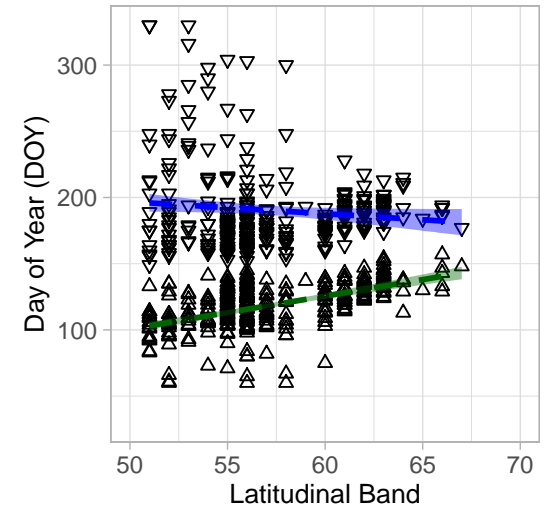
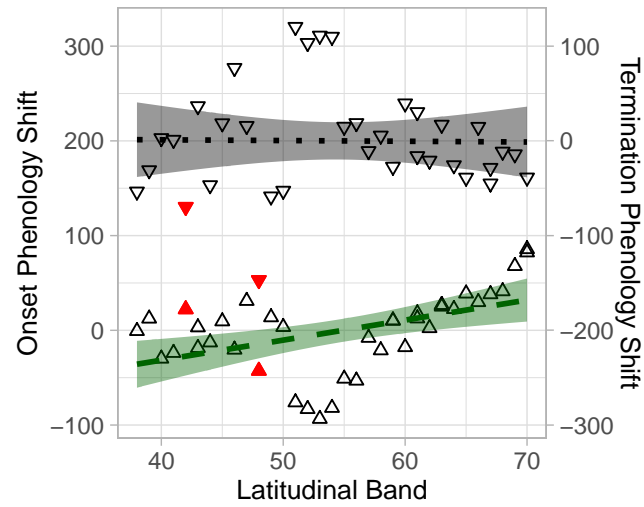
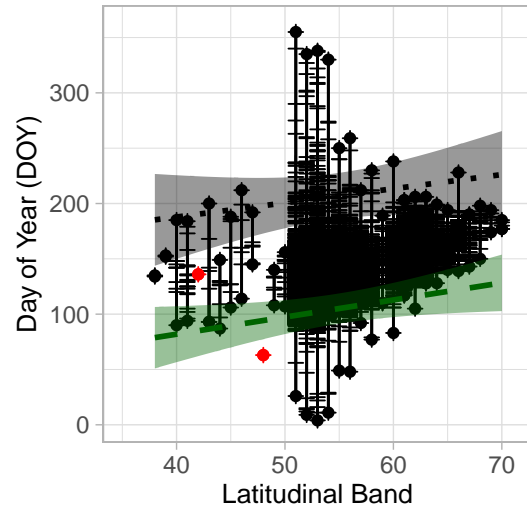


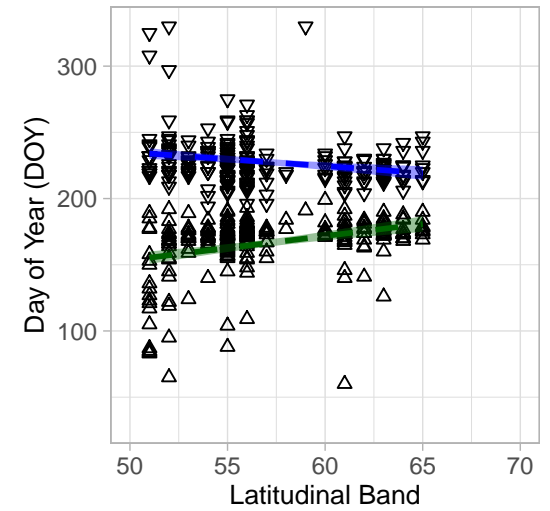
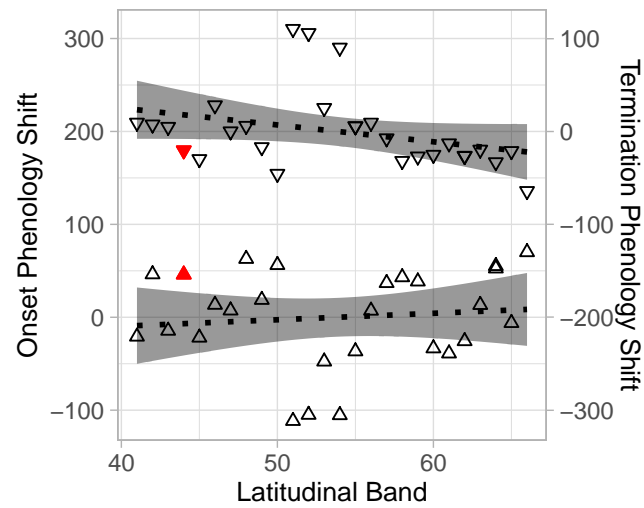
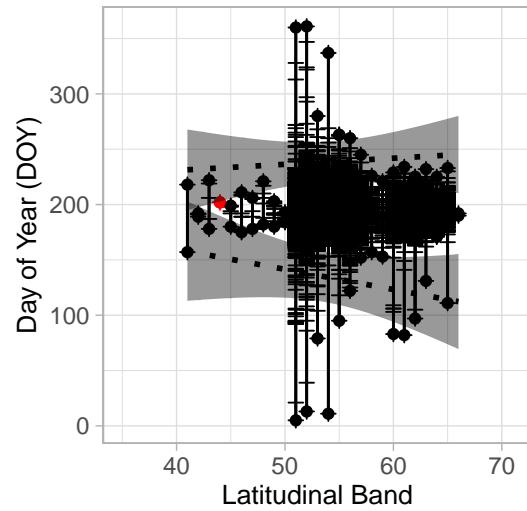
## Larsen and Shirey 2020 Supplemental Figure 1

These panels display the data and regression results for onset and termination across models. Each row of 3 panels represents a species in the re-analysis. In the left column, all raw occurrence data are shown as plus symbols' while onset and termination are shown as diamonds; red points indicate individual observations used as both onset and termination. Fric et al.'s single regression results of DOY ~ latitude for onset and termination are overlaid on the data. In the middle column, the residuals used in the Fric et al. (2020) regression of residuals are shown for onset (upward triangle) and termination (downward triangle) respectively, with red indicating records of observations used as both onset and termination. Because each dataset is residuals, the 'phenology shift' data are centered around 0 and the termination axis is shifted for easier interpretation. The slopes display the regression of residuals results from Fric et al. (2020). The right column shows the calculated onset (upward triangle) and termination (downward triangle) phenometrics calculated using the phest package in R. (Multiple observations for a latitudinal band represent different years), with the results from the multiple regression reanalysis. For all panels, the line format demonstrates positive (green, dashed), non-significant (black, dotted), or negative (blue, dashed) correlations with latitude in the corresponding models. While the Fric et al. analyses were generally reproducible, significance coding matches that reported in Fric et al. ST2, rather than our reproduction. We were unable to reproduce p values < 0.05 for the following single regression analyses: *E. maturna* onset and *L. virgaureae* termination.

