ABSTRACT: The Flint Hills of Kansas are the largest area of tallgrass prairie remaining in North America. For over a century, this land has been fenced and privately owned. The largest parcels have been used for cattle grazing, and the area as a whole offers little public access. To determine the ownership and tenure of the largest tracts of land in this area, we identified and mapped all tracts larger than 777 ha (3 square miles). County land ownership maps were used to identify these tracts of land. We then visited each of the 12 counties’ Register of Deeds offices, where we obtained the name and address of each landowner and recorded dates of purchase. Those 102 large parcels totaled 193,000 ha (almost one-half million acres); the average parcel size was 1,893 ha (4,675 acres). Chase County, Kansas, which in the 1970s contained a proposed U.S. national park site, had the largest rangeland parcels: 11 were larger than 1,554 ha (six square miles). Contrary to the notion that these lands are owned and operated by long-term Flint Hills ranch families, we found that two-thirds of the landowners could be identified as “absentee.” We believe that this study of recent historical ownership of private lands can serve as a model for other potential conservation areas where ownership patterns are important for land protection, purchase, and public access.

Index terms: Flint Hills, tallgrass prairie, private land ownership, Kansas, ranching

INTRODUCTION

The Flint Hills in eastern Kansas, USA, cover approximately 10,000 km² and are the largest remaining region of tallgrass prairie in North America (Figure 1) (Seastedt and Knapp 1986, U.S. National Park Service 1991). Beautiful, biologically diverse, and sparsely populated, sites in the Flint Hills have repeatedly been proposed as tallgrass prairie parks or reserves. However, since the 1880s, this area has been the largest commercial grazing area for seasonal cattle in the United States (Malin 1942, Hickey 1988). Some landowners and private property rights advocates strenuously oppose establishment of a prairie park in the Flint Hills. They claim the land is already in the hands of devoted caretakers who, in many cases, have inherited it from previous generations.

The Flint Hills are characterized by a succession of prominent scarps and benches formed on Permian limestones and shales (Schoewe 1949, Kollmorgen and Simonett 1965). Owing to surficial geology, most of the area has not been plowed and is managed as rangeland. The landscape is dominated by tallgrass prairie, including big bluestem (Andropogon gerardii), little bluestem (Andropogon scoparius), Indian grass (Sorghastrum nutans), and switchgrass (Panicum virgatum) (Seastedt and Knapp 1986, Reichman 1987). These dominant, warm-season grasses can be 2–3 m tall in favorable locations. In addition to these species, there is considerable diversity of other plants, including seven other major groups of prairie plant species: cool season grasses, legumes, ephemeral spring wildflowers, spring wildflowers, summer/ fall wildflowers, annuals, and woody species (Weaver 1954, 1968; Reichman 1987; Kindscher 1994; Kindscher and Wells 1995; plant nomenclature follows Great Plains Flora Association 1986).

Bison, elk, and pronghorn originally grazed and browsed the Flint Hills. Since the late 1800s, these native herbivores have been replaced by cattle, which became the foundation for economic activity in the region (Malin 1942, Kollmorgen and Simonett 1965, Reichman 1987). The ecological results of cattle grazing and its various levels of intensity, though still contested, clearly affect long-term biological diversity, range condition, and habitat for other species (e.g., Fleischner 1994; U.S. Bureau of Land Management 1994; Noss 1994, 1995). Beyond debate, however, is the fact that few people have access to this beautiful region, except through a car window as they pass by the ranches. The Flint Hills have been fenced private property.
for more than a century.

Since the 1930s, widespread desire for public access and preservation of this unique ecosystem has sparked calls for a prairie park. By the early 1950s, U.S. National Park Service feasibility studies had identified two Kansas Flint Hills sites: one at the intersection of Chase and Greenwood Counties, the other in Elk County (Figure 1). In 1959, the National Park Advisory Board proposed that a 13,800-ha (34,000-acre) Grasslands National Park be located near Manhattan in Pottawatomie County (State of Kansas 1974). Since then, numerous attempts have been made, including formal proposals to the Kansas Legislature and U.S. Congress as well as the National Park Service in 1962, 1963, 1971, 1975, and 1991 (U. S. Department of Interior 1991). Each of these attempts met the strident opposition of local landowners (U.S. Senate 1963, 1991; State of Kansas 1973, 1975).

Prairie park proponents have cited numerous reasons for their advocacy. In 1963, Conrad Wirth, Director of the National Park Service, testified on behalf of a Flint Hills park before the Subcommittee on Public Lands (U.S. Senate 1963). He stated,

now here is a large block of prairie preserved as such—an area where the prairie itself is primary and where the objective is to preserve it so that its original vastness, beauty, and significance can be appreciated as a major natural type and for the part it played in the development of this Nation.

