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Seasons of the Tallgrass Prairie

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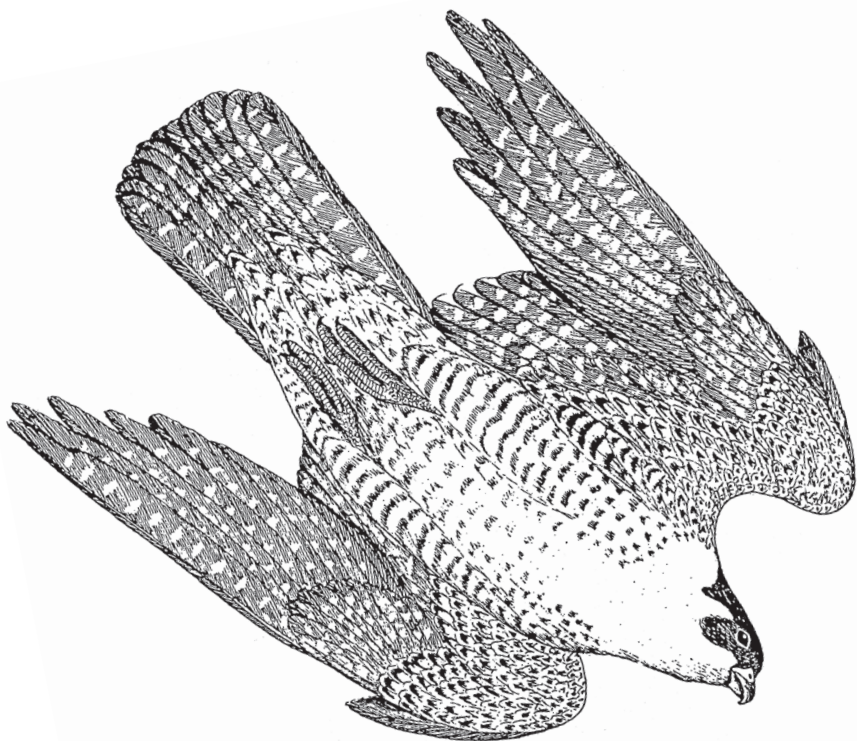
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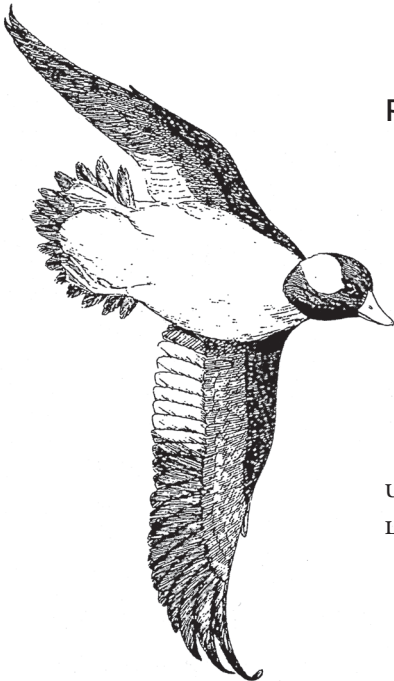
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SEASONS
OF THE
TALLGRASS
PRAIRIE

A Nebraska Year

PAUL A. JOHNSGARD



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LINCOLN AND LONDON

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Dedicated to all who fought all the past battles to preserve and protect Nebraska's natural resources, to those doing so today, and to any who will take on the future challenges to keep Nebraska a special place for both humans and all of our fellow travelers.

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PREFACE AND ACKNOWLEDGMENTS

This collection of essays had its origins mostly by chance. At times, after a wonderful day out-of-doors in Nebraska, I have felt compelled to sit down and summarize some of my immediate past experiences. That is how the first of the essays came about, after a quasi-religious visit to an ancient Pawnee sacred site. Others, such as the essays on snow geese and the Platte River, were written only after months of growing concern over what I have come to believe is an increasingly short-range attitude about the value, beauties, and needs for preservation of our state's finite natural resources of land, water, and ecosystems. Still other essays were written at the suggestion of friends or to comply with a magazine or newspaper editor's request for a timely story.

In any case, nearly this entire collection of essays has, in large part, been extracted from my already published writings. The great majority of them were written for *Prairie Fire*, a monthly independent newspaper published in Lincoln. The progressive stance of *Prairie Fire* as to important environmental and political issues is so refreshing and welcome that I have happily complied with any suggestions by its editor, Cris Trautner, for submissions and have at times pestered her to accept still others. I also greatly appreciate her help in providing me with edited copy of all the essays that were first published in *Prairie Fire*, and the willingness of the newspaper's publisher, W. Don Nelson, to let me reproduce them. The original essays and all my other pieces I have published there can be found on the newspaper's website: www.prairiefirenewspaper.com.