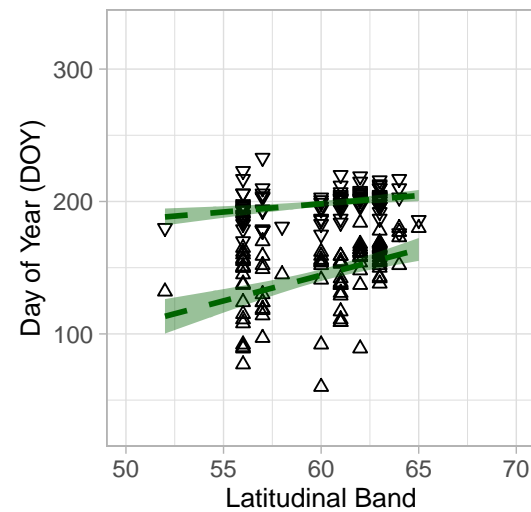
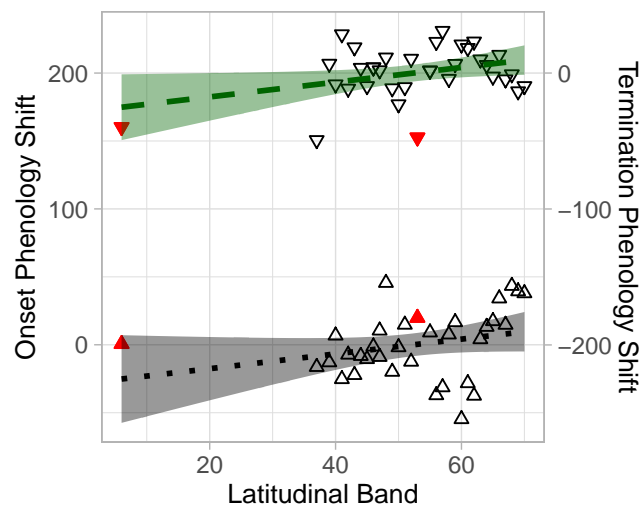
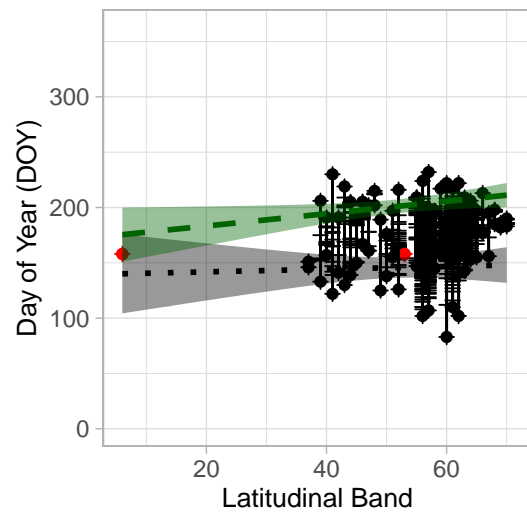
*Anthocharis cardamines*



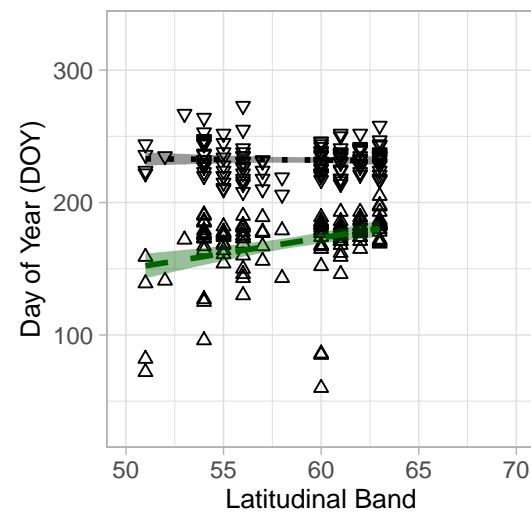
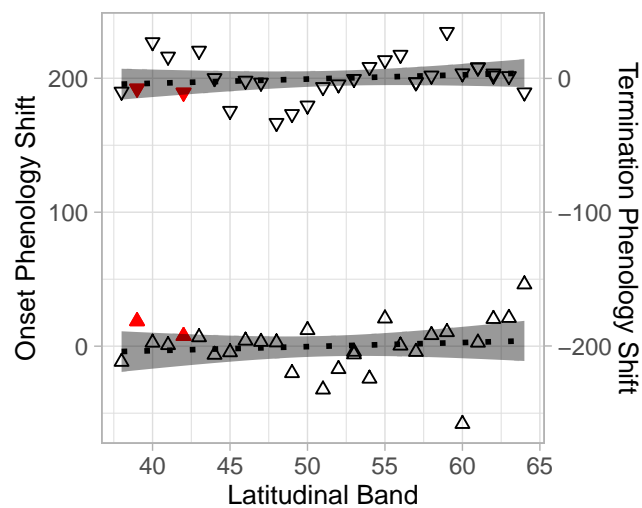
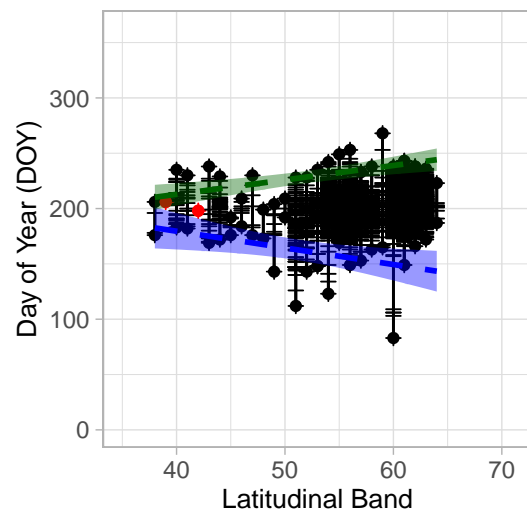
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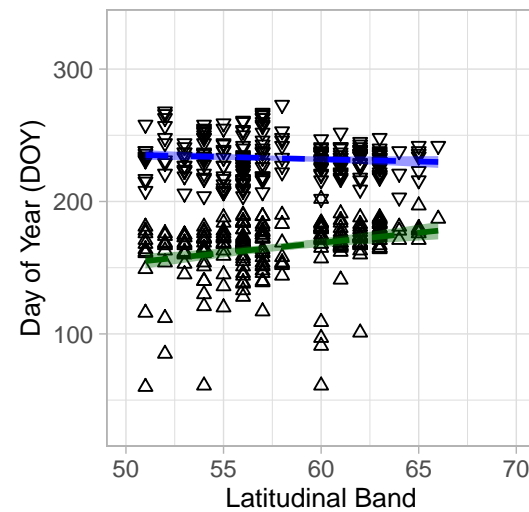
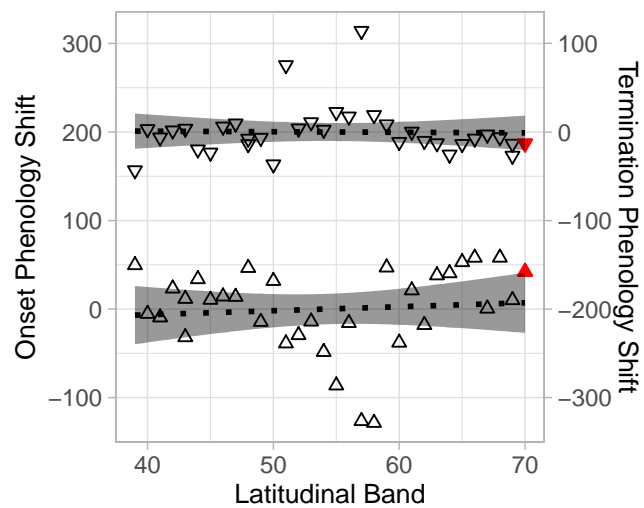
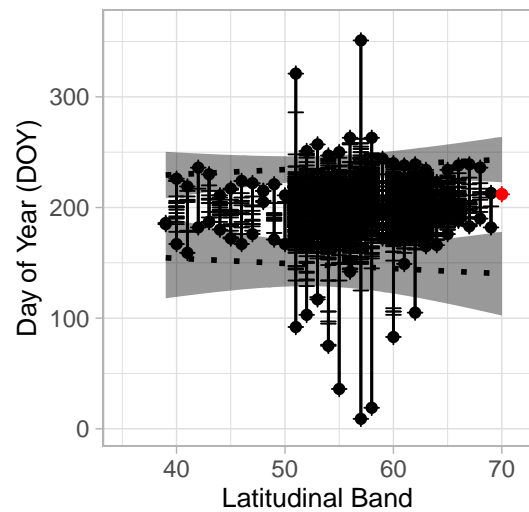
