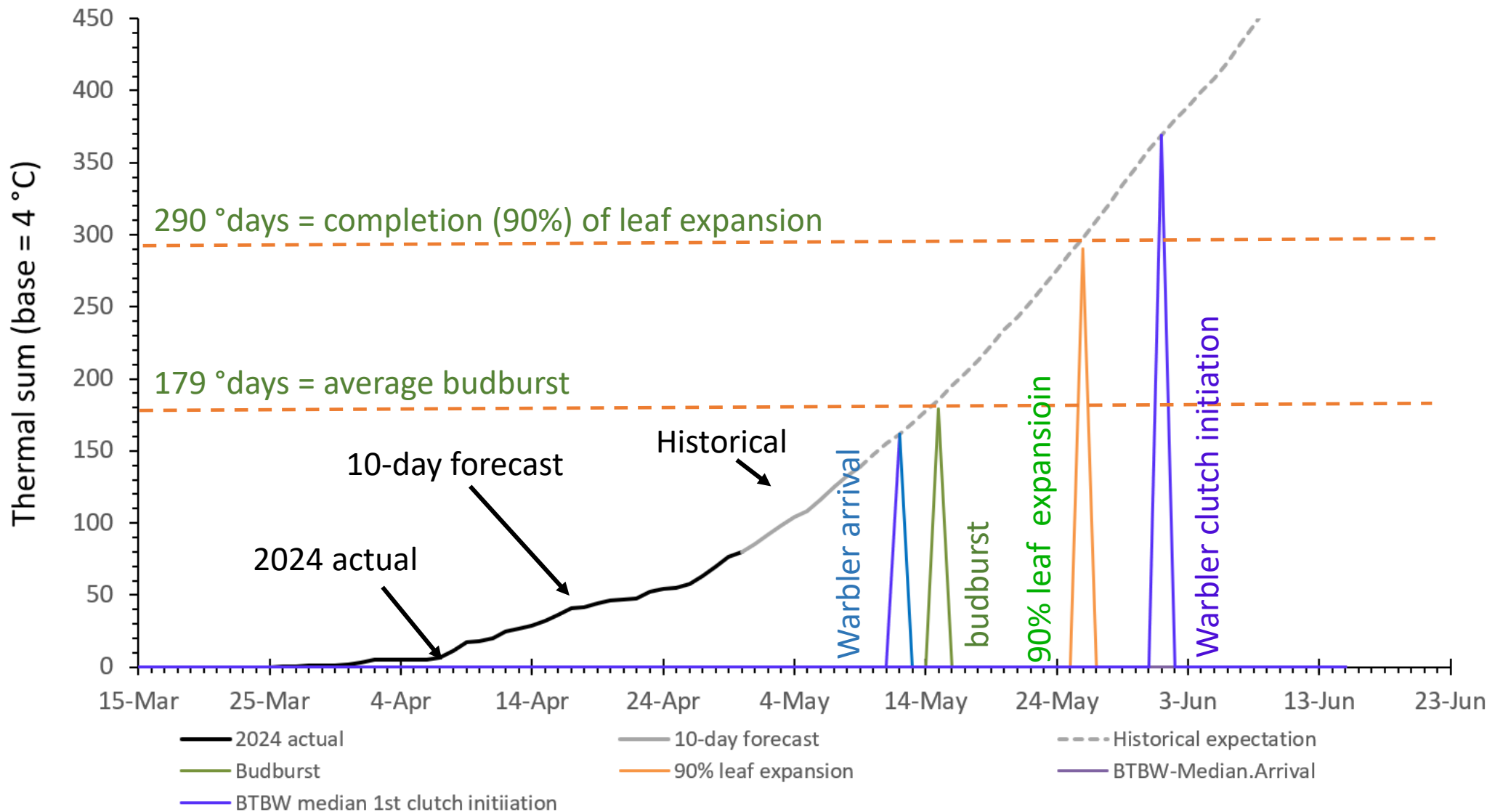


Estimated leaf-out phenology for mid-elevation Bird Plot in 2024 based on thermal sums.

As of 1 May, 2024, predicted dates for budburst and 90% completion of leaf expansion are:  
15 May and 26 May.

