Annotated Bibliography of Iowa Prairie Literature

Dean M. Roosa
Iowa Conservation Commission

James H. Peck
University of Arkansas at Little Rock

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Annotated Bibliography of Iowa Prairie Literature

DEAN M. ROOSA and JAMES H. PECK

This bibliography contains 335 references by 244 authors on the prairies of Iowa. The references include the taxonomic, floristic, ecologic, physiologic, historical, and wildlife reports on the Iowa prairie. Each reference is annotated to clarify its title and to summarize the contributions or topics discussed.

INDEX DESCRIPTORS: Grasslands, prairie, Iowa vascular flora, Iowa natural heritage, annotated bibliography.

Interest in prairie research and preservation has been growing throughout North America in recent years. Iowa's prairie remnants, slim reminders of this once magnificent ecosystem, are important markers of the natural heritage of Iowa. Recent reports by Burk (1973), Cawley (1972), Roosa (1981), and Smith (1981) point out the rate of decline of Iowa prairie habitat since settlement and the high value of the remaining remnants. The extensive literature on Iowa's prairies, located in many diverse journals, serials, books, and unpublished theses and reports, has never been compiled. This bibliography, a summary of the studies on Iowa's prairies, provides access into that literature. All of Iowa's prairie-types were considered: wet, tallgrass, native, loess, sand, pothole, hill, and openings. References which treated prairie restoration and landscaping with prairie plants were also included.

METHODS

The bibliography includes 335 references prepared by 244 authors. References were included if they treated the floristics, taxonomy, ecology, physiology, historical remnants, or wildlife of Iowa's prairies. County floras were generally not included, as such works were well summarized by Eilers (1975). It was relatively easy to decide whether a particular report was appropriate for inclusion. Some judgment was needed to determine whether there was enough natural history in some historical accounts and whether a given report was discussing prairie rather than wetland vegetation. The following serials were searched in their entirety: Proceedings of the Iowa Academy of Science, Iowa Conservationist, Cooperative Wildlife Reports, Iowa State Journal of Research, Studies in Natural History from the State University of Iowa. Efforts were made to locate all pertinent theses and dissertations prepared at Iowa State University, University of Iowa, and the University of Northern Iowa. The botanical literature summaries of Eilers (1975), van der Valk (1975), and Peck and Roosa (1983) were consulted. All references were annotated to clarify their titles, to summarize contents, or to elaborate on the methods used in the study. In only two cases could the original source not be located.

ACKNOWLEDGEMENTS

We thank our many colleagues who study the Iowa prairies for their inspection of preliminary lists. They added immeasurably to our efforts to make the list as comprehensive as possible. We are especially grateful to the librarians of the University of Iowa and Iowa State University.

ANNOTATED BIBLIOGRAPHY


Describes physical factors leading to invasion of prairie by shrubs and finally, forest. Measurements were taken along Missouri River in Nebraska, but Iowa's prairies and forests are briefly mentioned.


Secondary succession, studied on abandoned fields in Muscatine County, was found to occur in four stages. The sand prairie stage required from 16 to 30 years to develop.


Offers reasons why academies are not generally effective in aiding in conservation of natural resources in states. Gives a brief history of the conservation committee of the Iowa Academy of Science and offers the Prairie Project as a model.


Results of comparison of burned and unburned plots on two state-owned native prairies, Hayden Prairie in Howard County and Kalisz Prairie in Pocahontas County.


Gives a brief description, background, and some general results of prairie research in Iowa.


Five species of prairie grasses were utilized in studies to determine the best ground cover for soil-holding and soil-building properties. Studies were done in southeastern Iowa.


Gives results of quantitative investigations, including frequency, abundance, and importance values of 15 grasses and 23 forbs. Also provides a brief description of the plant communities and an annotated vascular plant list from this Dickinson County prairie.


A personal account of experiences with prairie sloughs (marshes) in several counties in Iowa.


Studies were made of six soils in their virgin and cultivated state. Physical and chemical determinations included permeability, aeration porosity, volume weight, aggregate analysis, total nitrogen, pH, and available phosphorus. Two soils
were derived from glacial till, the rest from Porean loess. Locations of the prairies were not given.


Quadrate established in 1931 were relocated and studied during 1934-1935. Tables of yearly records of presence and cover grades are given for 16 permanent quadrats. Included are 12 photographs of different aspects of the prairie, located in Dickinson County, Iowa.


Twelve prairie species were transplanted to Iowa Lakeside Laboratory property, Dickinson County, Iowa. Three years later, five species were still present.


