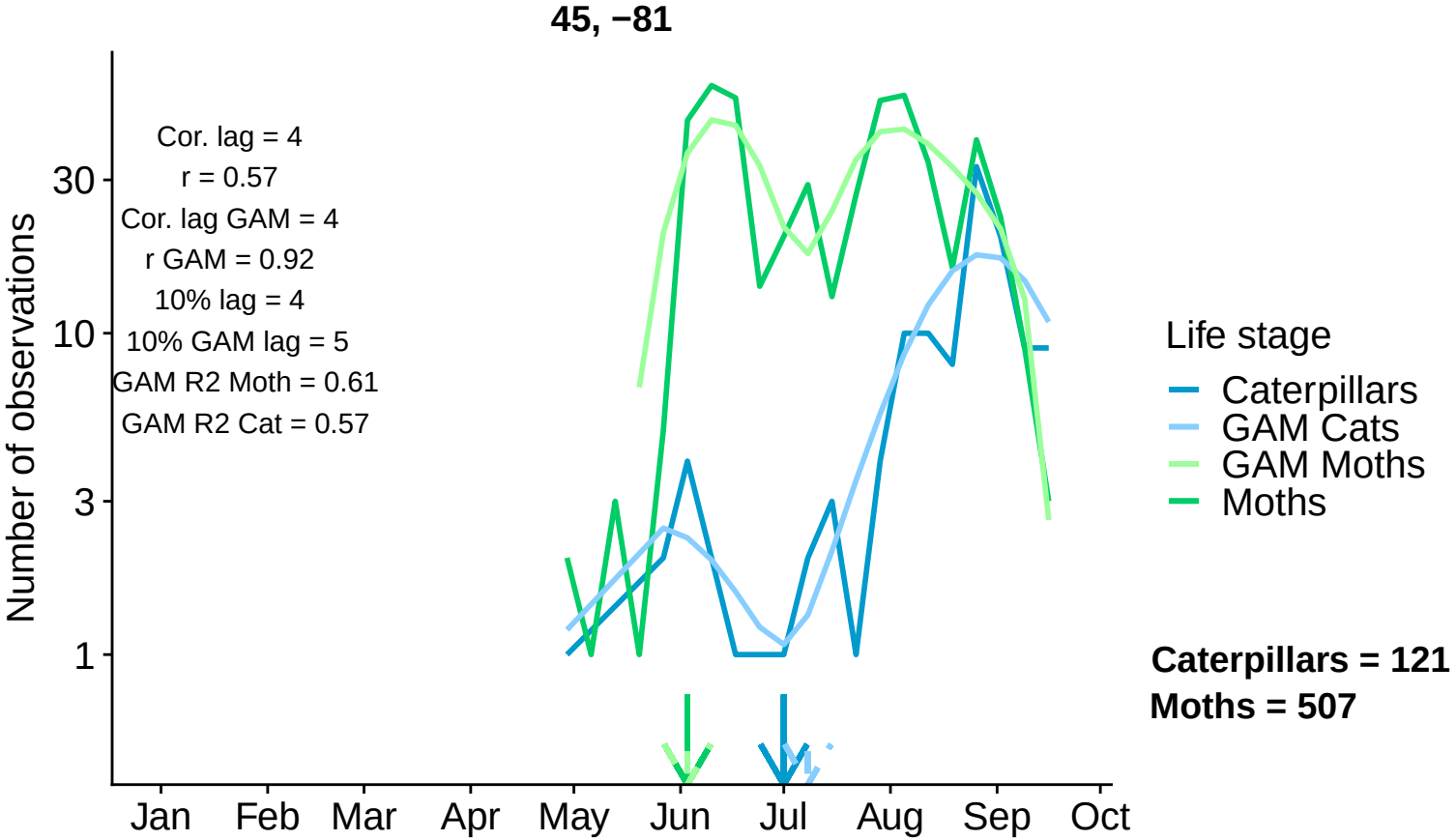

43, −79
Cor. lag = 4
r = 0.89
Cor. lag GAM = 7
r GAM = 0.94
10% lag = 1
10% GAM lag = 0
GAM R2 Moth = 0.83
GAM R2 Cat = 0.87
Number of observations
100
10
1
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Life stage
Caterpillars
GAM Cats
GAM Moths
Moths
Caterpillars = 331
Moths = 1925