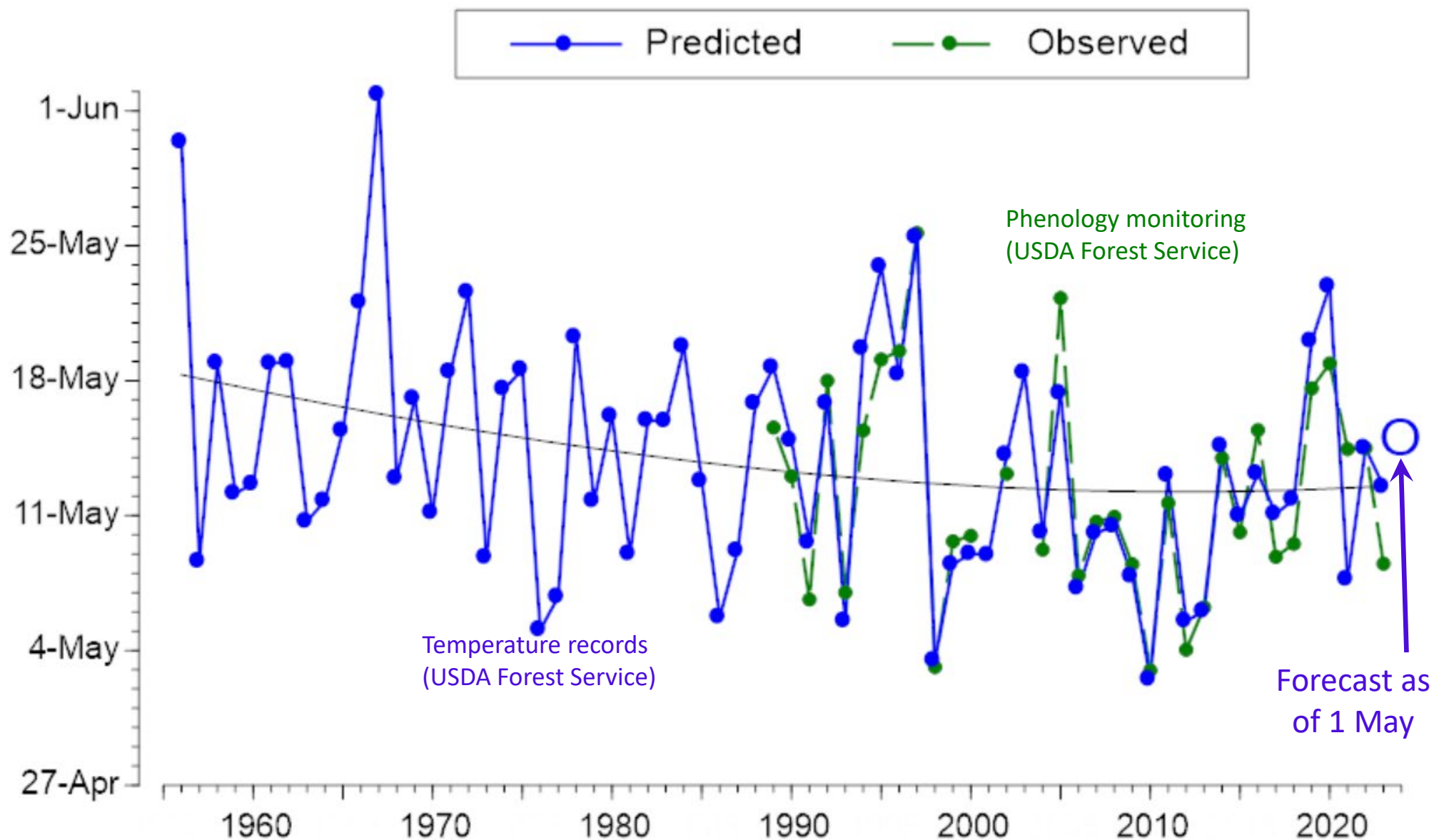
Predicted median dates of arrival and 1<sup>st</sup> clutch initiation by Black-throated Blue Warblers are:  
12 May and 1 June.



Real-time temperature records from USDA Forest Service station at Watershed 1.

Phenological models adapted from Lany et al. 2016 using long term data of USDA Forest Service.

Date of bud-burst in beech, birch, and maple



[As of 1 May 2024](#), the forecast date of leafout is 15 May for mid-elevation bird plots at Hubbard Brook.

Phenology measurements by Northern Research Station, USDA Forest Service.

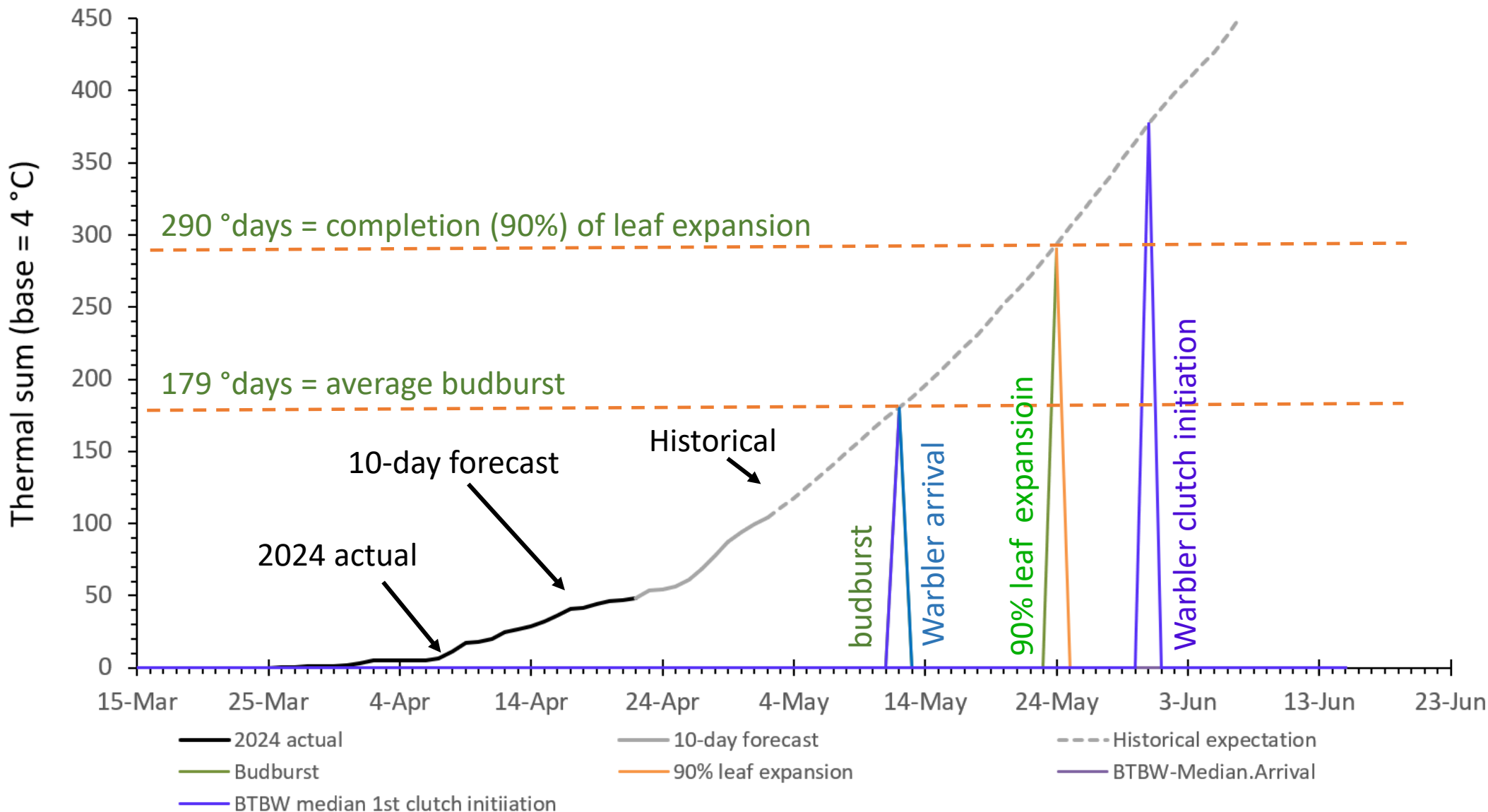
Leaf phenology model adapted from Nina Lany et al. 2016, *Oikos*.

