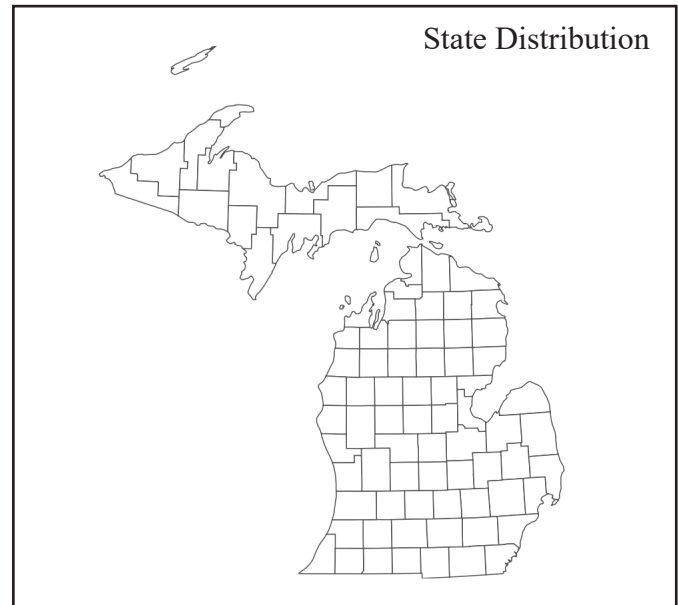
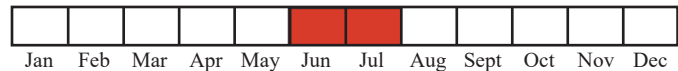


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## Best Survey Period



**Status:** State threatened

**Global and state rank:** G5/S2

**Family:** Fringillidae

**Synonyms:** Some authorities recognize this species under the name *Hesperiphona vespertina*.

**Total Range:** The evening grosbeak breeds in parts of Canada, the United States, and Mexico. In Canada, this it is found throughout British Columbia and Alberta, and in central and southern parts of the provinces from Saskatchewan to Newfoundland. In the USA, it breeds from northern California through western Montana in the west, and Vermont through Main in the east, with some populations extending into northern Minnesota, Wisconsin, and Michigan. The Mexican populations are residents, confined to mountain forests in northwestern and central Mexico (DeGraaf and Rappole 1995). Some local resident populations also exist in the mountains of Arizona and New Mexico. Evening grosbeaks winter in all but the most northern portions of their breeding range. Their non-breeding range varies from year to year, generally extending

into the northern United States from Wyoming to New England, but irruptions can reach as far south as Texas and North Carolina (Gilihan and Byers 2020). Evening grosbeaks underwent a significant range expansion eastward of the Mississippi during the mid-19<sup>th</sup> century, though their current range appears to be contracting (Gyak 2013).

**State Distribution:** In Michigan, evening grosbeaks breed throughout the Upper Peninsula, and to a lesser extent in the northeast portion of the Lower Peninsula (Gyak 2014). In winter they can be found throughout the state with variation in the number of sightings year to year (ebird 2025).

**Recognition:** The evening grosbeak is a sexually dimorphic and stocky finch. Adult males are mainly yellow and yellowish brown with black wings and tail, and a white wing patch; head dark with prominent yellow forehead and eyebrow. Females are grayish brown; wings black with white/gray patches, tail black with white tip and white spots. They have a pale greenish yellow bill in spring, which fades to white in fall. Juveniles resemble adult females, though male juveniles are more yellow. Size and coloration easily distinguish this species from



other finches in Michigan. (National Geographic Society 1999, Gillihan and Byers 2020)

**Best survey time/phenology:** Evening grosbeaks are found year-round in the Upper Peninsula and some parts of the northern Lower Peninsula. They may appear in the southern Lower Peninsula during winter months (eBird 2025). This species may be easier to detect in the non-breeding season, when they travel in flocks of 30-100 individuals and frequent artificial feeding stations (Scott and Bekoff 1991). Nest building occurs from mid-May through mid-June, making June and July the best months to survey for breeding birds (Gillihan and Byers 2020).

**Habitat:** Evening grosbeaks inhabit a variety of forest types throughout their range, including boreal forests and dry-mesic northern forests (Gayk 2013). Nesting habitat for this species is associated with forests containing higher proportions of fir and spruce (COSEWIC 2016). Evening grosbeaks show some preference toward more open forests when selecting nest sites, where nests are reported to be more successful. (Bekoff et al. 1987, Bekoff et al. 1989). In winter, this species descends on bird feeders in large numbers for short periods (Forster 1990).

