

Supplementary Figure 1. Analysis of the composition of the skipper community associated with the Dakota skipper at each site through nonmetric multidimensional scaling. An ordination was performed using the first Hesperiidae or positive survey for each site. The Dakota skipper positive site (green dots) ellipse is superimposed over the Dakota skipper negative site (red ellipse) indicating that a subset of Hesperiidae species will be present with the Dakota skipper.



Supplementary Figure 2. A female Dakota skipper observed on *Echinacea angustifolia*, displays her dorsal wings (photograph by K. Seidle).



Supplementary Figure 3. A female Dakota skipper observed on *Monarda fistulosa*, a potential nectaring plant of the Dakota skipper (photograph by K. Seidle).



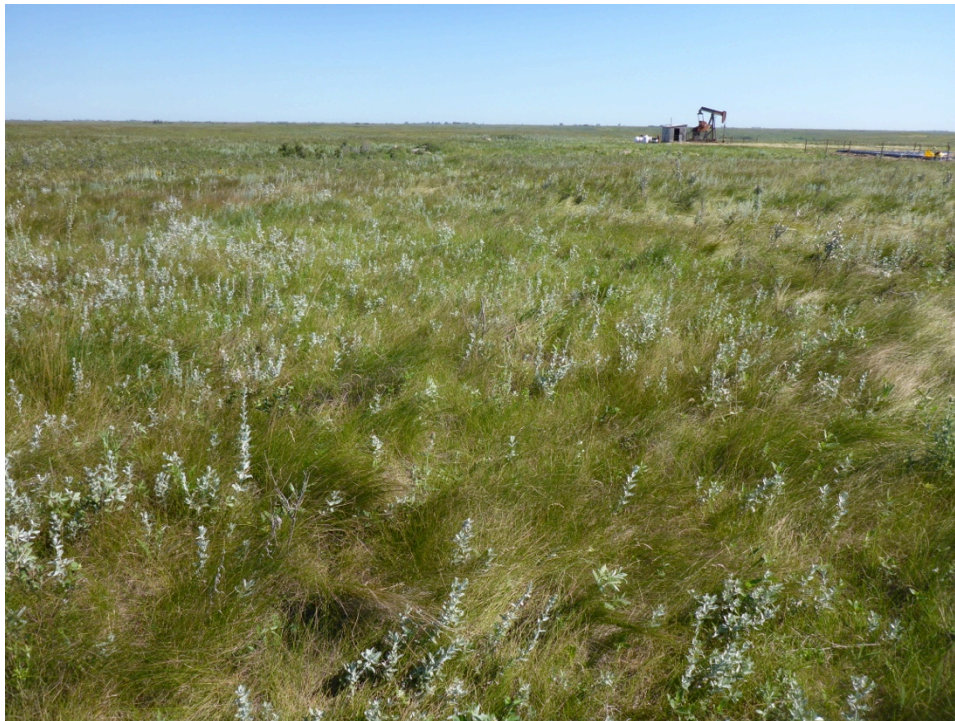
Supplementary Figure 4. A female Dakota skipper observed on *Echinacea angustifolia*, a potential nectaring plant of the Dakota skipper (photograph by K. Seidle).



Supplementary Figure 5. Dakota skipper (Fig. 2) observed at the base of a south facing native prairie slope, in an actively grazed pasture, dominated by *Pediomelum argophyllum* (photograph by K. Seidle).



Supplementary Figure 6. A female and male Dakota skipper caught mating mid flight display their ventral wings (photograph by K. Seidle).



Supplementary Figure 7. Three Dakota skipper butterflies found in the Coalfield Community Pasture observed just down from a functioning oil pumpjack on a steep northwest facing slope. This pasture remains native prairie due to rocky soil that is not suitable for agriculture (photograph by K. Seidle).



Supplementary Figure 8. A Dakota skipper positive site (same site as Fig. 7) contains a large amount of *Pedimelum argophyllum*, a significant forb to Dakota skipper presence (photograph by K. Seidle).



Supplementary Figure 9. A male Dakota skipper is found just beyond a large gravel pit on a west-facing slope. The site is dominated by *Pedimelum argophyllum*, a significant forb to Dakota skipper presence (photograph by K. Seidle).



Supplementary Figure 10. A Dakota skipper site (same site as Fig. 9) is experiencing *Bromus inermis* invasion and succession further down slope (photograph by K. Seidle).



Supplementary Figure 11. A negative Dakota skipper site experiencing succession of *Elaeagnus commutate*. A common occurrence now that wildfires have been suppressed within the mesic mixed-grass prairie (photograph by K. Seidle).



Supplementary Figure 12. A negative Dakota skipper site is severely overgrazed, contains little flora, and has exposed soils. The Souris River Valley contains sandy, gravelly, and stony soils, which have been exposed on this site (photograph by K. Seidle).



Supplementary Figure 13. A negative Dakota skipper site containing steep slopes demonstrating how pristine native prairies occur throughout the Souris River Valley as they are too steep to be developed or grazed (photograph by K. Seidle).



Supplementary Figure 14. A Dakota skipper positive site contains steep slopes and a dominant population of *Schizachyrium scoparium*, a significant plant species to Dakota skipper presence (photograph by K. Seidle).



Supplementary Figure 15. A Dakota skipper negative site contains a large population of *Echinacea angustifolia* and *Monarda fistulosa*. Potential nectaring plants for the Dakota skipper butterfly (photograph by K. Seidle).



Supplementary Figure 16. A negative Dakota skipper site contains a large population of *Lilium philidephicum* and *Campanula rotundifolia*. Potential nectaring plants for the Dakota skipper butterfly (photograph by K. Seidle).



Supplementary Figure 17. An abandoned painted turtle (S3) shell found within the Souris River valley. The mesic mixed-grass prairie is host to a large variety of at risk species (photograph by K. Seidle).



Supplementary Figure 18. The mesic mixed-grass prairie is host to the Species at Risk Act listed northern leopard frog, which is locally abundant in the native prairies of the Souris River Valley; listed as an S3 special concern in Saskatchewan (photograph by K. Seidle).