Analyses by Matt Ayres et al., Dartmouth College.

Estimated leaf-out phenology for mid-elevation Bird Plot in 2024 based on thermal sums.

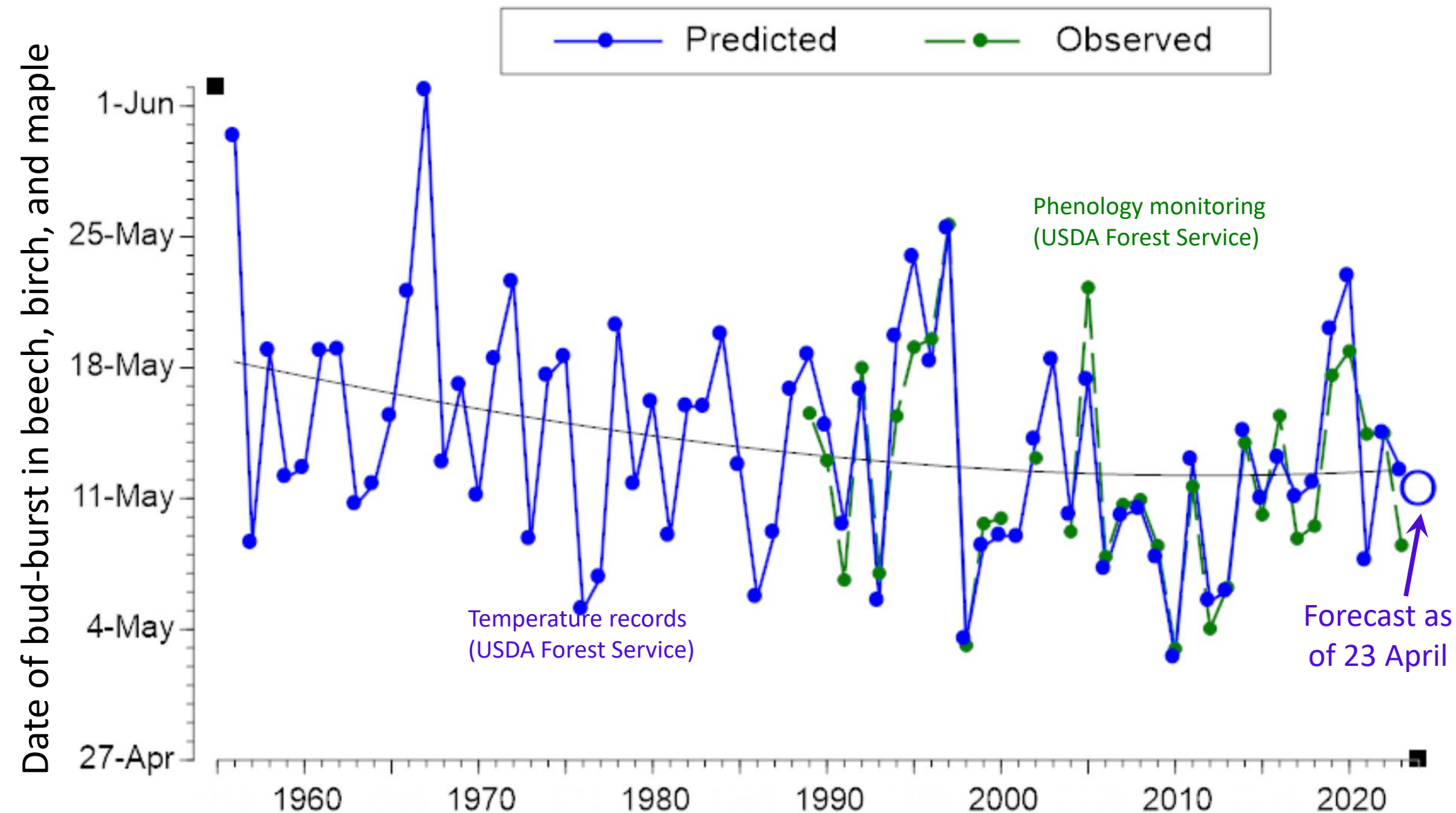
[As of 23 April, 2024](#), predicted dates for budburst and 90% completion of leaf expansion are:  
12 May and 24 May.