Other than the *Prairie Fire* articles (which can be easily identified by their same or similar titles in the bibliographic sources section), I have, with permission, extracted parts or used all of three stories previously published in *Nebraska Life* magazine. These include the

account of reproduction in the yucca and yucca moth (from “The Ancient Romance of the Yucca and the Yucca Moth”), the section of the prairie grouse essay that describes the interactions of a sharp-tailed grouse and prairie-chickens on a joint display ground (from “A Dozen Squaretails and a Sharpy”), and the descriptions of native grasses in an essay on tallgrass prairies (from “Autumn on the Prairie: Nebraska’s Grasses”). Additionally, I have extracted some historical information on irrigation and corn production in the Platte Valley from my book *The Platte: Channels in Time* (University of Nebraska Press, 2008). In all cases, there has been some trimming, updating, or other modifications as has seemed desirable. The final essay is entirely new, and I appreciate the advice that Jim Douglas and Scott Taylor of the Nebraska Game and Parks Commission provided in fact-checking my comments about that agency.

Dr. Karine Gil-Weir kindly agreed to collaborate with me in writing two of the essays; her work at the Crane Trust has provided an important baseline for long-term population studies of both sandhill and whooping cranes in Nebraska and elsewhere. I also owe the Crane Trust thanks for letting me use their bunkhouse on many occasions, as well as using their crane blinds, and the same is true for the Rowe Audubon Sanctuary and the Nature Conservancy. And I would be remiss not to mention Tom Mangelsen and the entire Mangelsen family, whose cabin on the Platte River has often seemed like a second home to me and whose hunting blinds converted easily to photographic blinds, allowing Tom and me to often ruminate about the fate of the cranes, the Platte, and the natural world, and, while thus engaged, to often miss out on great photographic opportunities.

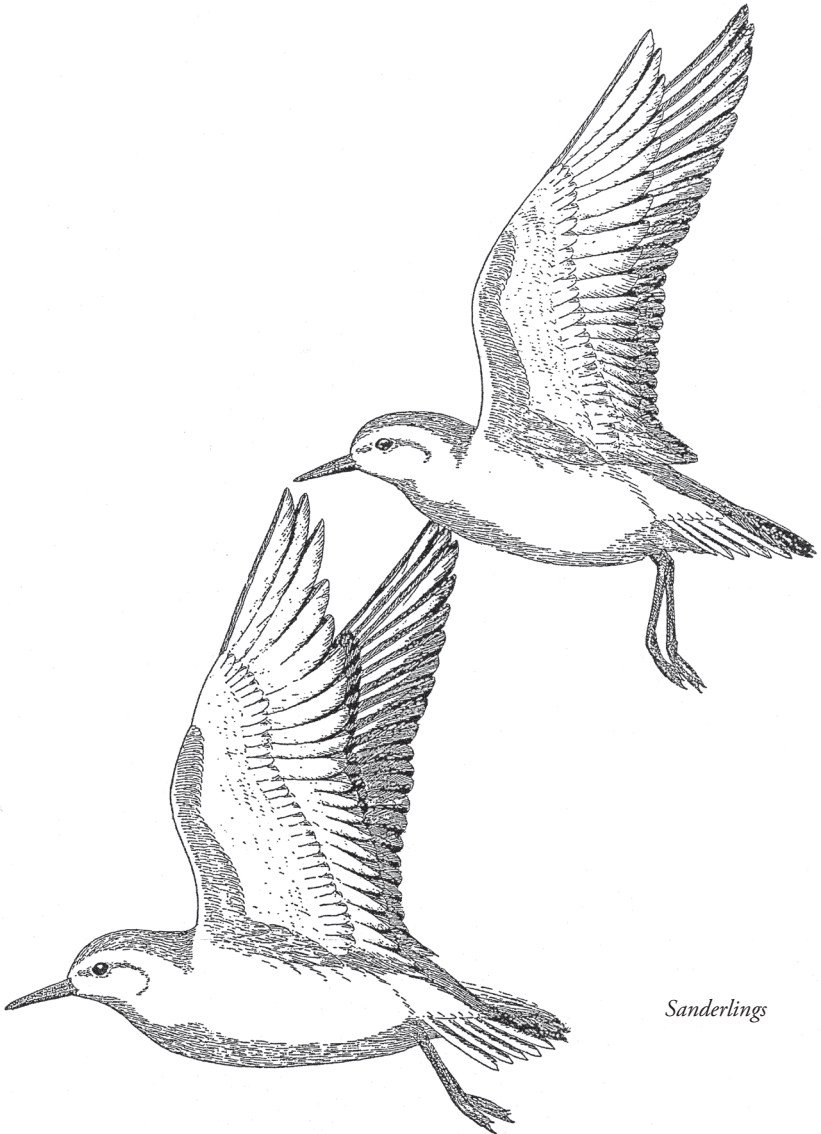
It is impossible to acknowledge all of the help I have directly or indirectly had in being able to write these pieces—they have grown out of a half century of roaming Nebraska’s back roads, trails, and half-forgotten places among our grasslands, forests, rivers, and wetlands. Writing these essays has brought back a host of memories of locations, events, and golden days afield with hundreds of students, friends, colleagues, and others. They will know who they are.

