

Ecological Monitoring Committee for the Lower Athabasca (EMCLA) Rare Animals 2013 Methods

The Ecological Monitoring Committee for the Lower Athabasca (EMCLA) is building protocols and techniques for using automated recording units (ARUs) to monitor vocalizing species. As a result, ARUs were used at sites across the Lower Athabasca Region during the 2013 field season. The ARUs deployed in 2013 were programmed to turn on and record for 10 minutes at the start of each hour. The EMCLA has developed a standardized central database and system for processing recordings from ARUs, where staff listened to a subsample of the recordings, and all species heard were entered into the central database on a minute-by-minute detection basis. The primary focus of EMCLA's 2013 field season was to improve detections of owls, yellow rail, and amphibians. To do this, the EMCLA conducted 2 field seasons: a late winter season for owls, and a late spring/early summer season focused on wetlands.

For both seasons, ARUs were in sets of five at each site. Each site was composed of 5 ARU stations in a square formation, one at each of the four corners and one in the center. For owl monitoring, ARUs were placed 1.6km apart, and for wetland monitoring they were placed 600m apart. Sites are deployed in clusters or groupings in a similar area. In the case of owls, these clusters consisted of sites with varying levels of noise intensity; in the case of wetlands, the clusters provided greater spatial coverage of large, wetland complexes.