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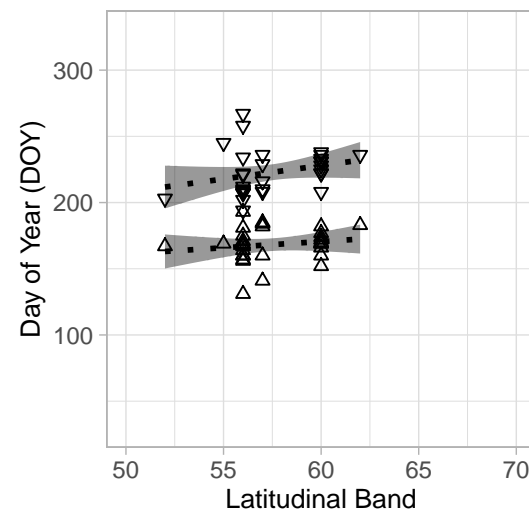
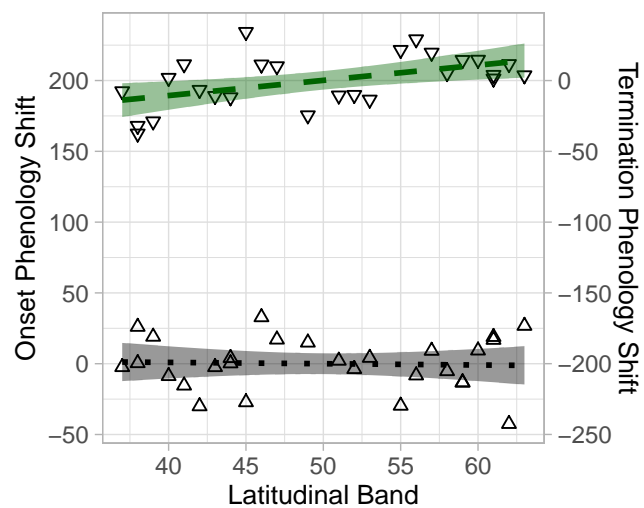
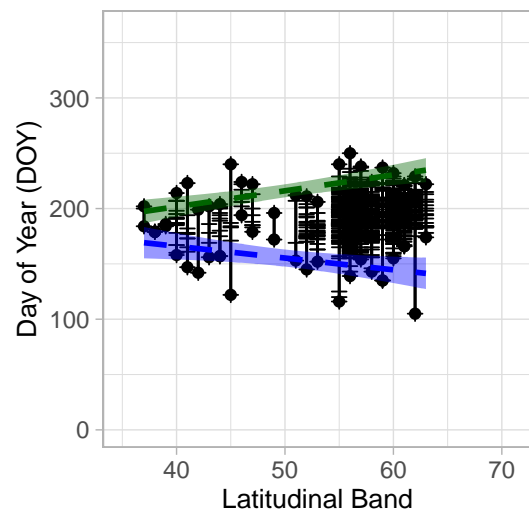
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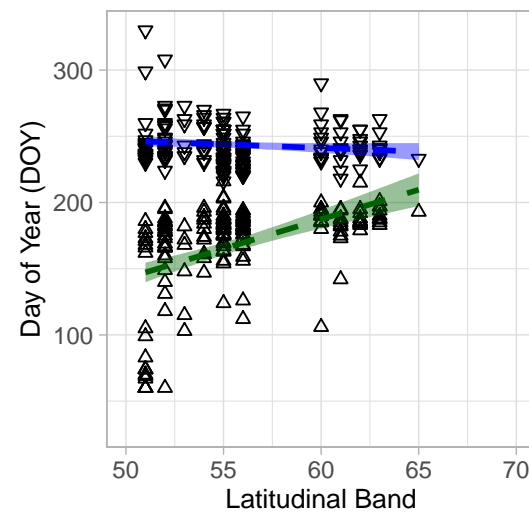
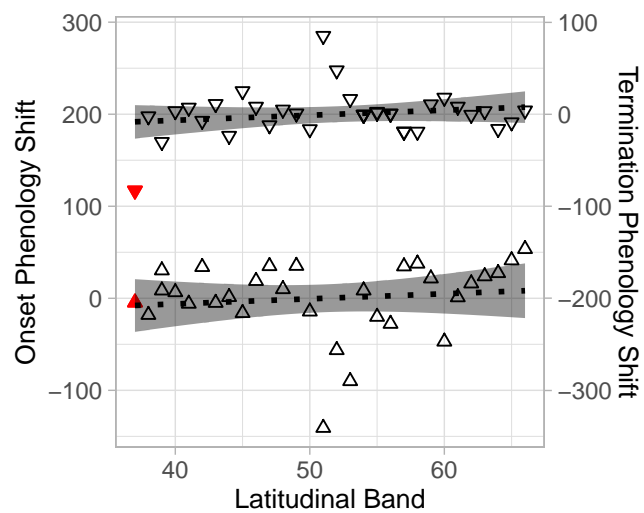
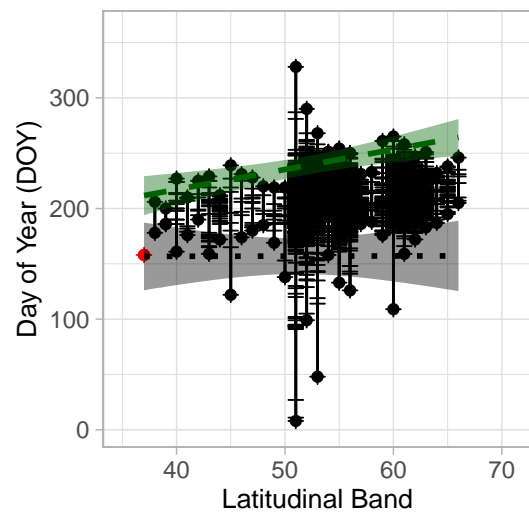
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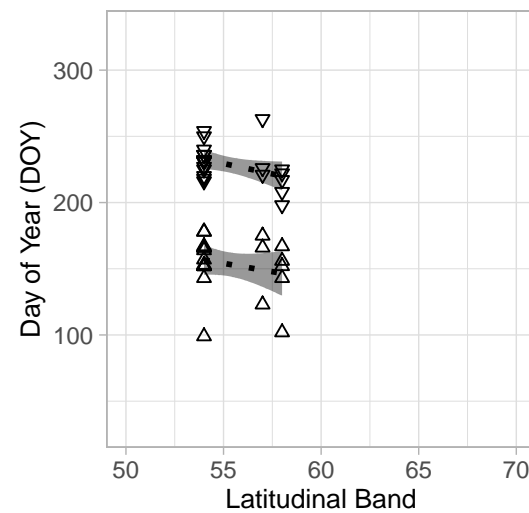
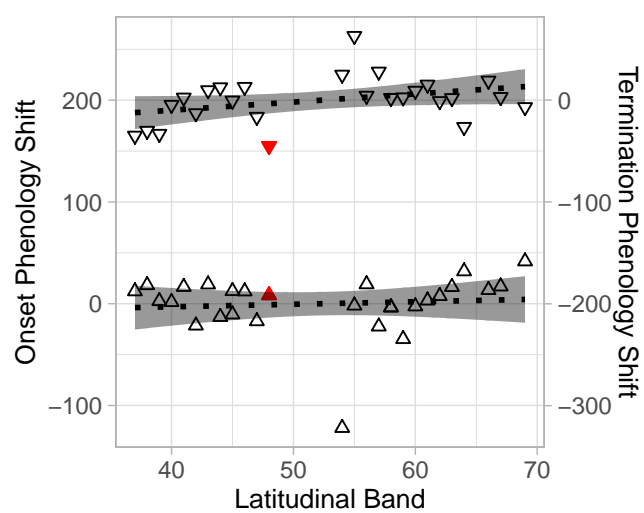