**Biology:** A few weeks prior to breeding, large winter flocks of evening grosbeaks break into smaller groups, and pair bonds begin to form (Gillihan and Byers 2020). In Michigan, pairs are formed, and nest construction begins, around mid-May (Gayk 2013). Nests are built, primarily by the female, in tree crotches, against the trunk, or toward the end of a branch where foliage provides cover (Scott and Bekoff 1991, Baicich and Harrison 1997). They are usually placed between 20-60 feet (6-18 meters) high (Baicich and Harrison 1997, Gillihan and Byers 2020). The nest cup is loosely constructed of roots and twigs, with a lining of finer materials (Gillihan and Byers 2020).

The female usually lays 3-5 eggs and incubates them for approximately two weeks (Scott and Be-

koff 1991, Baicich and Harrison 1997). The female leaves the nest only for short periods during incubation and the male will regurgitate food for her (Gillihan and Byers 2020). Hatchlings are altricial and downy (Gillihan and Byers 2020). Both parents forage during the nestling stage and feed their young with regurgitated insects (Bekoff et al. 1987, Baicich and Harrison 1997). Evening grosbeaks fledge at two weeks, and continue to be fed by their parents through early September (Scott and Bekoff 1991). By October they are integrated into adult flocks (Gillihan and Byers 2020).

Evening grosbeaks are partial migrants, with some individuals or populations remaining on breeding grounds year-round while others migrate south during winter months (Gillihan and Byers 2020). Females undertake longer migrations than males on average (differential migration), with some evidence to suggest this is due to differences in cold tolerance and social dominance (Prescott 1992). Evening grosbeaks are also well known for being irruptive migrants, with extensive migrations observed in some years but not others (Bolgiano 2004). These irruptive migrations appear to be linked to food availability, occurring to a greater extent when a large seed crop year is followed by a small seed crop year (Koenig and Knops 2001).

In winter, the evening grosbeak's diet is almost entirely seeds, showing preference for species within *Acer*, *Pinus*, *Cornus*, *Prunus* and *Juniperus* (COSEWIC 2016). During the breeding season, invertebrates are the primary food source, with the spruce budworm (genus *Choristoneura*) being of particular importance (Bolgiano 2004, Environment and Climate Change Canada 2022). Evening grosbeaks are also known to gather along roadsides to consume particles of grit to aid in digestion and to collect salts and other minerals (Gillihan and Byers 2020, Environment and Climate Change Canada 2022).

**Conservation/management:** Range wide evening grosbeak populations appear to be declining and their range is contracting (Bonter and Harvey



2008). This species underwent a large eastward range expansion beginning in the 1850's, so it is unclear the extent to which presently observed declines are related to longer term cycles (Gyak 2013, Ralston et al. 2015). However, declines in population have been observed throughout the range, not only in the eastern portions (e.g. Robinson et al. 2022). The causes of this decline remain uncertain (Environment and Climate Change Canada 2022).

Disease may be a contributing factor in population changes, as this species gathers in large flocks in winter and joins other species at feeding stations where diseases may spread (COSEWIC 2016). Some populations of evening grosbeaks have been impacted by an epidemic of *Mycoplasma gallisepticum* conjunctivitis in eastern North America (Mikaelian et al. 2001).

Changes in habitat may also be a contributing factor. Evening grosbeaks require open, mature forest stands for breeding (COSEWIC 2016). Forest harvest and land use change reduces and fragments these habitats (Environment and Climate Change Canada 2022). However, commercial thinning may improve habitat suitability for evening grosbeaks (Hayes et al. 2003). Other forestry maintenance techniques may decrease evening grosbeak abundance, likely by reducing food availability through the removal of insect infested trees (Breidinger and Baty 2020). Forest management decisions should consider these variable impacts in addition to community responses to forestry techniques.

**Research needs:** While the evening grosbeak is declining in population size, the causes of this decline remain murky. Additional research is needed to determine the impact of each threat driving population trends. It is widely agreed that spruce budworms are an important food source for evening grosbeaks, but change in spruce budworm populations have not yet been causally linked to grosbeak populations (Bonter and Harvey 2008). Additionally, the impacts of control methods, such as insecticides, warrant more study (COSEWIC 2016). Forestry methods are likely to have a large

and ongoing impact, and their effects should be monitored and measured to inform future decisions (Environment and Climate Change Canada 2022).

Climate change is likely to have an increasing effect on evening grosbeaks, as the forests they depend on are predicted to shrink. Climate change may also decrease food availability, especially spruce budworm. Continued study of climate related impacts is recommended (COSEWIC 2016).

Additional potential threats require further study to determine the extent to which they may be contributing to population decline. For example, while it is known that evening grosbeaks are affected by a variety of diseases, the impacts on demography are not understood (Robinson et al. 2022). Evening grosbeaks are also known to ingest road salt, but the degree to which populations are affected by its toxicity remains unknown (Environment and Climate Change Canada 2022).

**Related abstracts:** boreal forest, dry northern forest, dry-mesic northern forest, mesic northern forest, black-backed woodpecker, merlin, American goshawk, ram's-head lady's-slipper, pine-drops

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