Predicted median dates of arrival and 1<sup>st</sup> clutch initiation by Black-throated Blue Warblers are:  
12 May and 31 May.



Real-time temperature records from USDA Forest Service station at Watershed 1.

Phenological models adapted from Lany et al. 2016 using long term data of USDA Forest Service.



[As of 23 April 2024](#), the forecast date of leafout is 12 May for mid-elevation bird plots at Hubbard Brook.

Phenology measurements by Northern Research Station, USDA Forest Service.

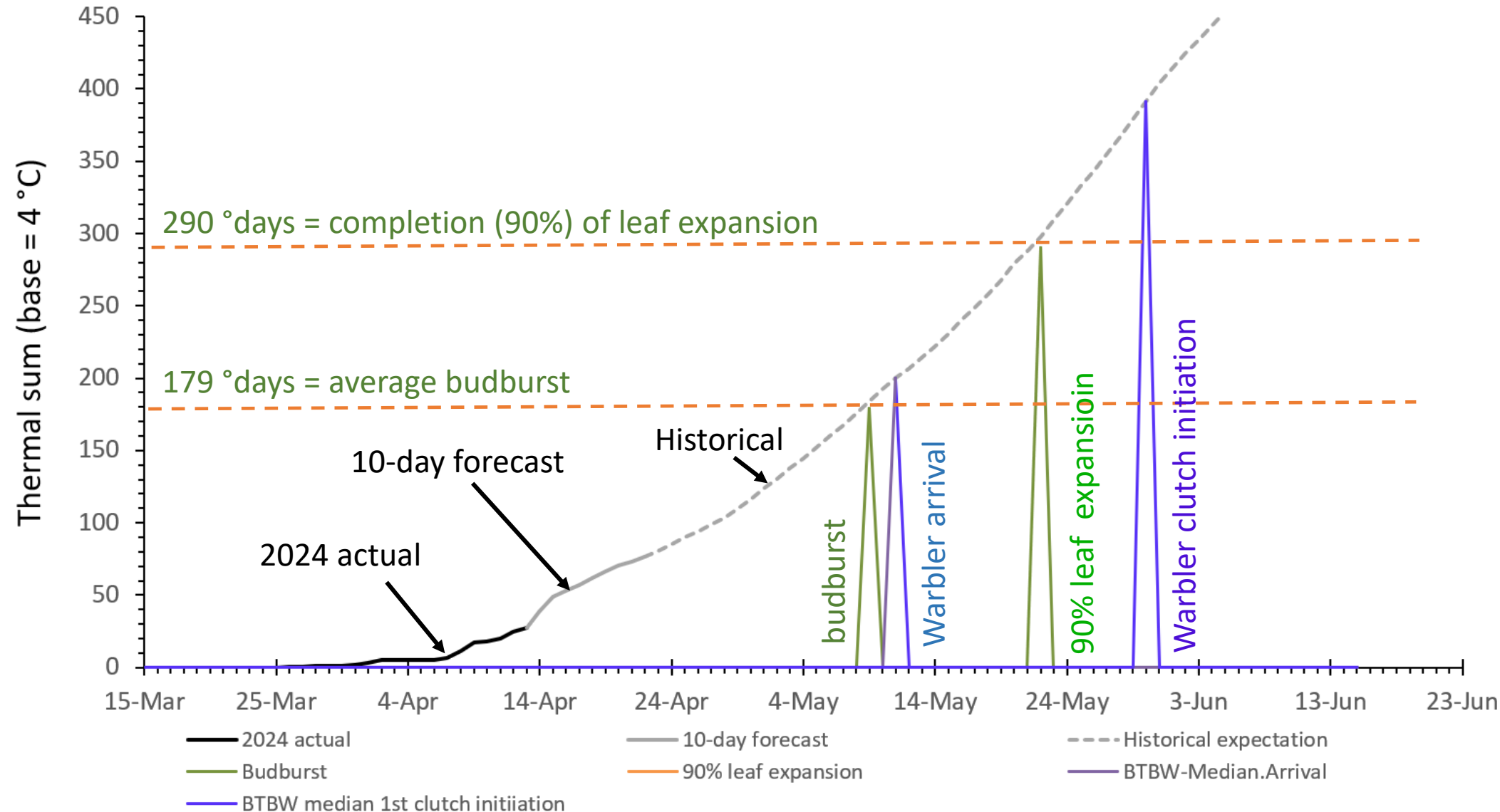
Leaf phenology model adapted from Nina Lany et al. 2016, *Oikos*.

Analyses by Matt Ayres et al., Dartmouth College.

Estimated leaf-out phenology for mid-elevation Bird Plot in 2024 based on thermal sums.