In 1930, a grazed area adjacent to Iowa Lakeside Laboratory, Dickinson County, was purchased. In 1931, two lines of quadrats were established. In 1934 and 1935, these quadrats were studied; species lists and cover values are given for some of them. A list of species for the tract is included.


Reports on visits to prairies near Strawberry Point in Clayton County, near Osceola in Clarke County, and near Cherokee in Cherokee County. Probably written by L. H. Pammel.


An account of a family's homesteading of a Pocahontas County tract. The prairie is described, as are prairie fires, blizzards, and numerous anecdotes of prairie pioneer life.


Sediment core from Lake Okoboji indicates prairie plants arrived about 9,000 years ago. Macrofossils and pollen of prairie indicators appeared about that time, accompanied by increasing percentage of grasses and composites.


Bales of prairie vegetation from a Cherokee County, Iowa, prairie were examined to determine presence and viability of seeds and the possible use of the bales for mulch and seed source for highway plantings.


A sand prairie and a nearby old field located in Red Rock Reservoir, Appanoose County, were studied and compared. A species list for each community is included.


An annotated catalog of the vascular plants of the northern end of the Loess Hills landform, with emphasis on the prairie community. Included are information on the geology of the loess and on the phytogeography of certain species.


Describes some physical aspects of the environment and how they influenced the settlement of Iowa in the mid-1800s.


The book describes three periods: the colonial frontier, the trans-Appalachian frontier, and the trans-Mississippi frontier. Chapter 23, The Mississippi Valley Frontier, contains many references to Iowa, the prairies, and settlement rates. There are four editions with this title.


The settling of the United States is documented. Chapter 4, The Mississippi Valley Frontier, 1812-1840, describes the rate at which Iowa was settled.


A prairie area in Cedar Rapids, originally described by McGee in 1889, was being destroyed by a home-building plan. The tract was studied and a species list is presented.


The establishment of 15 native prairie grasses on eroded soil was investigated by means of replicated seed plots, sod transplants, and contour strip seeding. Fall seedings were made in mid-acute plots on an eroded upland site, an eroded slope, and a lowhead. Sites were located in Davis County.


Field and greenhouse experiments were carried out to determine the adaptation of Dalea alpinaea to different soil types, as influenced by seed treatment. Sandy soil, low in organic matter, proved to produce better growth. Field tests were conducted in Story County.


A faunal list is presented along with comparison of population densities of birds and mammals on burned and unburned areas.


Species list of reptiles, amphibians, birds, and mammals are given, along with a comparison of populations on burned versus nonburned areas. Maps of bird nests and mammal trapping sites are included.


Twenty-five species of native and introduced legumes were planted in randomized plots in three sites in Davis County. Great variation in establishment and growth in response to soil and microclimate were noted.


Twenty-five species of native and introduced legumes were planted in three sites in southeast Iowa from 1939-1941. Soil properties, microclimate data, and plant response were noted; plant response correlated best with microclimate, rather than the soils.


Kalsow Prairie State Preserve, a 65 ha (160-acre) native prairie in Pocahontas County, was studied...
to determine subcommunities and to provide information on phytosociology in relation to edaphic and topographic factors and to disturbance. A species list is included.


Species presence was determined for vascular plants in 968 contiguous 9.14 m x 9.14 m (30 ft. x 30 ft.) quadrats in Kalsow Prairie, Pocahontas County, Iowa. Zonation occurred around pond holes. Published by abstract only.


Describes the rate of recovery from grazing of a portion of Kalsow Prairie State Preserve, Pocahontas County, Iowa.


Reports 138 species of grasses from an area encompassing 11 counties. An annotated species list is presented.


A general description of the sand mounds is given, followed by a list of 316 species, many of which are prairie species.


Two quadrats were established on different parts of a prairie remnant—one on low ground, the other on high ground. The number of individuals of each species present in each quadrant, evaporation rates, soil temperature, and soil chemistry were recorded for each quadrant.


Gives a brief history of the chapter and a short description of the areas it owns.


Recognizes three grassland types, presents numerous maps which show species' ranges, and discusses the effect of climate. Iowa is often mentioned and shown on the maps. A detailed map of the grassland biome is included.


Describes the distribution and abundance of vascular plants for 10 northwest Iowa counties. Includes species lists for selected habitats.


Quadrat sampling was conducted in 1957 and 1958 on three typical plant communities on west-facing loess bluffs in Monona, Plymouth, and Woodbury counties. Twenty-one of the 164 vascular plant species were common to all three communities, while an additional 20 species were frequent in occurrence.


Gives a brief history of prairie preservation in Iowa, present activities of the State Preserves Board, and states some immediate needs for preservation of remnant tracts.