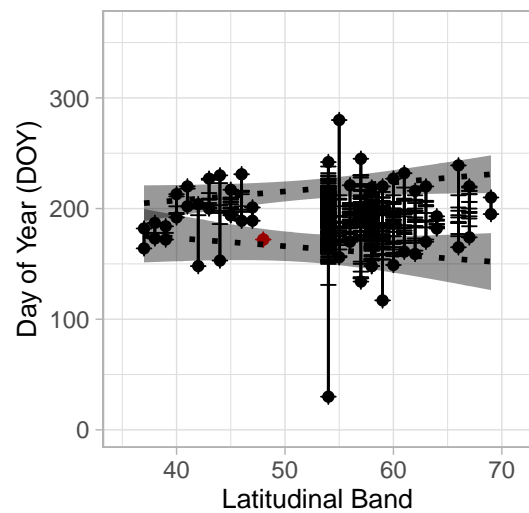
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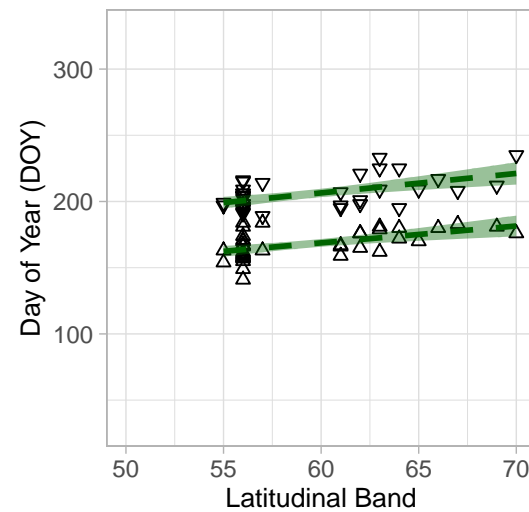
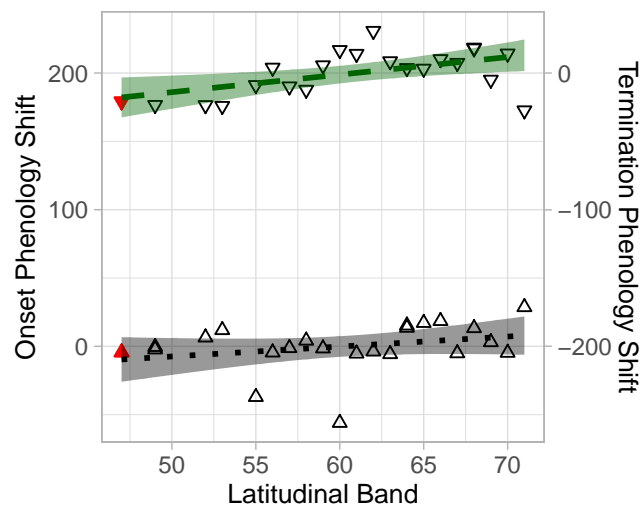
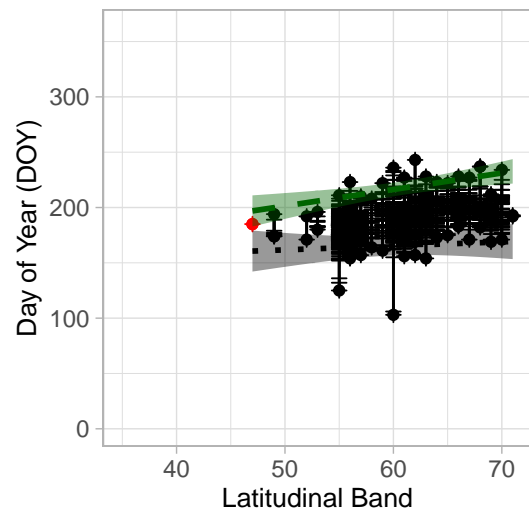
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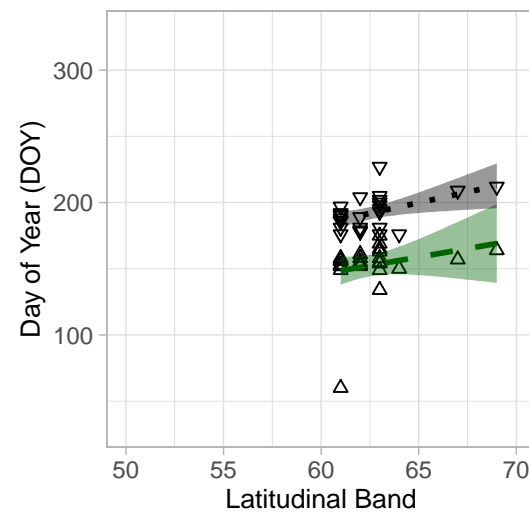
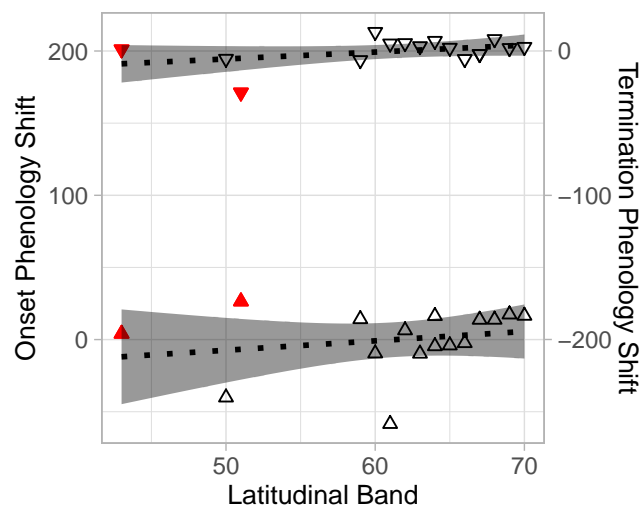
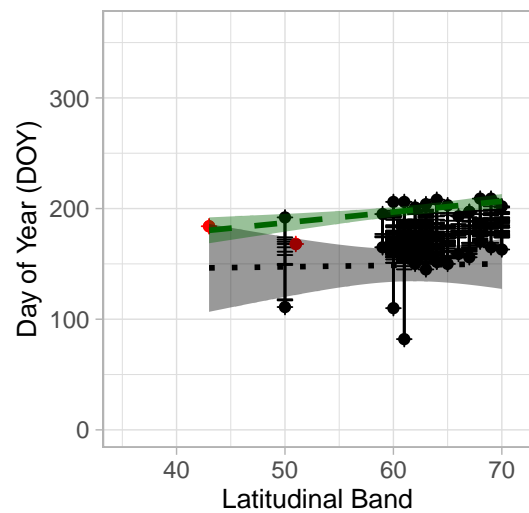
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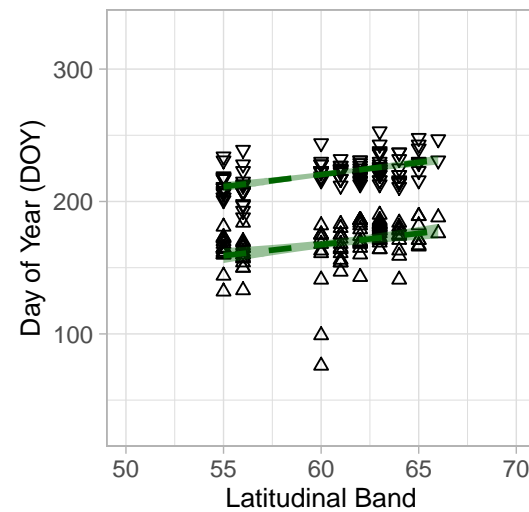