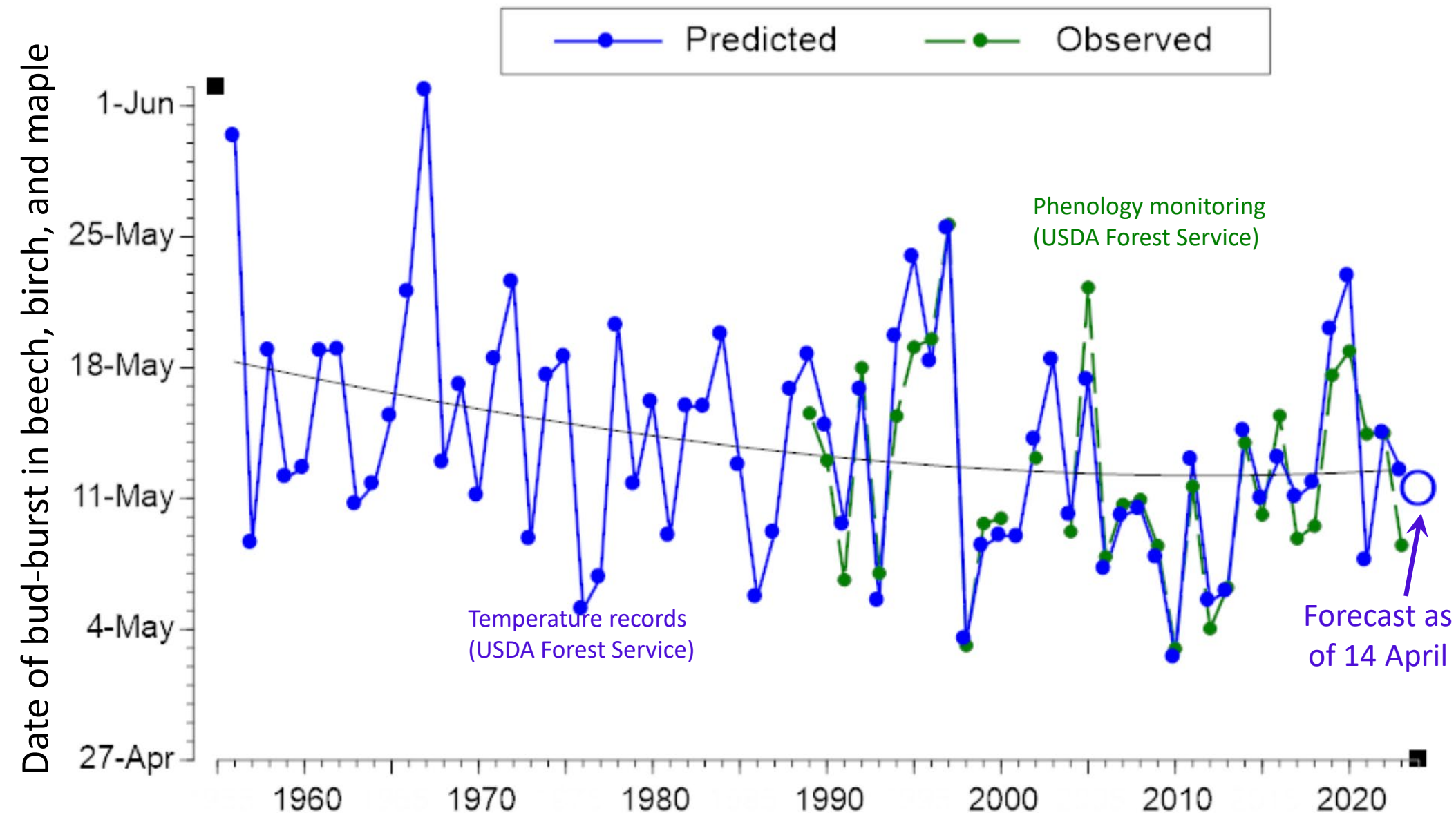
[As of 14 April, 2024](#), predicted dates for budburst and 90% completion of leaf expansion are:  
11 May and 23 May.

Predicted median dates of arrival and 1<sup>st</sup> clutch initiation by Black-throated Blue Warblers are:  
12 May and 30 May.



Real-time temperature records from USDA Forest Service station at Watershed 1.

Phenological models adapted from Lany et al. 2016 using long term data of USDA Forest Service.



[As of 14 April 2024](#), the forecast date of leafout is 9 May for mid-elevation bird plots at Hubbard Brook.

Phenology measurements by Northern Research Station, USDA Forest Service.

Leaf phenology model adapted from Nina Lany et al. 2016, *Oikos*.

Analyses by Matt Ayres et al., Dartmouth College.