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PART ONE

Wild Places and Natural Treasures



Sanderlings

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1

A Place Called Pahaku

There is an area in eastern Nebraska where the Platte River, after flowing northeastward from the vicinity of Kearney for nearly 150 miles, enters the glacial drift bordering the Missouri Valley and turns directly east. Over its eastward course of about fifty miles, the river forms a shallow and wide sandy channel that is bounded to the south by forested bluffs and to the north by a wide, wooded floodplain. One of these glacially shaped and loess-capped bluffs was known historically to the resident Pawnee tribe as Pahaku (usually but incorrectly spelled as Pahuk) Hill. This Pawnee word may be roughly translated as “mound on or over water,” or “headland.” The bluff is one of five natural sites (four of them along the Platte River) in the historic range of the Pawnees that were considered sacred to them and is the only remaining location that is still virtually biologically intact. About fifty thousand years ago, during late glacial times, this bluff also marked the approximate point where the Platte River abruptly turned southeast. It then followed a glacial moraine valley, now known as the Todd Valley, toward present-day Ashland. Although this part of the lower Platte Valley is now recognized for its uncommonly rich bottomland soils, it is also rich in Pawnee history, since the Platte and Loup Valleys were among the most important parts of the Pawnees’ original homeland.

Pahaku Hill is located almost directly north of Cedar Bluffs, in northern Saunders County. According to one Pawnee legend, a young boy once lay at the edge of the bluff, hoping to shoot a bird

with his bow and arrows. Growing at the edge of the bluff was a tall cedar tree, marking the entrance to a huge cave that was the lodge of many animals. Several eagles and a hawk sat on the cedar tree, perhaps serving as guardians. A second, underwater entrance to the cave was also believed to exist, which could be reached only by following a kingfisher as a guide. The chief of the animals living in the lodge was a giant beaver, but the lodge also was the home of other spiritually important animals, such as deer, elk, antelope, wolves, coyotes, foxes, cranes, and geese.

These were known to be sacred animals (Nahu'ac) by the Pawnees, and in this cave they periodically held council. There they also endowed the young Pawnee boy with special healing powers, which he later passed on to others of his village. At times such medicine men visited Pahaku to renew their healing abilities and to give thanks. Of all the Pawnee animals having spiritual powers, birds were especially important. They served as direct messengers to the gods and played significant roles in important Pawnee ceremonies. Eagles were the most preeminent and powerful of these totemic birds, and hawks were also notable, as were their feathers. Owls were particularly significant in Pawnee healing ceremonies, while other species such as jays, magpies, and woodpeckers were appreciated for their own valuable attributes. For example, the intelligent magpie helped the legendary Pawnee child find the entrance to the Pahaku cave. There probably once was an actual cave at this site, as several of the Pawnees' sacred sites along rivers consisted of bluffs with caves, but erosion no doubt destroyed it long ago.

In a different and perhaps more authentic version of the legend, after a young boy had been sacrificed by his father and placed in the Platte River, two turkey vultures delivered his body to the sacred animals in the cave. The sacred animals brought him back to life and taught him all of their medicine powers. He later went back to his people to serve as a great medicine man and transmit his knowledge.

The Pawnees' peaceful bison-hunting and agricultural culture was eventually destroyed by the impact of European immigration, partly

as a result of the destruction of their bison-dependent economy. Their vast homeland, which once stretched from the Niobrara to the Arkansas and Cimarron Rivers and numbered about twenty thousand people by 1820, was decimated by smallpox during devastating plagues during 1831 and 1832. Adding to this catastrophe, part of their land was sold at a pitifully small price to the United States in 1833. Later losses of ancestral Pawnee territory were associated with the Kansas-Nebraska Act of 1854 and the ceding of tribal lands for settlement by immigrants. The Pawnees were soon limited to a small reservation along the Loup River, now Nebraska's Nance County. Eventually even this tiny remnant of their homeland was lost to settlement pressures. In 1874 the last of the Pawnees (about two thousand) left Nebraska, when all the adults walked to a small reservation in Indian Territory, now Oklahoma. At this time they were under periodic danger from attack by the Lakotas and were being increasingly surrounded by white settlements. After their reservation school year was over, the Pawnee children were similarly moved to Indian Territory. According to Pawnee oral history, they too walked the entire distance; after their shoes and moccasins had worn out they had to walk barefoot, with some dying along the way. The Pawnee reservation now consists of about twenty thousand acres, and the population near the end of the twentieth century consisted of about twenty-four hundred Native Americans, or about one-tenth of the estimated presettlement number.