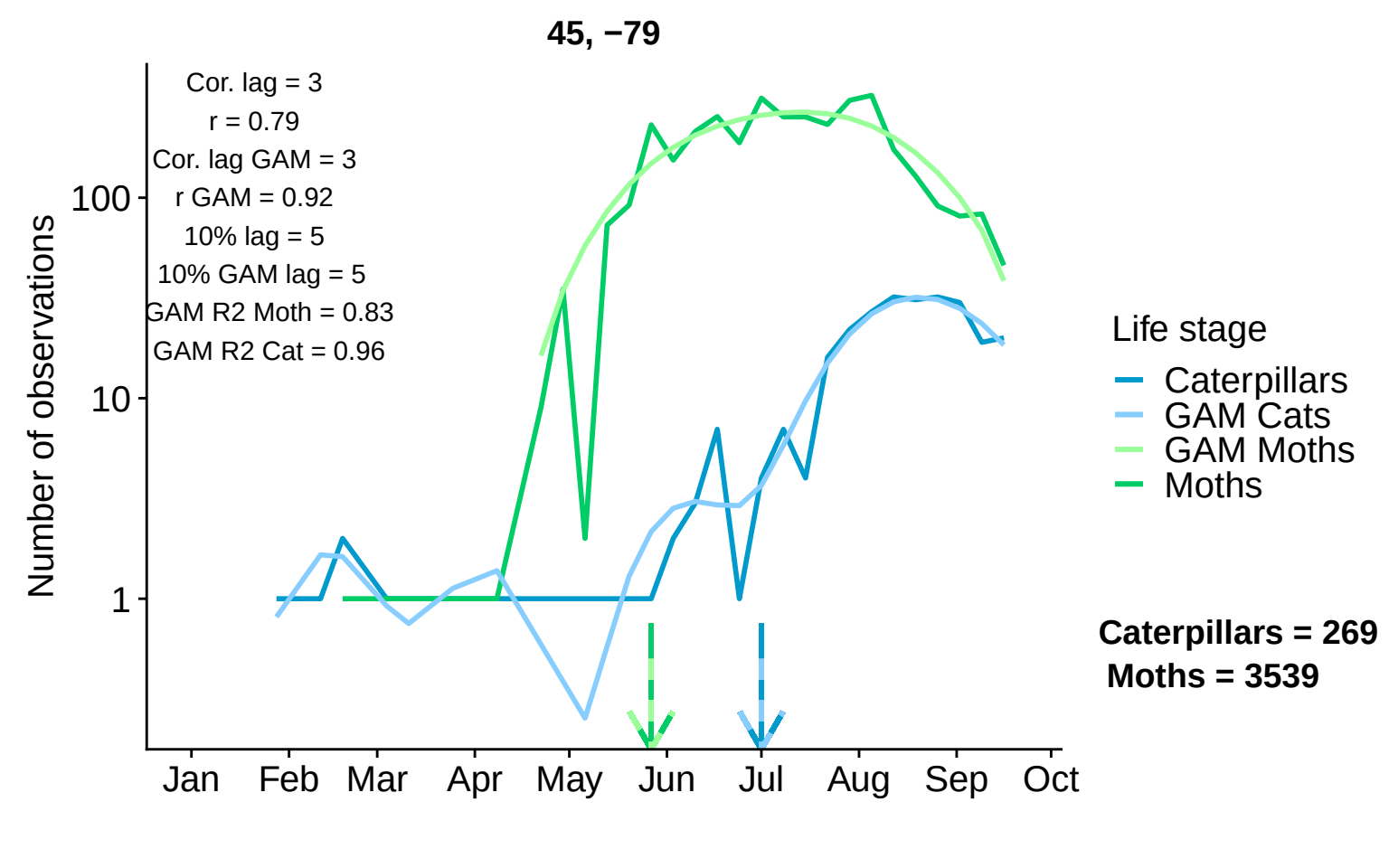

43, −77
Cor. lag = 4
r = 0.62
Cor. lag GAM = 4
r GAM = 0.88
10% lag = 8
10% GAM lag = 8
GAM R2 Moth = 0.55
GAM R2 Cat = 0.66
Number of observations
100
10
1
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Life stage
Caterpillars
GAM Cats
GAM Moths
Moths
Caterpillars = 104
Moths = 1431

