Potential Changes in Eastern North American Monarch Migration in Response to an Introduced Milkweed, *Asclepias curassavica*

Abstract

We investigated fall and winter breeding behavior by eastern North American migratory monarchs. Using data from two citizen science projects (the Monarch Larva Monitoring Project and Journey North), we documented monarch egg and larva presence in Texas and other Gulf Coast states throughout the fall and winter. An experiment with caged migratory butterflies suggested that fall reproduction occurs in response to the presence of milkweed in good condition. Citizen science data and our own monitoring showed that female monarchs prefer the non-native *Asclepias curassavica* during the fall, and it is possible that the presence of this species triggers diapause termination. *A curassavica* in Texas is more abundant in the fall and in better condition than the local and native milkweeds. Our finding that monarchs eggs and larvae are present throughout the fall and winter shows that some monarchs migrating southward in the fall reproduce as do at least some of their offspring; however, our experiments with caged monarchs suggest that the vast majority of monarchs do not break diapause and reproduce, and that most of the offspring of those that do reproduce are in diapause.