Pahaku was homesteaded in 1868, and it was not until the forested part of the bluff was purchased by Dr. Louis and Geraldine Gilbert in 1962 that any attention was given to preserving its natural habitats. After learning of the location's great spiritual significance, the Gilberts applied to have the site placed on the National Register of Historic Places, which was approved in 1973. During the 1980s their land was preserved for posterity through a conservation easement. Later the Gilberts' land was sold to Kirby and Mary Zickafoose, who are equally determined to keep it in a natural and protected state. The Pat and Nancy Shanahan family have farmed the remainder of the bluff for more than a century, and in 2008 a delegation

of Pawnees from Oklahoma visited Pahaku to help celebrate the establishment of a conservation easement on the Shanahans' farm, protecting that part of the bluff from further development.

Because of Pahaku's history and transitional location, linking the eastern deciduous forest plants and the prairie riverine forests, Ty Harrison, a University of Nebraska botanist, did an ecological analysis of the site's plants in 1984. He found that several eastern deciduous forest trees (bitternut hickory, black walnut, and American linden) approach or reach the western edge of their Platte Valley distribution at Pahaku. There are also several eastern woodland vines (carrion flower, bristly greenbrier, eastern virgin's bower, and Virginia creeper) and many woodland wildflowers (jack-in-the-pulpit, columbine, pale touch-me-not, white snakeweed, and American bellflower) that have similar eastern forest affiliations and range limits. Farther to the west, the drier climate and absence of a shaded forest understory increasingly prevent these plants from thriving and reproducing. In these ways, Pahaku represents a kind of botanical eastern outpost that also supports a comparable array of eastern forest-adapted animals such as eastern fox squirrels and white-tailed deer.

On a cold morning in mid-April 2010 I drove to Pahaku with a friend to meet with its longtime caretaker and fierce protector, Cherrie Beam-Clarke. Cherrie also has served for three decades as interpreter of the land's natural and Pawnee history and is an educational speaker for the Nebraska Humanities Council. The American plums were then in full bloom along woodland edges, while the leaves of most of the forest trees were just unfolding. Newly arrived migrants from the tropics such as brown thrashers and eastern phoebes were establishing territories, while permanent residents such as red-bellied and downy woodpeckers were making their presence known with territorial drumming. We walked a trail to one of the higher points on Pahaku Bluff, an open area of prairie where the carcass of a white-tailed deer had provided food for wintering bald eagles. From the hill one can visualize the course of the old Pawnee Trail that paralleled the southern bank of the Platte River, leading to distant Morse Bluff on the western horizon.

Walking along the bluff's steep slope, we flushed a pair of wood ducks from the trees where they had no doubt been looking for a suitable nesting cavity. Wood ducks are another eastern species that, like red-bellied woodpeckers, has progressively moved west along the Platte Valley woodlands. In addition to the widespread and early blooming blue violet, we found a few examples of Dutchman's-breeches. This delicate eastern woodland flower is very near the western edge of its Nebraska range and at Pahaku is limited to the bluff's steep and shady north-facing slopes, where it often grows among mosses and ferns. Its pinkish flowers resemble baggy pants hanging upside-down from a clothesline, through the narrow "waist" of which bumblebees must pass so they can reach the pollen tucked away in its spurs. The other early spring wildflowers we most wanted to see, columbine and jack-in-the-pulpit, had not made their brief but beautiful curtain calls. Like many other deciduous forest plants they have evolved adaptations allowing them to bloom and be pollinated before most sunlight is cut off by the leafy summer canopy.

We did find another botanical goal: the oldest bur oak in the area, which no doubt was already an impressive tree when the Pawnees were still living peacefully along the Platte. The great oak is still producing a few acorns but is slowly dying; one of its largest lower branches had recently broken off and lay desolate on the ground. The tree's twisted shape reminded me of an ancient Pawnee holy man, lifting his arms in anguish toward the sky and lamenting the fate of his dispossessed people, who now live in a reservation over five hundred miles away from their homeland.