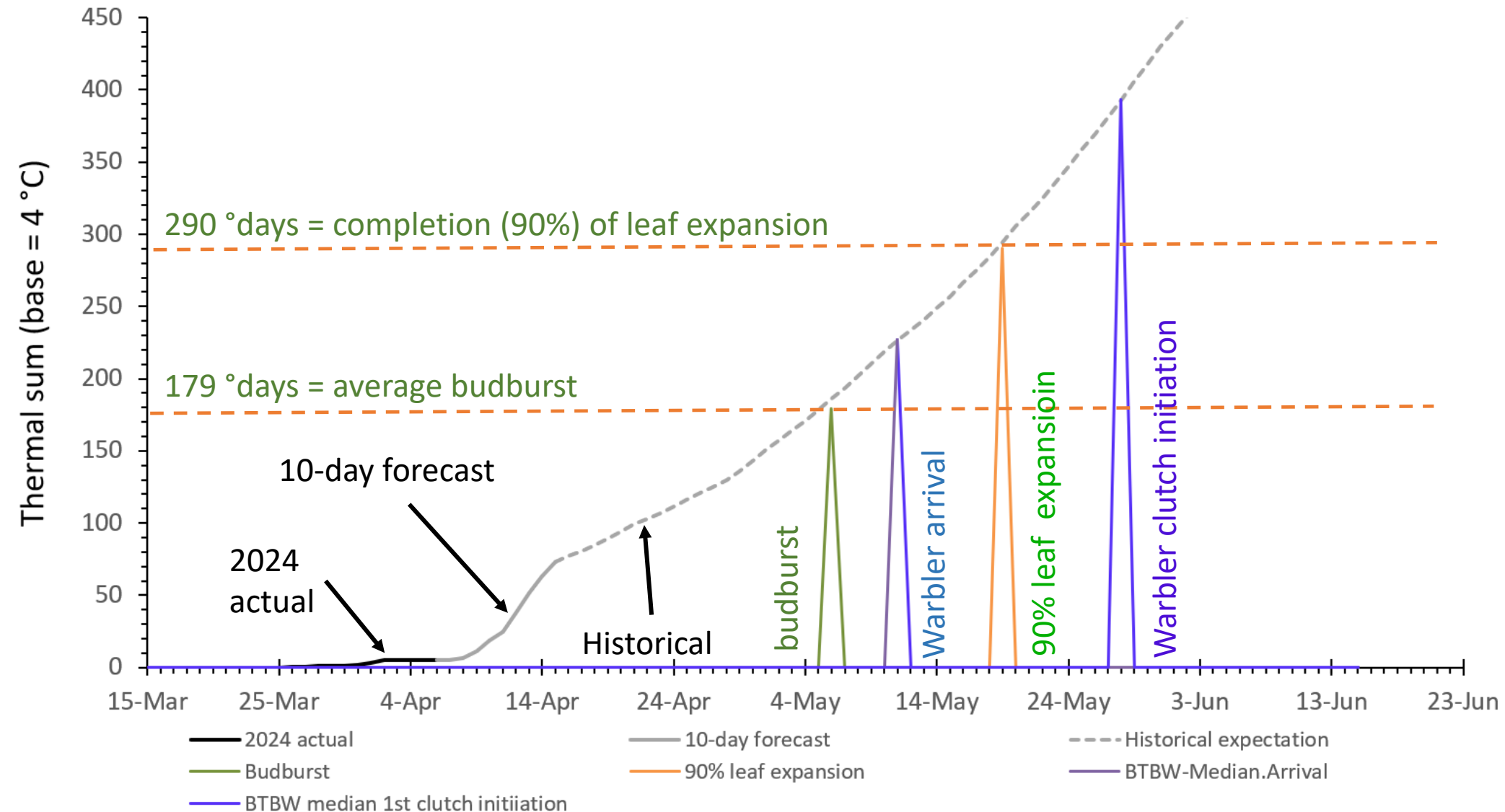
Estimated leaf-out phenology for mid-elevation Bird Plot in 2024 based on thermal sums.

[As of 7 April, 2024](#), predicted dates for budburst and 90% completion of leaf expansion are:

6 May and 19 May.

Predicted median dates of arrival and 1<sup>st</sup> clutch initiation by Black-throated Blue Warblers are:

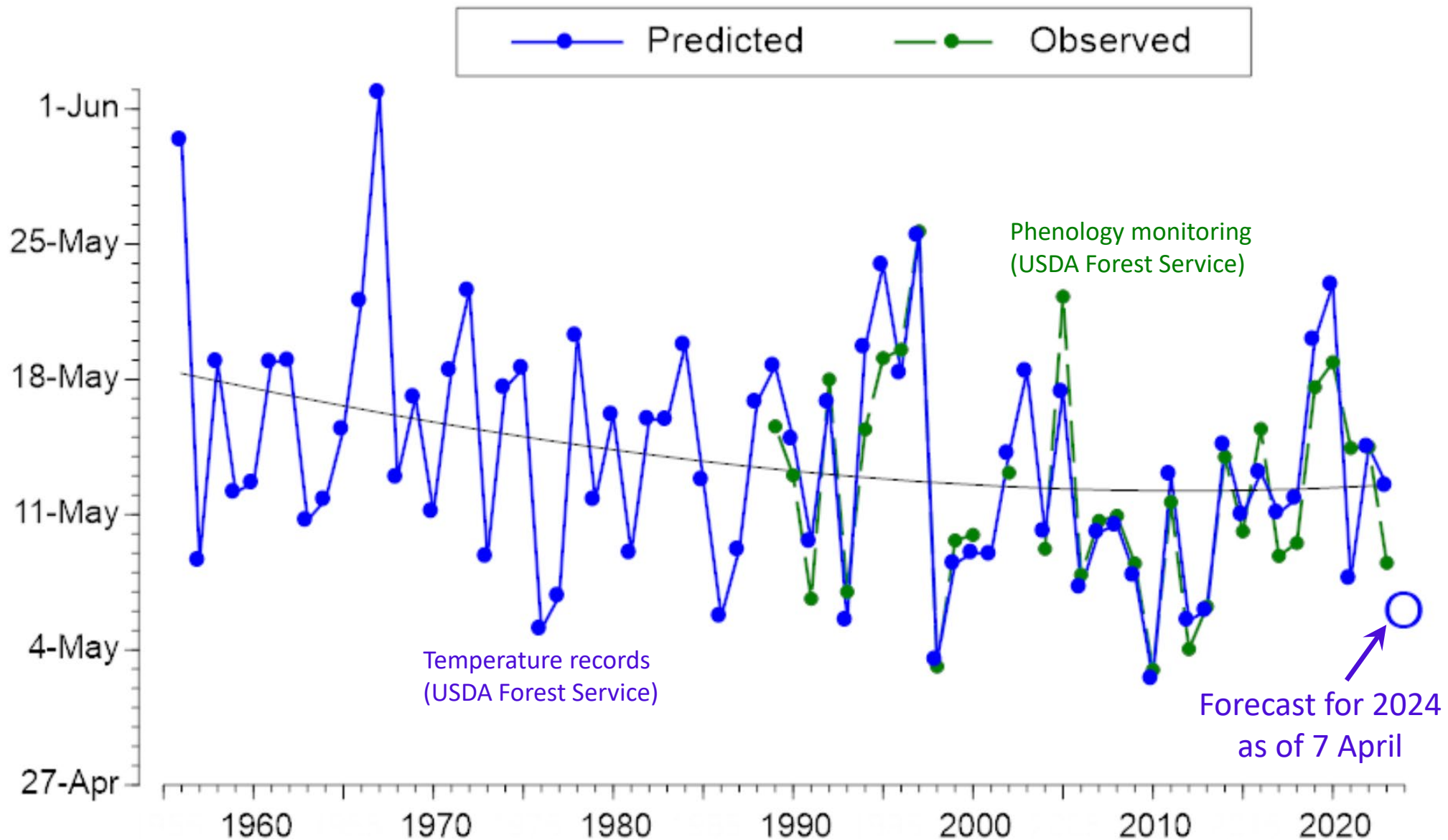
11 May and 28 May.



