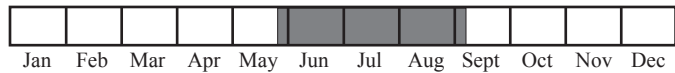


Best Survey Period



Status: State special concern

Global and state rank: G5/S2S3

Family: HesperIIDae (skippers)

Range: The wild indigo duskywing ranges from the northeastern United States south to northern Florida and west to Minnesota, Nebraska, Kansas, Oklahoma, and Texas (Opler et al. 2012). The northern limits of its range occur in southern Michigan to central Wisconsin and Minnesota. The species is secure in the majority of its range, but is listed as critically imperiled in New Hampshire and Florida, imperiled in Michigan, and vulnerable in Wisconsin, Iowa, and Nebraska (NatureServe 2011).

State distribution: Locally uncommon, the wild indigo duskywing has been recorded in six counties in southern Lower Michigan: Hillsdale, Monroe, Oakland, St. Joseph, Wayne, and Washtenaw (Nielsen 1999, MNFI 2011). The northern range limit of the wild indigo duskywing occurs in southern Lower Michigan, and this may explain its rarity in the state. However, the range of this species may be expanding due to the recent adoption of a new larval host plant, the widespread, non-native crown vetch (*Securigera varia*) (McMahon 2007).

Recognition: The wild indigo duskywing has a wingspan of 2.8–3.5 cm (1.1–1.4 in.). It usually has three or four small white spots in the subapical region of the forewing (Glassberg 1999). The basal half of the forewing is usually very dark and appears oily. The upper surfaces are chocolate brown with small, white, semi-transparent spots irregularly aligned. The undersurface of the hindwing is brown with two irregular rows of dull yellowish spots. The caterpillar is light green with a darker dorsal line and yellowish lateral lines and is sprinkled with raised yellow dots with a blackish brown center (Nielsen 1999). Similar species include the columbine duskywing (*Erynnis lucilius*) and the persius duskywing (*E. persius*). The very similar columbine duskywing tends to be smaller, with wingspan averaging 1.5–1.8 cm (0.6–0.7 in.), but there are few other differences and experts should be consulted to verify species identification. The persius duskywing tends to have more aligned rows of spots on the hindwing undersurface, contrasted with the rather irregular rows of spots on the hindwing undersurface of wild indigo duskywing (Iftner et al. 1992).

Best survey time: Generally, adults are active from late April or early May in the southern portions of its range, and late May in the northern portions of its range, and fly until late September. The best way to survey for



this species is by conducting visual meander surveys which consist of checking for this species near larval food plants, on adult nectar sources, and in mud patches along roadsides. Reports of this species should be documented with a voucher specimen and verified by a taxonomic expert to ensure correct identification.

Habitat: In Michigan, the wild indigo duskywing occurs in open oak barrens, shrubby fields, prairies and roadsides. Its main food plant, wild indigo (*Baptisia tinctoria*) generally occurs in sandy soils in dry or dry-mesic habitats, such as dry-mesic southern forests and dry sand prairies (Reznicek et al. 2011). In the southern portions of its range, the wild indigo duskywing is increasingly found near crown vetch. This non-native species is commonly found along roadsides, often spreading from plantings intended to slow or prevent soil erosion (McMahon 2007).

Biology: There is debate over the number of broods this species produces each year, but there are likely two or three flights, depending on annual weather variability. In Michigan, the first brood generally emerges in mid-to-late May, with adults from successive broods remaining active until late September. Before the introduction of crown vetch, the wild indigo duskywing larvae fed almost exclusively on *Baptisia* spp., most of which are locally distributed or rare in Michigan (Reznicek et al. 2011). Since the introduction of crown vetch, wild indigo duskywing has apparently shifted its host plant to this locally common, widespread species, causing an expansion of the species' range and population size (McMahon 2007).

Wild indigo duskywing eggs are green, and become pinkish as they mature. Larval biology for this species is poorly known. The young larvae feed on wild indigo and crown vetch, and larvae from the first brood are likely present from mid-June to July. Adults from successive broods are active until late September. Adults are known to nectar on red and white clover (*Trifolium pratense* and *T. repens*), ironweed (*Vernonia* spp.), blue vervain (*Verbena hastata*), joe-pye weed (*Eutrochium maculatum*), blazing star (*Liatris* spp.) and various asters (*Symphotrichum* spp.) (Iftner et al. 1992) as well as crown vetch and wild indigo (Shull 1987).

Conservation/management: Wild indigo duskywing is locally uncommon in southern Michigan, but it may be expanding its range. Little is known about the status, distribution, and specific threats to this species. As a

result, specific management recommendations cannot be provided at this time. Threats may include habitat loss due to conversion to agricultural lands; altered fire regime; habitat fragmentation; invasive plants; use of herbicides and pesticides; and lack of scientific knowledge. Sites at which this species has been documented should be protected and maintained to ensure sufficient densities of the species' host plants.

Research needs: More surveys are needed to determine the current status and distribution of the wild indigo duskywing throughout the state. Research to obtain additional information on this species' life history and ecology and an assessment of threats is also warranted.

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