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ABSTRACT

Purple prairie clover (*Dalea purpurea* Vent.) is a common native legume on dry prairies throughout the central USA and Canada. Seed set in natural populations can be very low, and the reason(s) are not well known. Our objectives were: 1) determine seed set in natural and cultivated populations of purple prairie clover in eastern SD, and 2) identify seed predators and parasitoids associated with natural and cultivated populations. Collection of inflorescences occurred on the South Dakota State University Oak Lake Field Station (OLFS), and from a cultivated population in McCrory Gardens at Brookings, SD. At OLFS, normal seed set was 10% compared with 60% for the McCrory Gardens population. Frequency of unfertilized ovules was about 25%, and seed predation was 55% at OLFS compared with 24% unfertilized ovules and 23% seed predation at McCrory Gardens. The most common seed predators were *Kissingeria capitone* (Kissinger) and an unidentified midge, *Contarinia* sp. (Cecidomyiidae). The bruchid beetle *Acanthoscelides seminulum* (Horn) had much lower seed predation rates. The most common parasitoid reared from beetle larvae was *Lyrcus incertus* (Ashmead). The chalcidoid wasps *Baryscapus* sp. and *Aprostocetus marylandensis* (Girault) attacked midge larvae. A few individuals of *Bracon* sp. and *Inostemma* sp., hosts unknown, were also collected from immature inflorescences. This study identified a previously unknown guild of insects associated with inflorescences in purple prairie clover and revealed reasons for a paucity of viable seed production in natural populations.