



Figure 2. Study sites for American Golden-Plover surveys in Illinois and Indiana, USA, 2008.

temporal scale of hotspots, 5) model habitat associations, and 6) provide field experience for students.

In 2008, we recruited veteran birders to serve as crew leaders and mentors for the student volunteers. Twenty-five people participated, many for the first time. Prior to the survey we met to explain the protocol and practice identifying and counting plovers. Each crew was given detailed maps and instructions to enable independent work in the field.

We used a 6-mile by 6-mile township unit to standardize each sampling area. This sampling unit enabled us to bracket the hotspots and determine their spatial bounds. To achieve the most thorough spatial survey while

avoiding double counting, we randomly placed thirty survey points within each township at the midpoint of east-west section roads. Each point was further divided into four quadrants. We surveyed all ten townships during a 24-hour blitz at the peak of migration on 19 April 2008.

We conducted 5-minute, unlimited-radius, point counts at each site, recording the number of plovers and their dominant behavior. Observers also documented all plovers detected en route between observation points. We rotated observers to reduce systematic observer bias. We also documented the distance to each flock to estimate the detection probability.

We documented the aforementioned

habitat characteristics of both occupied and unoccupied quadrants. Using geospatial databases, we also recorded soil type and topography, which may be among the factors preferred by plovers (Erickson 1984). All of these covariates will be used in later analyses to construct models of plover occupancy.

The spring migration of 2008 was unusual for many birds, and golden-plovers were no exception. Leroy Harrison of Prairie Ridge State Natural Area reported fewer plovers overall in 2008 than he has seen in the last thirty years. Of our 10 sites, only 4 held any plovers on the April 19th survey. Most plovers stopped short at the southern portion of the stopover region. Ninety-eight percent of all the plovers we observed were found at similar latitudes in townships E, F, and G (Figure 2).

In spite of the odd migration, we still recorded 11,655 plovers. 3,862 were recorded in township F, with exceptional numbers southeast of Arcola, Illinois. 3,470 were recorded in township E, with most located southwest of Dalton City, Illinois. 4,083 were observed in township G, primarily northwest of Hume, Illinois. Township I in Benton County, Indiana contains an Audubon Society Important Bird Area for golden-plovers, but we only recorded 240 plovers there, with very few sightings at any time during the entire migration.

Supplemental surveys in the weeks preceding and following the primary blitz survey indicated very consistent use of the same areas throughout the staging period. In the three most heavily used townships (E, F, and G), plovers generally restricted their daytime use to an area no larger than nine square miles. With only one year of observations, it is not yet clear to what extent plovers rely solely on these very specific restricted areas, but it seems possible that plovers rely on discrete hotspots for much of their stopover. We will continue to examine the local and landscape-level characteristics of plover hotspots to try to identify what sets them apart from the rest of the region.