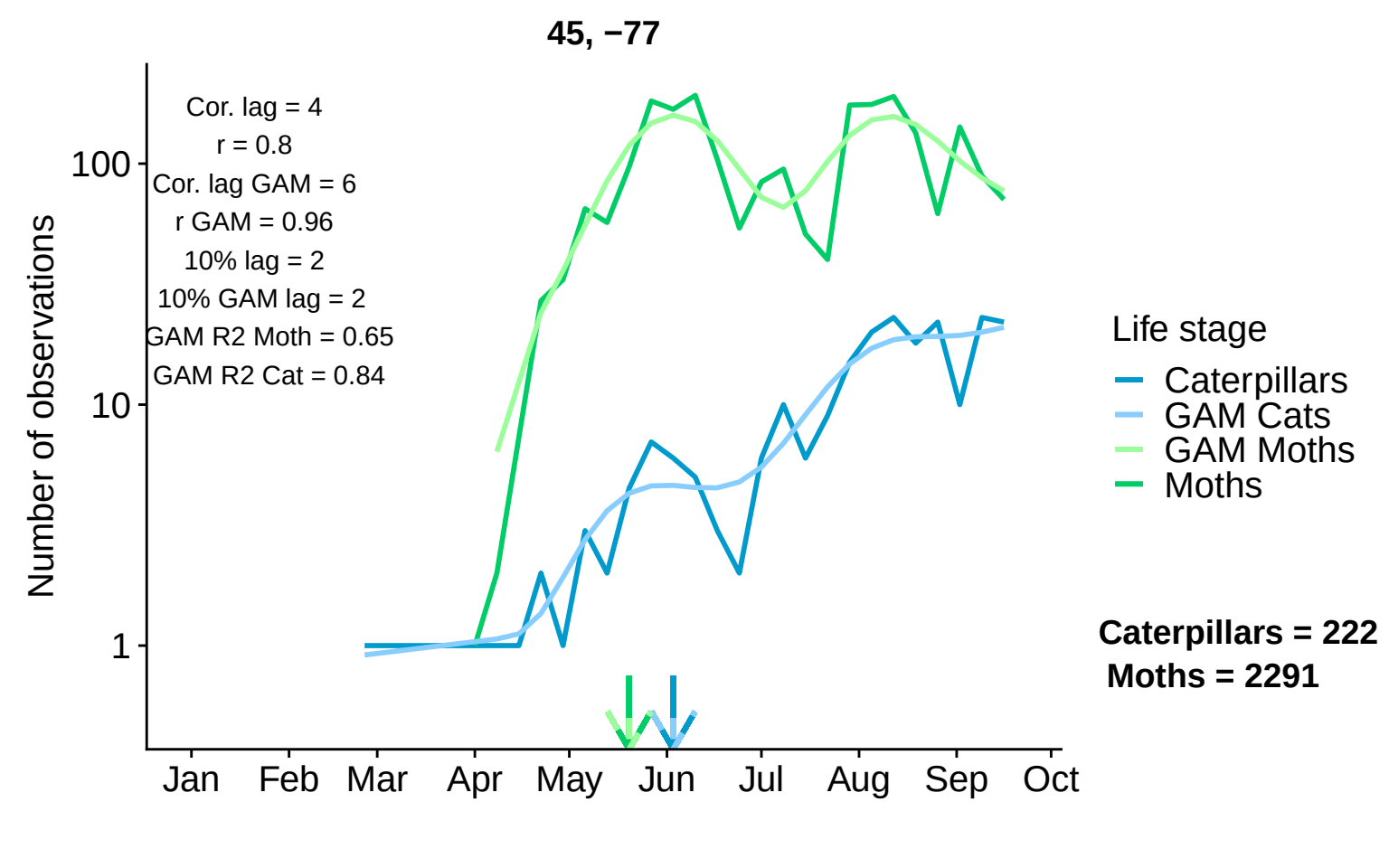

43, −73
Cor. lag = 4
r = 0.92
Cor. lag GAM = 4
r GAM = 0.98
10% lag = 4
10% GAM lag = 5
GAM R2 Moth = 0.85
GAM R2 Cat = 0.89
Number of observations
100
10
1
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Life stage
Caterpillars
GAM Cats
GAM Moths
Moths
Caterpillars = 253
Moths = 2924

