

# Unexpected Sanctuary for Prairie Plants: Midewin's Scrapes

By Brenda Molano,  
Illinois Natural History Survey

During the summer of 2000, a group of volunteers took on the task of finding “scrapes” at Midewin (Fig. 1).



Figure 1 – Volunteers examining a scrape.

For those of you who don't know what scrapes are, they are areas where the Army has removed the topsoil (Fig. 2), characterized for the most part by bare soil (clay) and few plant species. The purpose of this project was to locate the scrapes,



Figure 2 – Scrapes are areas where the topsoil has been removed.

develop a plant species list for them, and determine soil fertility (i.e., pH, N, P, and K). Volunteers were trained to use satellite location (GPS) units and soil test kits, and worked with maps and data sheets to collect the information. Through their work, we have discovered several interesting patterns.

First, 27 scrapes were located using GPS (Fig. 3) -- two on the west side and 25 on east side of Midewin. Although this can be interpreted as the west side having less scrapes than the east side, volunteers were not able to GPS all the scrapes on the west side.

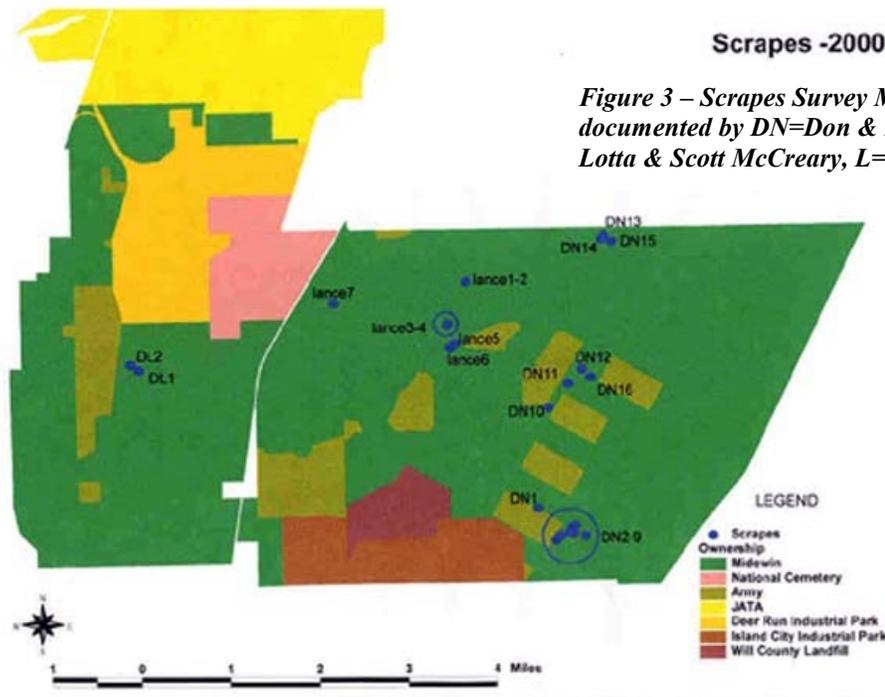


Figure 3 – Scrapes Survey Map. Key to data sites documented by DN=Don & Espie Nelson, DL=Diane Lotta & Scott McCreary, L= Lance Vinsel

Second, most of the scrapes were found along roads, fences, or railroad beds. These locations suggest that many of the scrapes found at Midewin are the result of Army construction practices (i.e., removal of soil to build something).

Third, vegetation cover in scrapes varies. One scrape on the west side was mostly covered by *Bromus inermis* (smooth brome) and *Asclepias verticillata* (whorled milkweed) [Diane Lotta and Scott McCreary data]. On the other hand, many of the east side scrapes either were almost bare soil or were covered considerably with vegetation. This is an important observation because it can potentially be used to determine the age of a scrape (i.e., younger (mostly bare soil) to older (covered by vegetation)). Unfortunately, although some native vegetation was present, many scrapes that are almost bare soil are invaded by weedy species such as *Cichorium intybus* (chicory), *Daucus carota* (Queen Anne's lace), or *Melilotus officinalis* or *M. alba* (sweet clover) (Fig. 4).



**Figure 4 – Chicory and Queen Anne's lace are examples of weedy species that invade scrapes.**

Fourth, a lot of variation regarding size and shape was found. Scrape size can vary from 5 meters to almost 50 meters or more, and their shapes are irregular, some of them are rectangular, oval, etc. Again this may be associated with the construction practices of the Army.

Finally, most of the scrapes are nutrient depleted [Don and Espie Nelson's

soil nutrient tests- pH, N, P, and K]. However, this information should be taken with caution because the soil testing kits that were used are not very powerful.

You may think, well, this information is interesting but how can Midewin use it? One of the purposes of this study was not only to determine the location of the scrapes but also to develop a plant species list for them. Although a lot of the scrapes have weedy vegetation, many native species, in particular prairie species, can be found, as well. For example, volunteers



**Figure 5 – Some scrapes support enough native species to actually look like a prairie.**

were able to locate one scrape that actually looks like a prairie (Fig. 5).

Among the prairie species that can be found at this scrape are: *Aster novae-angliae* (New England aster), *Liatris spicata* (dense blazingstar), *Penstemon digitalis* (foxglove beardtongue), *Psoralea tenuiflora* (scurfy pea), *Sisyrinchium albidum* (white blue-eyed grass), *Solidago rigida* (stiff goldenrod), and *Zizia aurea* (golden Alexanders) [Don Nelson data]. By the way, you can find most of these species in our *Wildflowers and Grasses of Midewin* brochure. Unfortunately, sweet clover and smooth brome are invading this area rapidly. This scrape should be protected and managed to eradicate these exotic species but also to enhance the native vegetation.

In addition to this "prairie" scrape, scrapes may be the only place where some

species can be found at Midewin. For example, *Asclepias viridiflora* (green milkweed, Fig. 6) is found here only in scrapes. This species likes dry or sandy soils. Because most of the scrapes found at Midewin are bare soil (clay) they provide an excellent habitat for this species. In the scrapes you can find green milkweed seedlings to adult individuals with pods [Espie Nelson data].

Finally, because volunteers got involved in this project, new seed collection sites have been discovered. Scrapes in

general have many prairie species that can be used as seed sources for the restoration that will be going on at Midewin.

I cannot finish this report about the Midewin Scrapes without thanking the volunteers who were involved in the project. To **Espie Nelson, Don Nelson, Diane Lotta, Scott McCreary, Lance Vinsel, and Gretchen Baker**, thank you so much for your help and effort during this project. I hope that this was a positive experience for all of you.

*Figure 6 – At Midewin, green milkweed is found only in scrapes.*