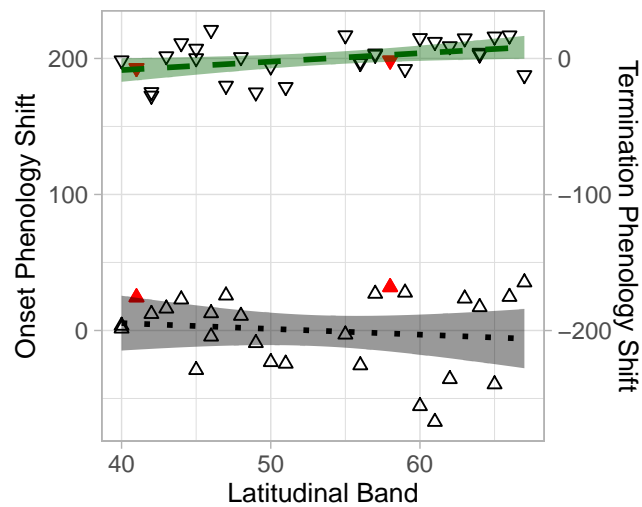
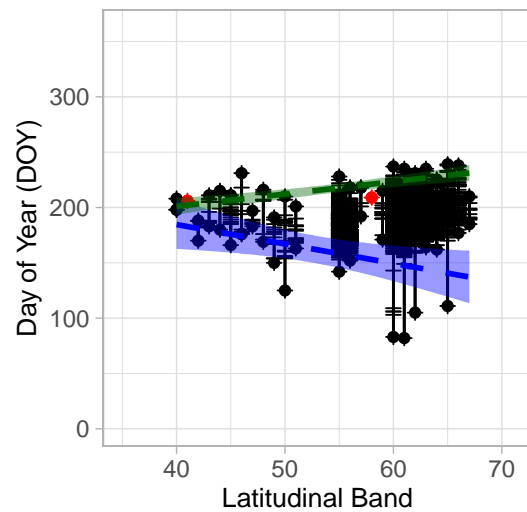
*Boloria aquilonaris*



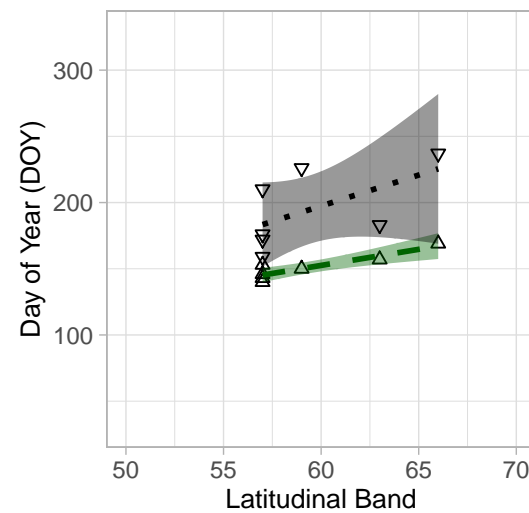
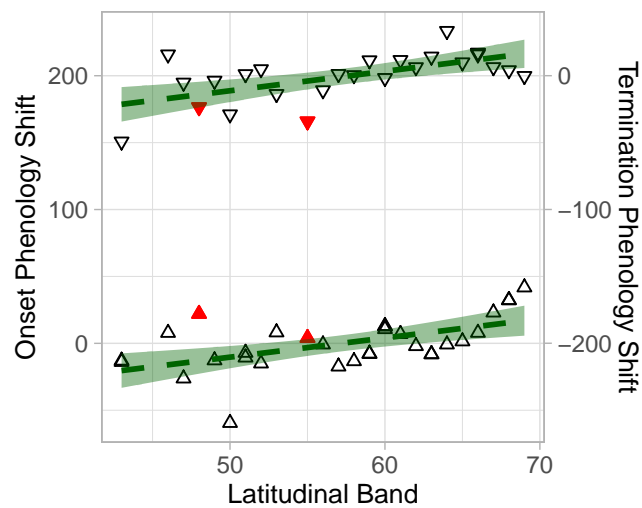
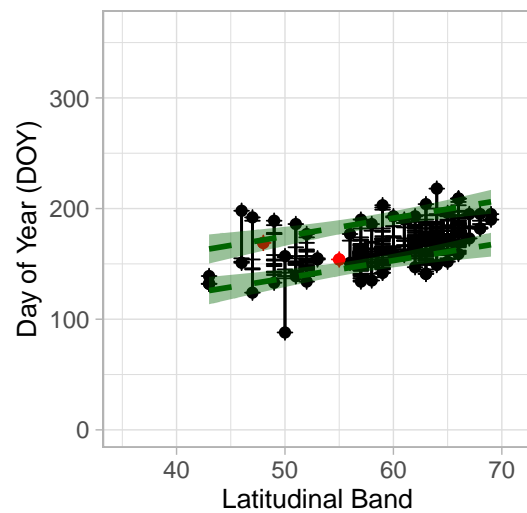
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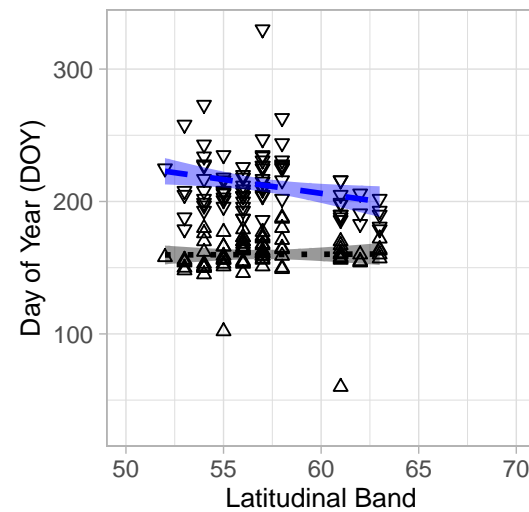
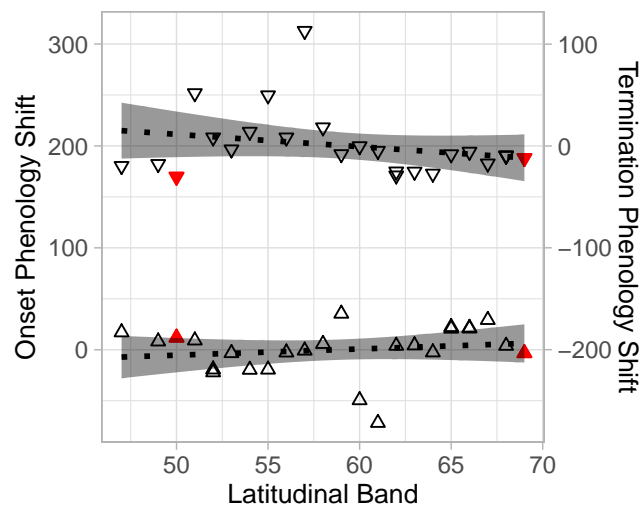
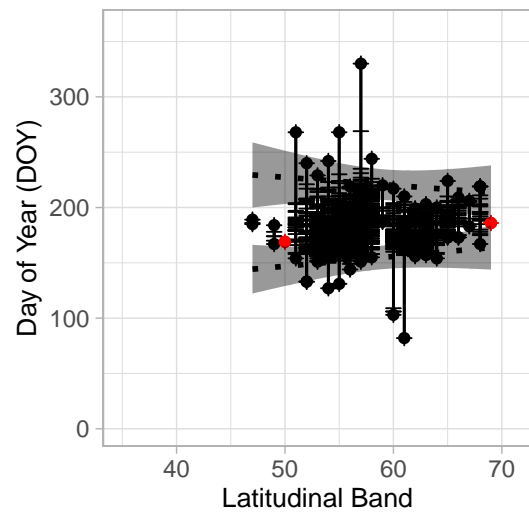