E. Raymond Hall, Professor of Biology at the University of Kansas, agreed: "The best reason for preserving an example of the tallgrass prairie is to make its beauty available to everyone, now and in the future, and I make no apologies" (U.S. Senate 1963). However, Hall added another incentive for preservation:

Too little has been said, in my opinion, about the scientific value of these natural areas... tallgrass prairie will be recurrently useful to any student of microbiology, to the soil scientist, hydrologist, biologist, and other investigators as an outdoor laboratory for scientific research, which means a laboratory area for practical study and understanding of the effects of native plants and animals upon the soil and upon each other (U. S. Senate 1963).

Opponents of a tallgrass preserve have countered such claims effectively. Early hearing records are full of references to the fire hazard of irresponsible tourists on the dry summer plains. Many residents also feared the degradation of their communities by tourist accommodations such as car parks, motels, and fast food restaurants (U. S. Senate 1963). However, testimony in recent years has emphasized the sanctity of private property and the potential loss of county tax revenues. Kansas House Concurrent Resolution No. 2013, which urged Congress in 1975 not to establish a park in Kansas, lamented that such an action "would result in the taking of substantial acreages of privately owned property of ranchers and cattlemen who depend upon the preservation and improvement of the grassland for their survival" (State of Kansas 1975). The assumption has been, as Mr. Bill House testified in 1973, that "the land is primarily owned by people who have had it for three, four and five generations" and that these owners are superior stewards of the land (State of Kansas 1973).

Because of the United States' long history of private property rights and the extensive acreage under management by federal and state governments, land ownership is a powerful determinant of the types of conservation that can occur at any specific location on the landscape. Knowledge of land ownership can be a powerful tool for conservation planners who are trying to protect biodiversity, landscapes, or other valuable economic, ecological, or environmental attributes. Information derived from courthouse records and abstracts can

Figure 1. Map of the Kansas Flint Hills showing the location of the largest 102 parcels of land.
tell us whether landowners in potential conservation areas are private or corporate, how long they have owned the land, and where they live (thus providing information on the relative amounts of absentee and local ownership). In addition, land ownership information is necessary for making landowner contacts related to ecological studies and conservation planning, for identifying where clusters of large parcels are located, and for determining the veracity of antipreserve claims related to the large parcels that have been proposed as national parks or reserves.

**METHODS**

In response to the continuing interest in patterns of land ownership and land tenure, we identified and mapped the largest properties in the Kansas Flint Hills. We defined the boundaries of the Flint Hills by their geography and land use (see Figure 1) (Schoewe 1949, Kollmorgen and Simonett 1965). From several publishers of rural directories, we then purchased maps that roughly identified property boundaries and owners. These maps are frequently out of date, but useful as a starting point. We selected 777 ha (3 square miles) as a minimum parcel size. Parcels larger than this size appear to be economically viable for ranching and historically have been the most attractive for conservation purposes (U.S. National Park Service 1975, 1991). Marshall County was excluded from the study because it contained too few parcels greater than three contiguous square miles in size. The county courthouses of each remaining county were then visited in 1993 and 1994 to verify current property boundaries and ownership and to determine historical ownership patterns.

From each county appraiser’s office, we obtained “legal descriptions” of property, accessible by owner’s name and property address. In offices with particularly helpful staff, we pointed at specific locations on their county map. A legal description guaranteed accuracy during the rest of the search. Property boundaries were then verified against the title register in the office of the Registrar of Deeds. After determining that the property was mapped properly on the ownership maps, it was possible to check back through time noting changes in ownership or property boundaries. This was a time-consuming process for large parcels because, at least in Kansas, each quarter section is recorded separately in the Register of Deeds. To maintain a high level of accuracy, we spot checked several quarter sections of the perimeter of each tract, several in the middle, and finally a few of the surrounding sections comparing ownership and dates of sale.

Title registers contained the date and nature of transfer as well as the names of buyer and seller. Current addresses of owners were available from the County Tax Assessor or Clerk. Without going to successive deeds (often a rigorous and time-consuming task), using title registers was the only way to determine if, when, and by what means holdings had grown or shrunk. Checking the actual deeds of transfer was often useful. The deed gave a legal description of land being transferred and, in some counties, a description of land use at the time of sale (e.g., pasture, tillage, or woodlot). Records in the probate court are often valuable as well, as not all inheritances are recorded in the title register.

