Grassland Habitats at the Miami University Airport: A Brief History

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> *As is true of most declining species in North America, the primary cause of emberizid population decline is habitat loss. The grassland species, in particular, have suffered from the widespread conversion of their habitats to agriculture and housing developments.*
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> —John B. Dunning, Jr. (2001)

Without a doubt our knowledge of the true status of Smith's longspur *Calcarius pictus* in Ohio is heavily biased by data from a little-known site on the southwestern edge of the state, the Miami University Airport near Oxford. Several authors note that the species has often been found at small airports. Lowery (1974) reports that the only records for Smith's longspur in Louisiana came from the old Municipal Airport in Shreveport, where it was found during the winters of 1952-53 and 1953-54. Kemsies and Randle (1964) note that during the winters of the 1950s and 60s this species was discovered at small airports in Arkansas, Mississippi, Tennessee, and Alabama. This information enabled the more accurate delineation of its wintering range.

Airports also host Smith's longspurs on migration, as observers at the Miami University facility were to learn beginning in April 1949. Many flocks of longspurs were studied there over the years, until the last report of the species from the site in 1963. The dearth of information after 1963 may be due to a lack of investigation by observers, but I doubt this to be the case. At least one observer that I know of continued to visit the airfield after 1963. David Osborne, an ornithologist with Miami University's Department of Zoology, visited the airfield throughout his career as a faculty member until his retirement in 1998. He regularly took students from his ornithology classes to the field from January to May almost every year to search for longspurs and other grassland species. They did not find Smith's longspurs, and I would argue that previous changes in management practices at the property had probably led to the abandonment of the airport as a migratory stopover location for the species.

The university airport was first established in January 1943 on a 300-acre tract of land, purchased in 1942, on Fairfield Road just west of Oxford proper. The earliest historical record of land use for this property I was able to locate dates to 1912. At that time the majority of the acreage was utilized for agricultural purposes, with several small woodlots (~35 acres total: 5, 7, 10, and 13 acres individually) dotting the landscape. In 1912 these woodlots were comprised of both old-growth and young-growth beech, gum, elm, maple, hickory, ash, and some basswood. A small stream is documented in the northeastern corner of the property running through one small woodlot (McDonald 1941).

Photo taken by Gilson Wright in January 1943 of the Miami University airport's first hangar. The structure was moved from an abandoned Cincinnati airfield. Photo courtesy of the Smith Regional History Library of Oxford, Ohio.

In 1943, 30 acres of the 300 purchased by the university were cleared of trees and graded, and a makeshift hangar was erected on the property. The few aircraft present used grass fields for landings and take-offs, as there were no runways. By mid-1943 a total of 85 acres was being utilized, with an additional 60 acres in the process of preparation through seeding (White 1994).

By 1946 roughly 94 acres were devoted to wheat, with additional acreage for the growth of straw (~35 tons) and hay (~8 tons). Straw was shown to have a low return per acre, and therefore was incorporated into the soil. The planting and harvesting of straw may subsequently have been abandoned over the latter part of the decade. In a 1949 letter to Miami University's president W. P. Roudebush, Art Conrad, the grounds department land manager, specifies the proceeds generated from the sale of only hay and wheat for that season. Though this does not rule out the possibility that straw was still grown, it does suggest that not enough was planted to generate any income during this time period. In his report Mr. Conrad also remarks that the production of wheat was "spotty" due to variation in the conditions of the field, some areas being wetter than others. Overall, wheat was grown on 70 acres and hay on 25 acres during the 1949 season.

Though university documents are lacking for 1950-58, Jay Sheppard (pers. comm.) reports that in the summers of 1956 and 1957 approximately 82 acres of tomatoes were planted on the southern portion of the property. Later, the 1958-59 report to the president presented the first published documentation of a change in crops planted at the airfield. In this report, Mr. Conrad noted that 87 acres of the property had not been agriculturally developed in order to preserve landing areas for planes. Eighty-five acres were planted with corn on a fifty-fifty contract basis with an unidentified local farmer. In the Miami University business manager's report to the president for the 1960-61 fiscal year it is noted that, again, 85 acres of corn were planted and harvested. Additionally during this year, a 3000-foot blacktop runway was installed, and the construction of a 1700-foot hard-surfaced taxiway was underway at the time. Two hundred acres of turf were maintained for general landing purposes by aircraft. The 1961-62 report from the grounds department to the president documented the first use of selective herbicides for weed eradication throughout the university campus and airfield runways. Nonselective chemicals were applied to areas in which grass was undesirable. The following year, the remaining turf runways were sprayed in hopes of achieving weed control for several seasons.