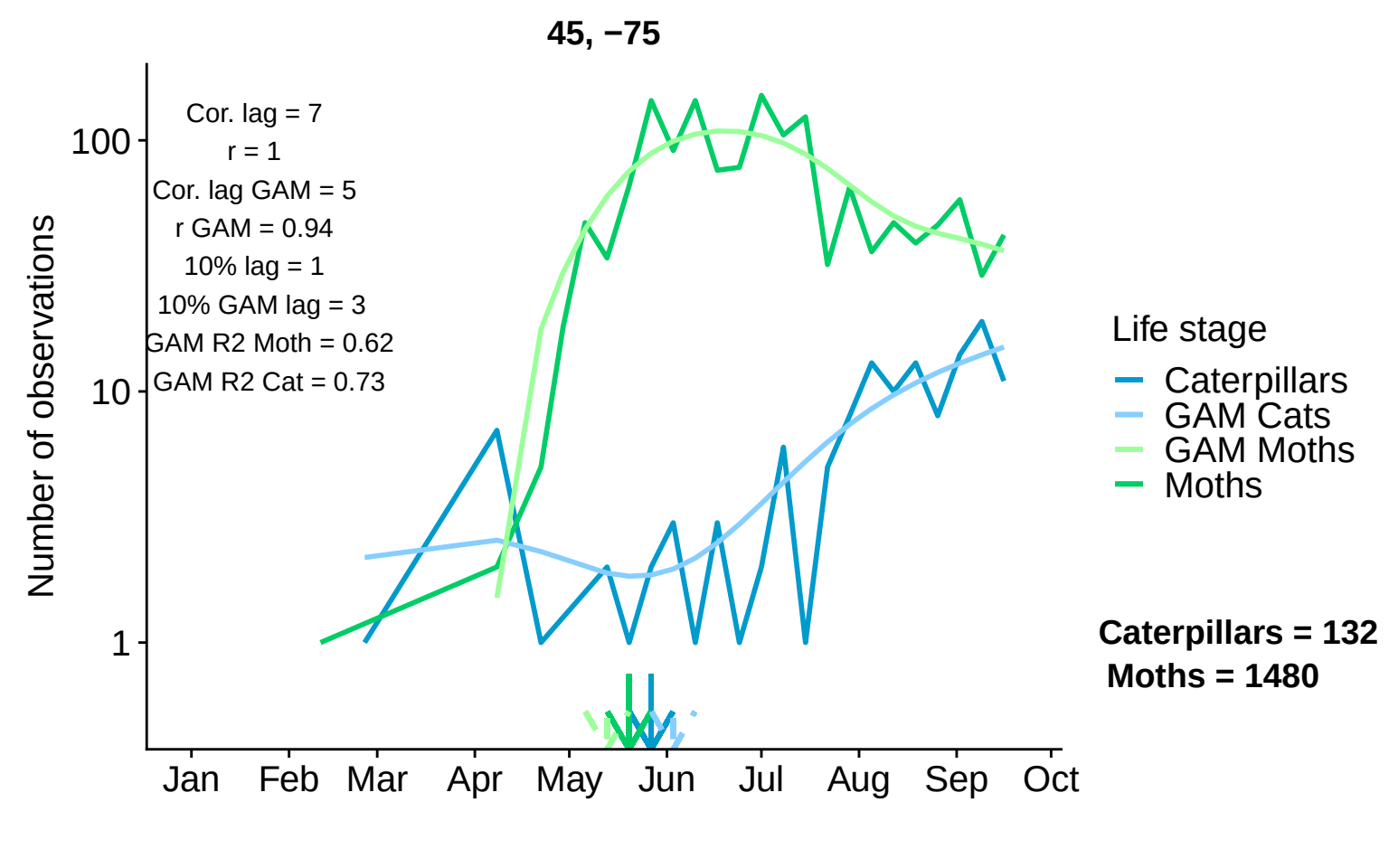

43, −71
Cor. lag = 5
r = 0.82
Cor. lag GAM = 5
r GAM = 1
10% lag = 2
10% GAM lag = 4
GAM R2 Moth = 0.71
GAM R2 Cat = 0.82
Number of observations
100
10
1
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Life stage
Caterpillars
GAM Cats
GAM Moths
Moths
Caterpillars = 130
Moths = 1262