Real-time temperature records from USDA Forest Service station at Watershed 1.

Phenological models adapted from Lany et al. 2016 using long term data of USDA Forest Service.

Date of bud-burst in beech, birch, and maple



[As of 7 April 2024](#), the forecast date of leafout is 6 May for mid-elevation bird plots at Hubbard Brook.

Phenology measurements by Northern Research Station, USDA Forest Service.

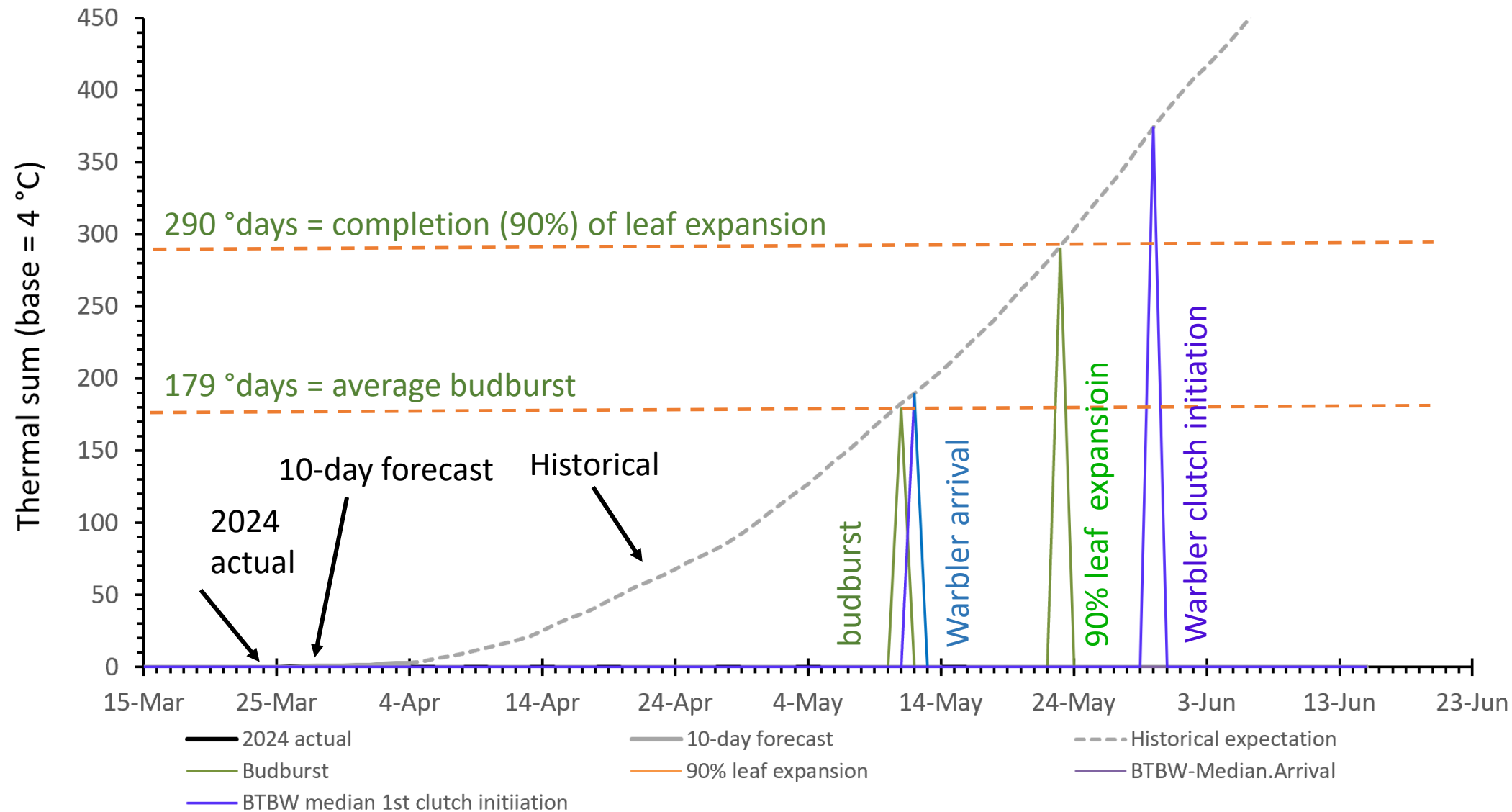
Leaf phenology model adapted from Nina Lany et al. 2016, *Oikos*.