*Brenthis ino*



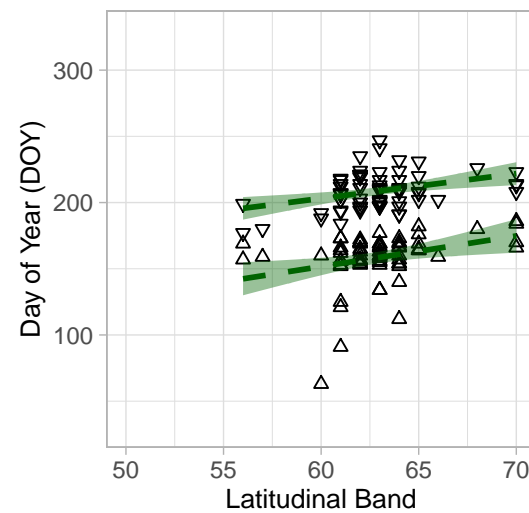
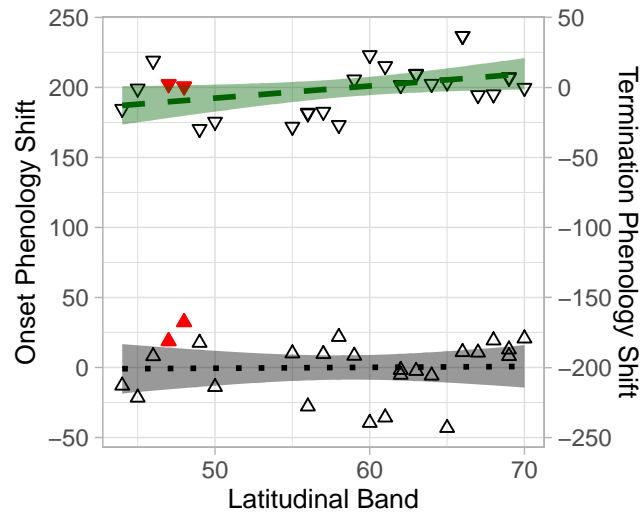
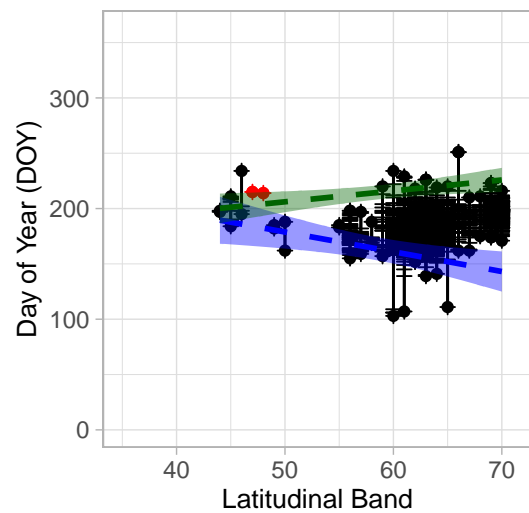
*Carterocephalus palaemon*



*Coenonympha tullia*

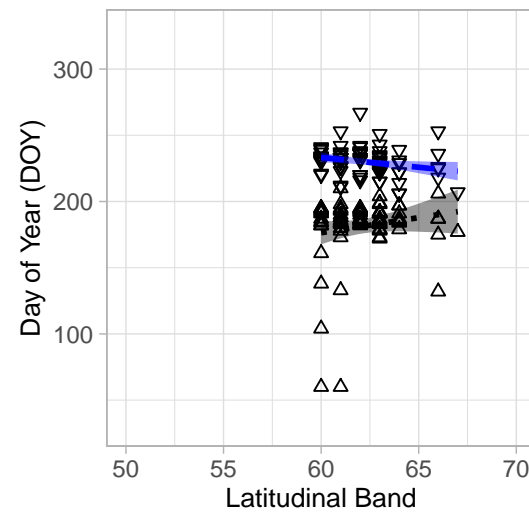
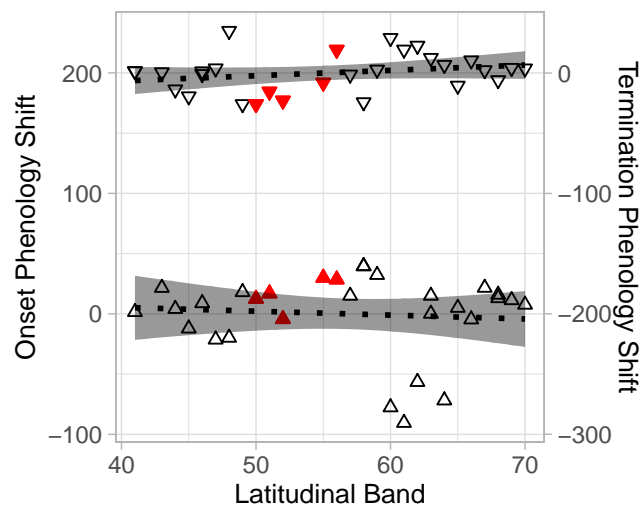
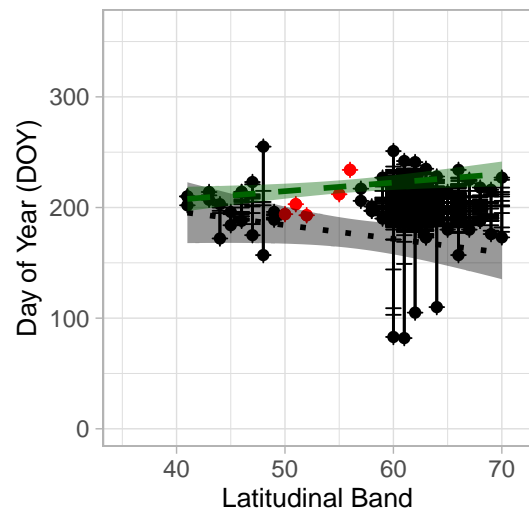


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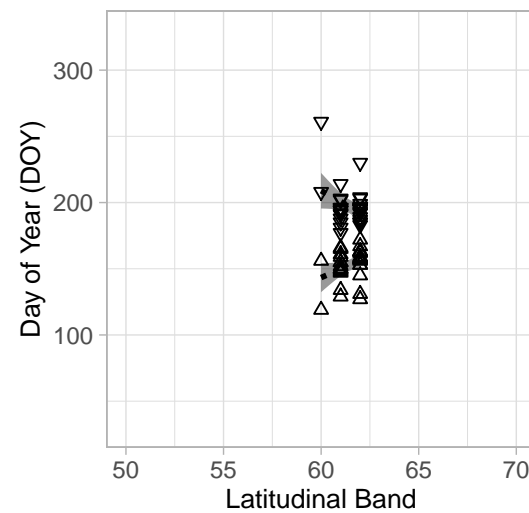
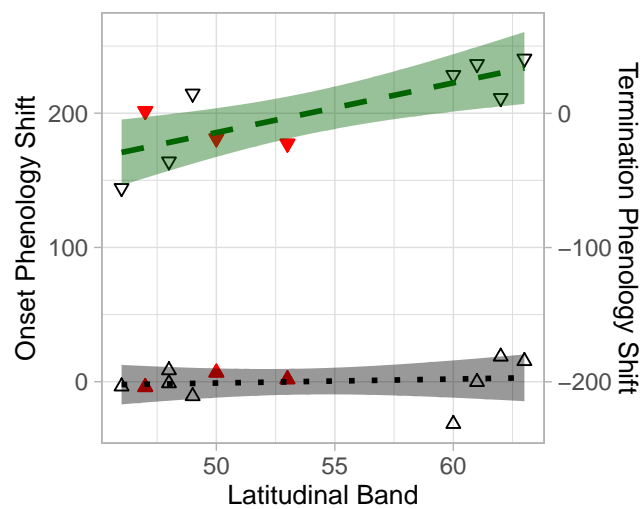