The photos presented here were taken from roughly the same southward facing angle. The photo above was taken in 1960 by G.R. Hoxie. The photo below was taken in 1986. Notice the planes from the 1960 photo, parked to the west of the large hangar, are now parked on its south side in 1986. The paved plane parking area and taxiway shown in the 1986 photo do not exist in the photo taken in 1960. The encroaching agricultural fields can be seen in the upper left and right hand corners of the photo taken in 1986. These photos were provided by the Smith Regional History Library and Miami Computer and Information Services (MCIS) audio-visual department.

The Miami University grounds department report for the period of 1 July 1962 through 30 June 1963 notes a harvest of 82 acres of corn and 32 acres of soybeans at the airport property. After the harvest, 76 acres were replanted in corn and the 32 acres of bean fields were sown with wheat. Though not specified in the report, this replanting was most likely done in the spring of 1963. During this period weed-killing chemicals continued to be applied to the turf runways.

During the 1963-64 reporting season, 1710 feet of sub-surface drainage system was installed in the agricultural portions of the airfield. Presumably this was to eliminate the wetter areas that caused "spotty" crop production in years past. Interestingly, several authorities say that Smith's longspurs prefer wetter fields than do Lapland longspurs (see Bailey and McCoy this issue, and Kemsies 1968); Sheppard, who notes (this issue) the species' habit of going to standing water in fields every day, nevertheless does not believe they showed greater preference for wetter habitats in Ohio than do Lapland longspurs (pers. comm.).

By 1966 replanting of wheat was abandoned, and corn and soybeans became the staple crops for that year. The grounds department report for the 1966-67 fiscal year notes the planting of 82 acres with corn and 30 acres with soybeans, and fails to mention wheat or other crops such as hay. By the mid- to late 1980s the amount of land utilized for agricultural purposes had increased greatly. Aerial photos of 1986 show that much of the property once left as turf had been converted to what appear to be soybean fields. This increase in land use for agricultural crops may have begun in the mid-1970s, according to Mr. K. Haven (pers. comm.), former groundskeeper for the airport during that period. The conversion of turf to leased agricultural land was implemented by Mr. Haven as a means to reduce the amount of mowing that was necessary to maintain the turf areas. The available land was leased to local Oxford area farmers.

The transition from wheat and hay crops in the 1940s to corn and soybeans in the late 1950s and 1960s, coupled with increased drainage of the field in the early 1960s, may be the reasons for the abandonment of the area as a migratory oasis in Ohio. Briskie (1993) notes that Smith's longspurs' diets during winter and migration is composed of seeds of grasses, waste grain, and weeds. These include wheat, timothy, clover, crabgrass, ragweed, bulrush, millet, and sedge. Kemsies and Randle (1964) comment that in at least one occurrence of the species, near Montgomery, Alabama in December 1958, an individual was found feeding on waste grains of wheat. The use of herbicides, begun during the early 1960s, may have also affected what remaining food sources were available for the species in the corn and turf areas.

Jay Sheppard (pers. comm.) feels that the openness of the habitat was what drew Smith's longspurs to the area, and to similar fields nearby in Indiana. He comments that he rarely observed the species near fence lines or relatively large trees (>3-4 m in height), and speculates that the species may still pass nearby, but is simply too difficult to find. In recent years, however, many local birders have birded similar habitats in the surrounding areas (near Oxford, Reilly, Morning Sun, Eaton, and Camden in Ohio, and Bath, Brookeville, and Liberty in Indiana) from at least August through May and June of each year with no success in finding the species.

It is unfortunate that an area once noted for the presence of migrant and breeding grassland species such as Smith's longspur, Sprague's and American pipits, American golden-plover, upland sandpiper, short-eared owl, and loggerhead shrike is now suitable habitat only for such species as eastern meadowlark (early spring), horned lark (winter through early spring), northern harrier (late fall through winter), mourning dove, European starling, and house sparrow.