Seeds of 75 species of prairie plants were collected and tested for germination. Sixty species germinated. Seeds of 65 species were seeded in field plots with various levels of competition.


Provides history, present status, and a projected management plan for Hayden Prairie. Plant frequency data, a map of vegetation types, soils, and drainage patterns are included.


Describes and evaluates management practices and offers recommendations for improved management of Hayden Prairie, Howard County, Iowa.


Information is given on the germination and early establishment of 30 prairie species. Germination varied from 96% to 0%.


Sod plugs, 25 cm in diameter and 10-20 cm deep, were used successfully in transplanting 42 species. Forty-eight of 52 prairie species transplanted as seedlings were present after overwintering. The study was conducted in Boone, Mitchell, and Story counties, Iowa.


Plots to assess management strategies on roadside vegetation were established in Linn County in 1971 and checked through 1973. Several aspects of roadside vegetation management must be integrated to produce optimum results.


Includes keys, habitat description, and dot maps. Prairies are often mentioned in relation to the habitat.


A description of the breaking plow and its operation.


This phytosociological book devotes Ch. 4 (pp. 53-89) to "grasslands" and discusses the associations on the Iowa prairie, anatomy of some prairie plants, sand prairie flora, and gives an extensive species list.


Pp. 43-48, written by Ada Hayden, provide a brief history of pioneer work of the Iowa Academy of Science in conservation, clarifies the differences between state parks and state preserves, and makes a plea for prairie preservation.


Annotated catalog, including dot maps, is presented for these three eastern Iowa counties.


A brief introduction is followed by a list of species.
for three state parks in eastern Iowa: Bellevue State Park, Jackson County; Maquoketa Caves State Park, Jackson County; and Wapsipinicon State Park, Jones County. Refers to prairie species growing in open areas at the crests of bluffs in all three parks.


An annotated catalog of the vascular flora of three counties in eastern Iowa, along with a description of the area.


Plant succession was studied on bluffs on opposite sides of the Missouri River in the region of Nebraska City. The order of succession was found to be the same. However, on east-facing slopes, which excelled in number of individuals and variety of species, underwent succession at a faster rate.


A popular account of the prairie, its plants and animals. Iowa is mentioned numerous times. A brief description of large prairie remnants is given.


Presents descriptions and distribution maps for all species in the Umbellales. Also has pictures of the fruits. Several are prairie species.


Keys, description, and distribution maps of the species of Umbelliferae found in Iowa. Numerous taxa are prairie species.


Greenhouse experiments were conducted on the affect of soil type, inoculations, and lime treatment. Results showed the plant may be of agricultural value.


The distribution of plant species and communities on Stanton Prairie State Preserve, Kosuth County, Iowa, were analyzed in relation to varying environmental factors. Gradient analysis was used to compare individual species' distribution along a topographic gradient. A species list is appended.


Describes replicate transects on Stanton Prairie State Preserve, Kosuth County.


A 14.6 ha (30 acres) sand prairie consisting of mashes, moist to dry sandy prairie, and wet to moist swale was studied. Included is an annotated list of 280 species of vascular plants. Carex leptalea, new to Iowa, was found.


One collecting site was a wetland in a sand prairie in Black Hawk County.


Keys, annotated catalog, and county dot maps are presented for 67 species in three tribes of composites (Asteraceae).


A condensation of a master's thesis. Includes keys and an annotated list of species, many of which are prairie plants.


Gives an annotated species list and distribution maps of higher vascular plants. Species lists for characteristic habitats are included.


Annotated catalog of vascular plants of 14 counties, including many prairie species. Specific locations for rare species are given.


Twenty-four general habitat types, from 14 counties, are described. Generally, a specific location is presented, each with a species list. Included are prairie tracts in Wapello, Louisa, Lee and Van Buren counties.


A study was made of the primeval settlement forest cover of three Iowa counties—Allamakee, Jackson, and Lee—and of three belt transects, each six miles wide, across the state. The principal source of data was the original land survey records. Although a study of forest types, it has much information on the amount and distribution of prairies and oak barrens.


A diatom flora of 107 species in 22 genera was identified from four microhabitats in a wet, sandy prairie swale. Fifteen were new records for Iowa.


Describes technique used in original survey. Provides historical documentation on how Iowa's boundaries were determined, how subdivisions were marked, how Indian boundary lines were established, and on the private land claims. Although prairie is seldom mentioned, there are important implications on the extent of the original amount of prairie.


An historical account of settlement of the midwest. Iowa is mentioned in a general way on 17 pages.


Proposes modeling a profitable mechanized agriculture after the prairie systems to achieve greater efficiency and reduce current problems of high energy consumption, excessive erosion, and soil depletion.