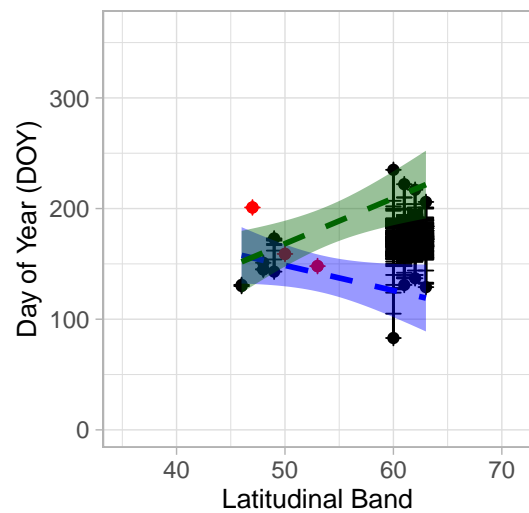




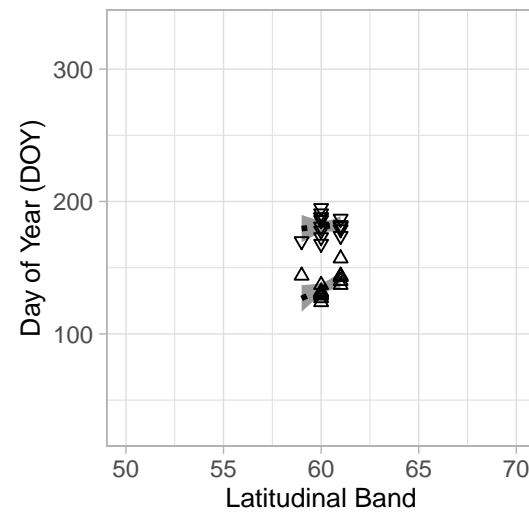
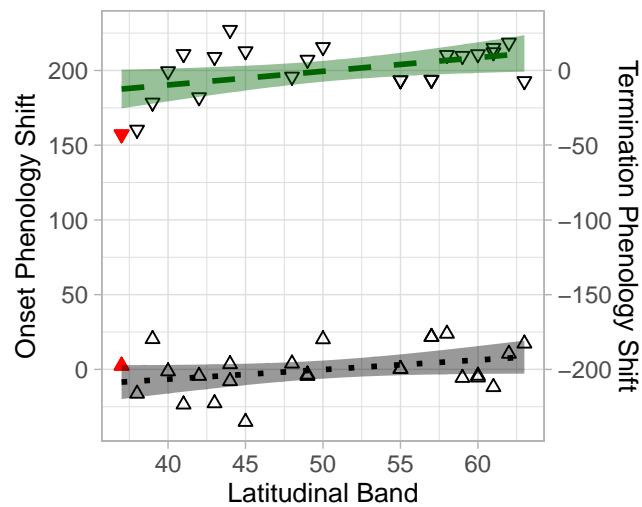
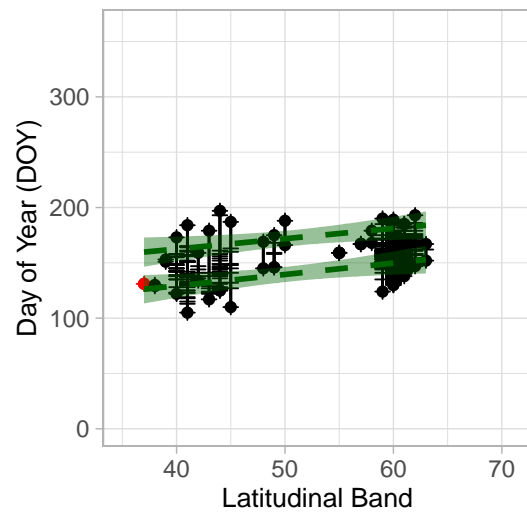
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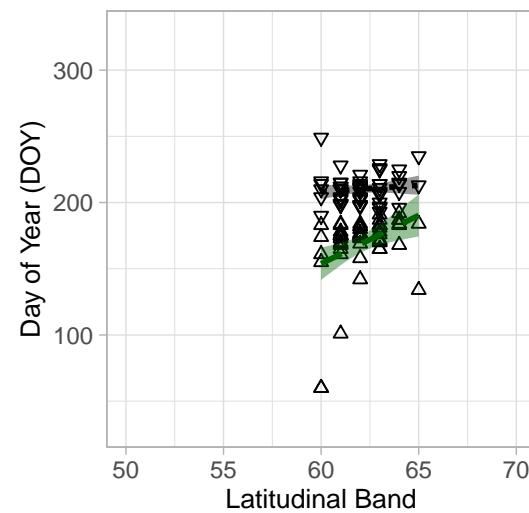
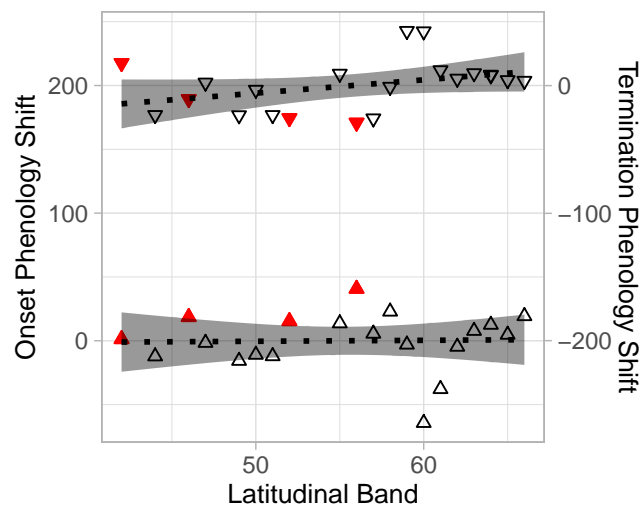
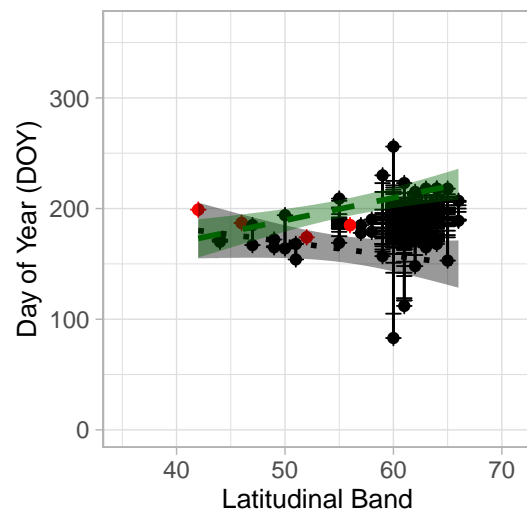
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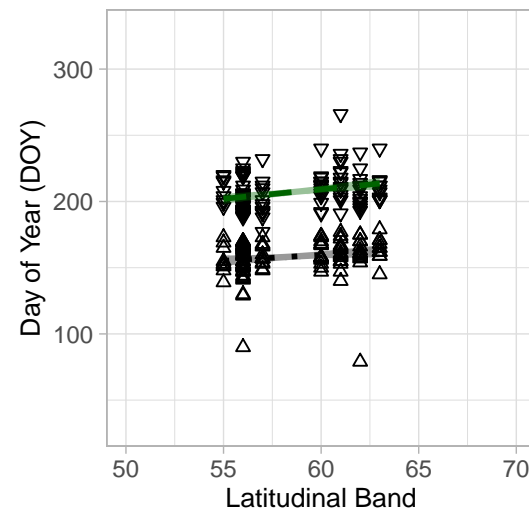
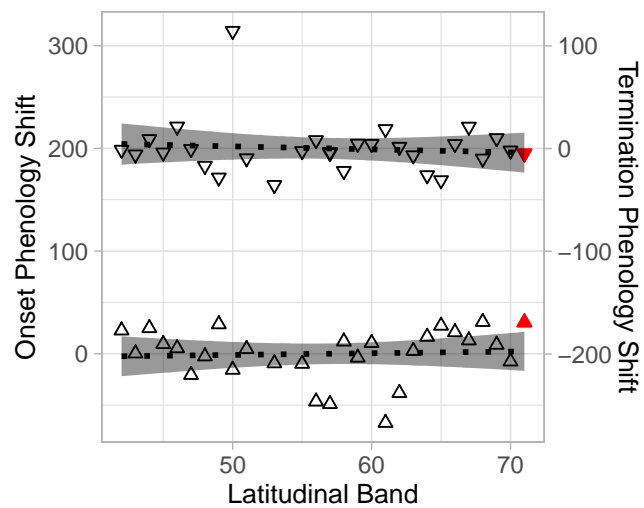