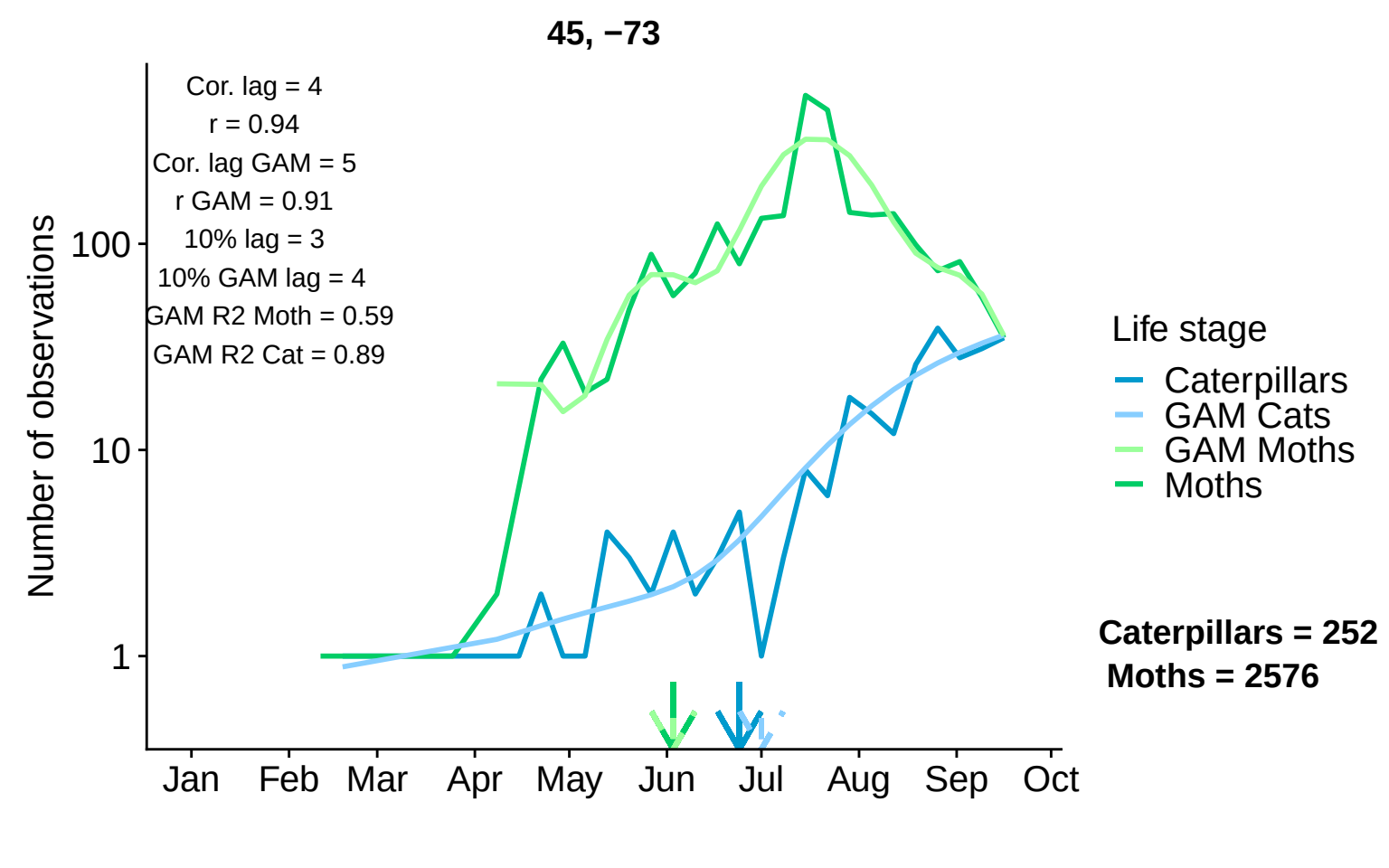

45, −93
Number of observations
30
10
3
1
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Cor. lag = 0
r = 0.72
Cor. lag GAM = 1
r GAM = 0.96
10% lag = 5
10% GAM lag = 5
GAM R2 Moth = 0.74
GAM R2 Cat = 0.73
Life stage
Caterpillars
GAM Cats
GAM Moths
Moths
Caterpillars = 107
Moths = 341


45, −81
Cor. lag = 4
r = 0.57
Cor. lag GAM = 4
r GAM = 0.92
10% lag = 4
10% GAM lag = 5
GAM R2 Moth = 0.61
GAM R2 Cat = 0.57
Number of observations
30
10
3
1
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Life stage
Caterpillars
GAM Cats
GAM Moths
Moths
Caterpillars = 121
Moths = 507


45, −79
Cor. lag = 3
r = 0.79
Cor. lag GAM = 3
r GAM = 0.92
10% lag = 5
10% GAM lag = 5
GAM R2 Moth = 0.83
GAM R2 Cat = 0.96
Number of observations
100
10
1
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Life stage
Caterpillars
GAM Cats
GAM Moths
Moths
Caterpillars = 269
Moths = 3539


45, −77
Cor. lag = 4
r = 0.8
Cor. lag GAM = 6
r GAM = 0.96
10% lag = 2
10% GAM lag = 2
GAM R2 Moth = 0.65
GAM R2 Cat = 0.84
Number of observations
100
10
1
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Life stage
Caterpillars
GAM Cats
GAM Moths
Moths
Caterpillars = 222
Moths = 2291


45, −75
Cor. lag = 7
r = 1
Cor. lag GAM = 5
r GAM = 0.94
10% lag = 1
10% GAM lag = 3
GAM R2 Moth = 0.62
GAM R2 Cat = 0.73
Number of observations
100
10
1
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Life stage
Caterpillars
GAM Cats
GAM Moths
Moths
Caterpillars = 132
Moths = 1480


45, −73
Cor. lag = 4
r = 0.94
Cor. lag GAM = 5
r GAM = 0.91
10% lag = 3
10% GAM lag = 4
GAM R2 Moth = 0.59
GAM R2 Cat = 0.89
Number of observations
100
10
1
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Life stage
Caterpillars
GAM Cats
GAM Moths
Moths
Caterpillars = 252
Moths = 2576