There were several limitations to the methodology employed for our research. Inheritance of land can be obscured in cases of inter-vivos (pre-death) transfer, popular in states that allow it because probate and inheritance taxes are avoided. Absentee ownership can also be difficult to determine. Out-of-state addresses (common in the Flint Hills) are relatively straightforward. However, in-county addresses do not always denote local owners. Often, addresses listed refer to solicitors, accountants, or other agents of the owner. Sometimes, a post office box in the county seat is listed in lieu of a street address. In either case, landowners may or may not be “absentee.” For this study, we defined “absentee landowners” as those people who resided more than one county away from their property—at least 80 km (50 miles). Our underlying assumption was that such distances made owners unlikely to participate in the daily management of their ranches.

Determining corporate ownership can be challenging as well. Corporate ownership is often hidden behind an agent’s name. Corporate entities may also represent family holdings (many families incorporated or put their land into trust during the 1980s for tax purposes). We were unable to distinguish between types of corporate ownership. The Kansas Secretary of State’s office informed us of corporate status of parcels based on filings their office had received from corporate entities, but required the owner’s exact name (e.g., Flint Hills, Inc., rather than Flint Hills). The names we supplied them came from county records and may have been different. [Note: For others conducting similar research, abstracts of title, which were unavailable for our study, would have dramatically decreased our workload.]

In addition, our methods may not have identified all properties that met our size criteria but crossed county lines. We have found only one instance of this error—a ranch that crosses the Elk, Butler, and Greenwood County lines.

**RESULTS AND DISCUSSION**

All identified properties were mapped on 1:100,000 scale topographical county maps. Our study identified 102 properties (see Figure 1) that are 777 ha (3 square miles) in size or larger. For purposes of our study, we defined these as “large parcels.” These large parcels cover an area of 193,063 ha (476,866 acres); the average size is 1,893 ha (4,675 acres). The largest individual properties were found in three counties: Butler, Chase, and Greenwood (the latter two of which were identified by the National Park Service as potential preservation sites, U.S. National Park Service 1975). Chase County contained 28 large parcels (Table 1). The largest individually owned parcels in our Flint Hills study area are 4,793 ha, 4,275 ha, and 3,498 ha, respectively (18.5, 16.5, and 13.5 square miles respectively). Within Butler, Chase, Chautauqua, Elk, and Wabaunsee Counties, large parcels are geographically clustered (Figure 1).

In Chase County, which contained more large parcels than any other Flint Hills
county, six of the ten largest parcels, approximately 33,200 ha (82,000 acres) collectively, were owned by out-of-state residents—three in Texas, two in Missouri, and one in Ohio. Of these ten largest parcels, four had been purchased during the last two decades—1973, 1983, 1985, and 1991. Each property had previously been sold only a few decades before its most recent purchase. These patterns of relatively short land tenure occur throughout the Flint Hills (for example, over half of the large parcels in Chautauqua and Greenwood Counties have been purchased since 1990).

CONCLUSION
The claim that the largest parcels of Flint Hills land (the type of parcels repeatedly proposed for conservation purposes) have been owned for generations by family ranchers is not supported by our data. Two-thirds of the largest 102 landowners for the region are absentee as defined by this study. Seventeen percent are corporate owners, and only 18% of the 102 properties had clearly been in the same family since at least the 1940s. The effects of these ownership patterns on the land and its biodiversity are unknown as there have not been any studies comparing private, public, or absentee ownership.

We evaluated only the largest parcels of Flint Hills land because large reserves are widely believed to be most beneficial for conservation (Noss and Harris 1986, Noss 1991) and especially for conservation of tallgrass prairie biodiversity (U.S. National Park Service 1975). In addition, these parcels have most often been proposed as conservation areas in the past. Having identified clusters of large parcels and a means of contacting their owners, we hope to open a dialogue that could lead to creative conservation proposals, including a mix of public and private ownership, leases, management agreements, and conservation easements. We believe land tenure studies in other areas can provide similar opportunities.

ACKNOWLEDGMENTS
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<table>
<thead>
<tr>
<th>County</th>
<th>Number of Parcels</th>
<th>Total Acreage of All Parcels</th>
<th>Average Size</th>
<th>Average Distance From Owner’s Home to Parcel (mi)</th>
<th>Percent Absentee Ownership</th>
<th>Average Date of Purchase</th>
<th>Average Date of Previous Purchase</th>
<th>Percent Corporate Ownership</th>
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Average: 7.8 36,682 5,148 2,083 65.1 57.6 1965 1958 17

Total: 102 476,866


U.S. Senate. 1991. Unpublished Hearings before Members of the Subcommittee on Public Lands, Emporia, KS.