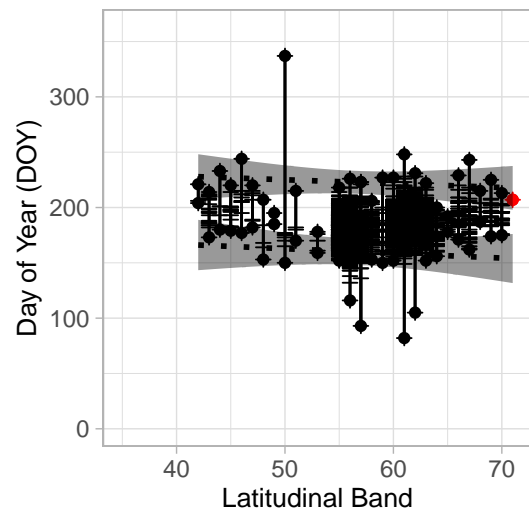
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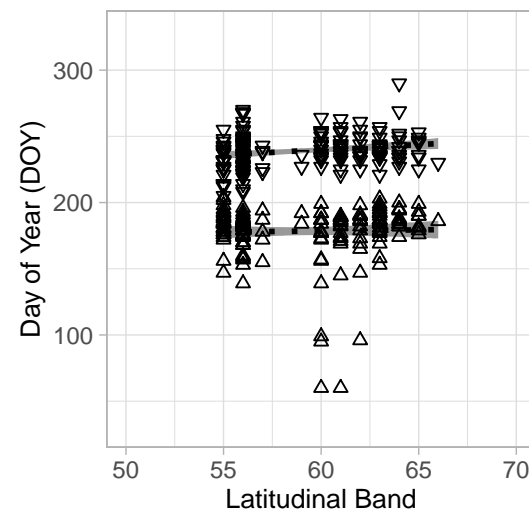
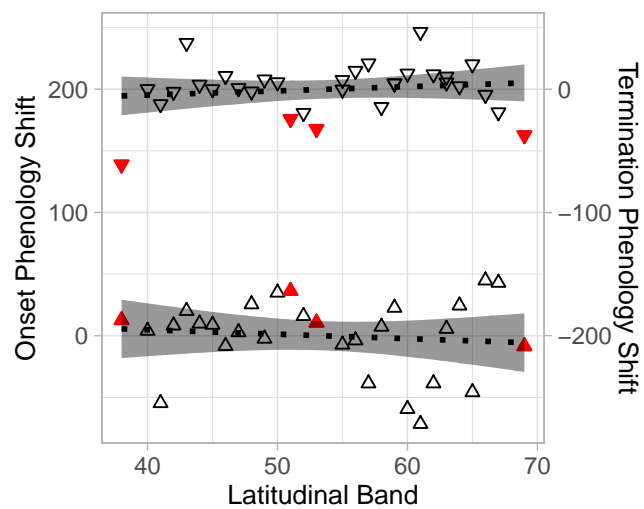
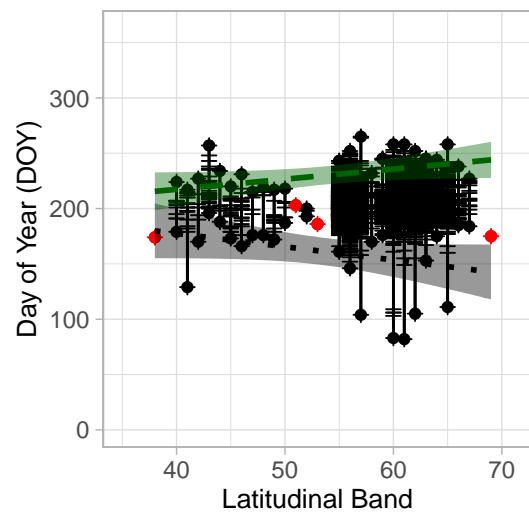
*Limenitis populi*



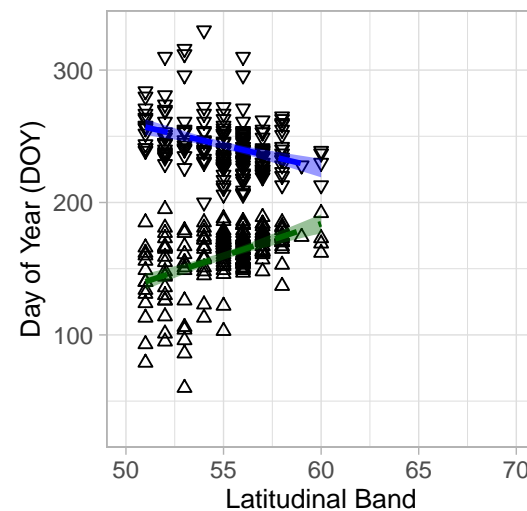
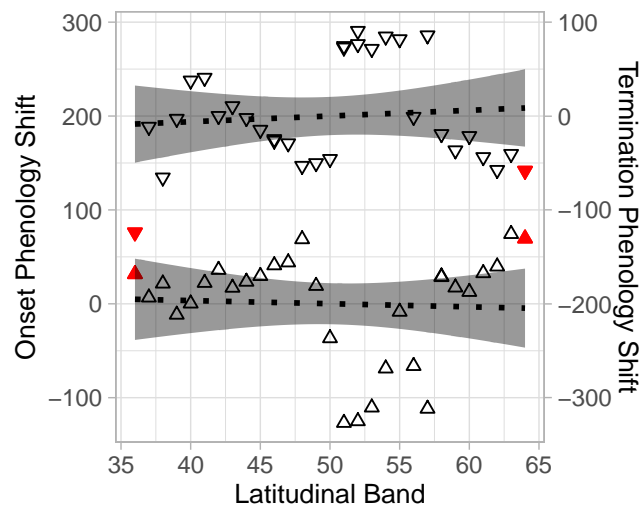
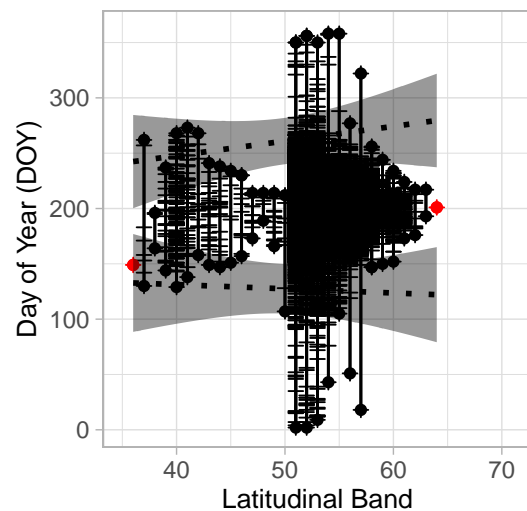
*Lycaena hippothoe*



*Lycaena virgaureae*



*Maniola jurtina*



*Thymelicus lineolus*