Based on the present status of Smith's longspur in North America, it may be worth the effort of local and state conservation organizations to encourage land managers to return portions of this property back to more grassland-like conditions. This could be accomplished through the planting of hay and wheat crops, or more native grassland plant species as a means of managing for the species in Ohio.

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References

Briskie, J. V. 1993. Smith's Longspur. In *The Birds of North America*, No. 34 (A. Poole, P. Stettenheim, and F. Gill, eds.). The Academy of Natural Sciences, Philadelphia and The American Ornithologists' Union, Washington, D.C.

Dunning, J. B. 2001. New World Sparrows. In *The Sibley Guide to Bird Life and Behavior* (C. Elphick, J. B. Dunning, and D. A. Sibley, eds.). Alfred A. Knopf, New York.

Kemsies, E. 1968. Smith's Longspur. In *Life Histories of North American Cardinals, Grosbeaks, Buntings, Towhees, Finches, Sparrows and Allies*, USNM Bulletin 237, Vol 3 (L. A. Austin, ed.). Smithsonian Institution Press, Washington, D.C.

Kemsies, E., and W. Randle. 1964. A distributional summary and some behavioral notes for Smith's longspur, *Calcarius pictus*. *Canadian Field-Naturalist* 78:28-31.

Lowery, G. H. 1974. *Louisiana Birds*. Louisiana State University Press, Baton Rouge.

McDonald, M. L. 1941. A Woodlot Survey of the Southern Half of Oxford Township. M.S. Thesis. Department of Botany, Miami University, Oxford, Ohio.

White, R. E. 1994. *1940-1946: Oxford and Miami University During World War II*. The Smith Library of Regional History, Oxford Lane Public Library.

Smith's Longspur: Occurrence in Indiana and Hints on Finding Them

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Smith's longspur was not regarded as a regular migrant through Indiana until the late 1940s and early 1950s, when birders seeking the last remaining prairie chickens in Newton County, near the town of Enos, began encountering them every April. Since then many records have accumulated, almost exclusively in the westernmost counties, from Lake Michigan south to Gibson County. They are difficult to locate even in areas where they are known to occur in numbers each spring, so it is not surprising that very few birds have been found elsewhere in the state, especially since their preferred corn-stubble habitat is not a very inviting locale for birding in early spring.

The peak time for Smith's in the Midwest is early to mid-April, but they can sometimes be found in late March and early May. Rarely are they found in anything other than corn-stubble fields, and they are very particular about the type of fields they feed in: the fields must be untouched by the plow since the harvest. Plowed fields are for the Lapland longspurs. In searching these unplowed corn-stubble fields, however, one's odds will be exponentially increased if a field can be found with copious amounts of the magic element that few Smith's can resist: FOXTAIL. Foxtail is a straw-colored weed that grows in thick clumps and is often smashed down and matted in the spring, sometimes missing its fluffy "tail" seed head. It commonly grows around the borders of fields, but when it is found growing throughout it is as good as gold for Smith's longspur in western Indiana. It is not certain whether they feed on the seed or use it for cover, but it is clear they have a penchant for it. It also helps if the accompanying stubble is not cropped too short: a foot or two high is good. A little vegetation of other types growing between the rows also helps, and thus fields that have been left fallow for a year or two are best. Smith's tend to gravitate toward the lower damper portions of the fields, so try these areas first.

If possible, try to pick a day with as little wind as possible. On calm days the longspurs are more likely to make short flights and to call, and it is easier to hear them at a distance. They are usually heard before they are seen. Their call is a rattle similar to the Lapland's and is difficult to differentiate without experience with both, but sounds slower and louder. The best way to describe the difference is to think of the Lapland's call as fast, thin, and dry and the Smith's as slow, fat, and wet, as though they are spitting as they give it. They will often come in and investigate when one plays a recording of this rattle call. Good examples of it can be found on both the Peterson Western Birds CD and the National Geographic Society's Bird Sounds CD.

Determining they are in a field is one thing; actually seeing anything other than a group of small specks flying quickly away is another. When in low flight, how-