Analyses by Matt Ayres et al., Dartmouth College.

Estimated leaf-out phenology for mid-elevation Bird Plot in 2024 based on thermal sums.

[As of 28 March, 2024](#), predicted dates for budburst and 90% completion of leaf expansion are:  
11 May and 23 May.

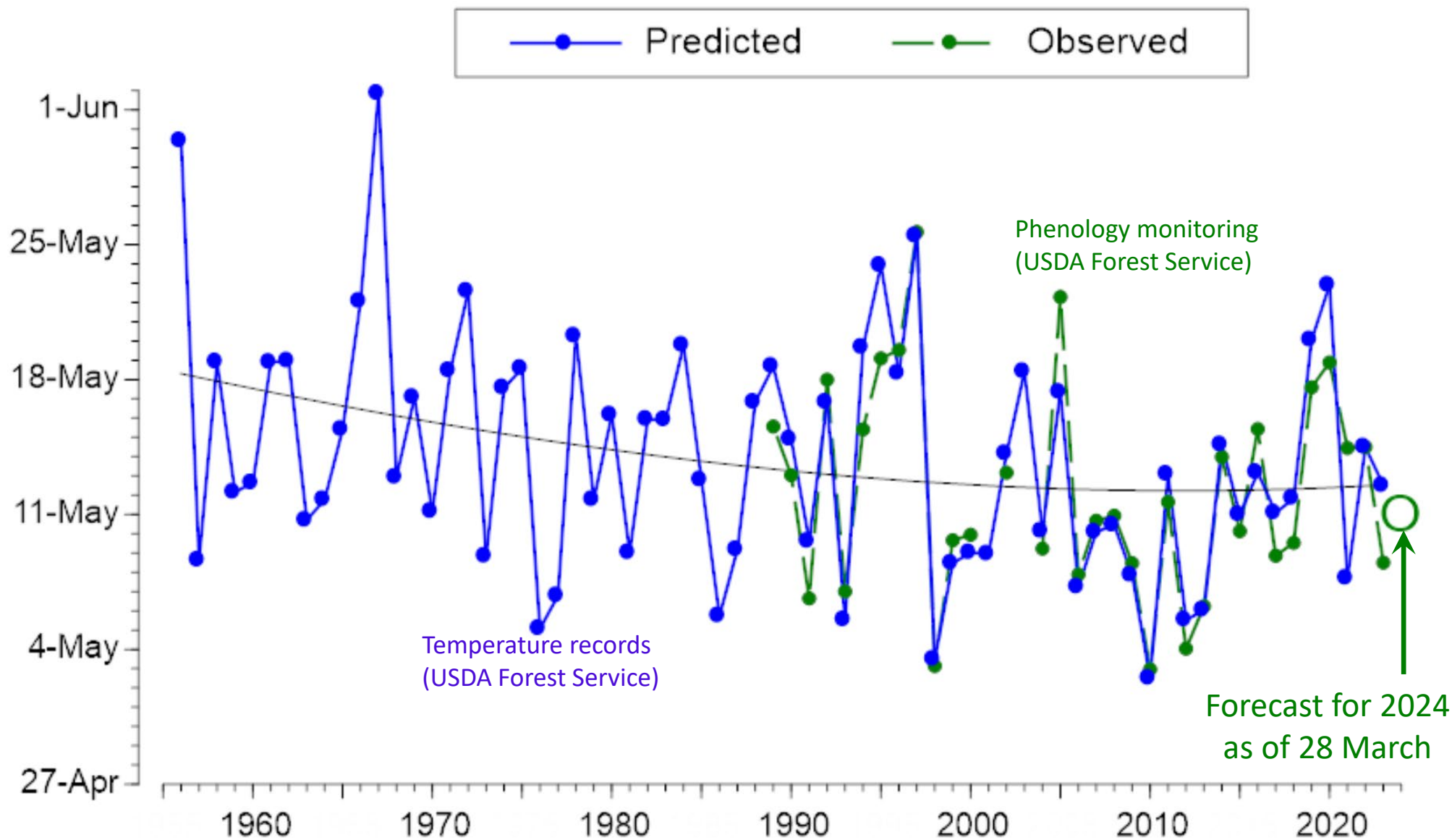
Predicted median dates of arrival and 1<sup>st</sup> clutch initiation by Black-throated Blue Warblers are:  
12 May and 30 May.



Real-time temperature records from USDA Forest Service station at Watershed 1.

Phenological models adapted from Lany et al. 2016 using long term data of USDA Forest Service.

Date of bud-burst in beech, birch, and maple



[As of 28 March 2024](#), the forecast date of leafout is 11 May for mid-elevation bird plots at Hubbard Brook.

Phenology measurements by Northern Research Station, USDA Forest Service.

Leaf phenology model adapted from Nina Lany et al. 2016, *Oikos*.

Analyses by Matt Ayres et al., Dartmouth College.

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<https://doi.org/10.6073/pasta/3afab60d54d5f2fcb1112e71f4be2106>

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