A popular account of personal experiences with the prairie and the people who study the prairie. Iowa is mentioned on six pages and the prairie preserve system of Iowa is described. Illustrated with many color photographs.


A county-wide inventory was conducted. Numerous prairies were located; especially prominent is
the sand prairie type.


Cites uses of prairie plants in landscape design.


The immediate and cumulative effects of different management practices such as complete protection, burning, and mowing were studied at Hayden Prairie, Howard County, Iowa.


Effects of burning and clipping were studied on the growth of some dominant and principal subdominant grasses and forbs at Hayden Prairie, Howard County, Iowa.


This August, 1956 study, conducted on Hayden Prairie, Howard County, Iowa, involved five grass species.


Effects of complete protection, burning, and mowing were studied on vegetation and soils of mesic Hayden Prairie in Howard County, Iowa.


Annotated catalog of vascular plants of the Iowan erosional surface. Includes a discussion of the relationship between Wisconsin glaciation and present flora.


Lists 360 species of vascular plants inhabiting prairie remnants in northeastern Iowa. Includes descriptions and locations of the prairie remnants.


A catalog of the vascular flora of the Iowan Erosional Surface consisting of all or parts of 27 counties. Includes a description of the region and a chart of species distributions.


Historical summary of literature on Iowa vascular plants. Summary of Iowa naturalists and the present status of Iowa vascular plant studies is presented. A bibliography of 238 references is included.


Pitfall traps set in cornfields, fencerows, and prairies, captured over 500,000 arthropods. Fifty-seven of 94 species were found on native prairies. Cayler Prairie, Dickinson County and Kalsow Prairie, Pocahontas County were studied.


History of midwestern prairies. Contains a map of Iowa with general locations of prairies and a panoramic photograph of Cayler Prairie, Dickinson County.


Brief description of project scope and survey, methods of dissertation research, includes work on Iowa bluff prairies.


An annotated catalog, including dot maps, is presented for 16 southwest Iowa counties.


A physical description of this glacial kame is Osceola County, and of over 35 plant species noted during a June, 1904 visit.


A list of vascular plants found on five prairie remnants in Story County, Iowa, was compiled. These five relics, which include upland and lowland types, support a flora of about 180 species, 32 of which are adventive.


Describes the use of warm-season native grasses for pasture use, and points out the increased benefits to wildlife.


Artificially established native prairie grass pastures were evaluated as nesting habitat for birds. Next success was much higher than in hayfields.


Native prairie grass pastures established and properly managed for warm-season livestock forage were found to provide suitable nesting habitat for a variety of upland birds during a four-year study in southern Iowa.


A kettlehole (now Freda Haffner preserve) in Dickinson County, Iowa, was divided into four zones and surveyed for vascular plants and animals. The area was found to consist of a vertical gradient of plant and animal communities. Two series, the hydroseres and xerosere, were recognized. Species lists and relative abundance for vascular plants, Orthoptera, plankton, and vertebrates are given.


A lowland prairie, located in Polk County between Beaver Creek and the Des Moines River, was studied during one season. Plots were established on the upland, potholes, and sandy areas. Species from each plot and the percentage of frequency are given.


During the summers of 1977-1978, 102 prairie remnants, ranging in size from 5.7 m2 to 960,000 m2, were surveyed for number of legumes, goldenrods, and milkweeds. The equilibrium theory of biogeography was employed to determine if it applied to small prairie remnants. Prairie remnants were mostly located in Dickinson and Emmet counties, Iowa, and Jackson County, Minnesota. Additionally, two were located in Cherokee County, two in Kossuth County, and one each in Howard, Pocahontas, and Clay counties, all in Iowa.


Discusses the formation of the vegetation of the midwest in an historical context, maintaining the
principal vegetational elements were differentiated during the Tertiary Period. Discusses the effect of glacial advance and retreat, plant migrations, and describes two periods of prairie dominance.


A species list, along with information on geology and soils, a vegetation map, and comparison to other prairies are given for the 12.5 ha (31 acre) Kossuth County prairie.


The vegetation of this native prairie is described and compared to other Iowa tallgrass prairies. A species list is included.


A body of anecdotal and experimental evidence raises questions about the common model of plant community succession in which each temporal vegetation stage facilitates the development of the next. Several lines of evidence emphasize the individualistic nature of plant community development. Work was done on Kalsow Prairie, Pocahontas County, Iowa.


Gradient analysis was used to analyze the distribution of plant species and resulting community structure along a topographic gradient on Stinson Prairie, Kossuth County, Iowa.


Describes plant communities of Iowa’s “Driftless Area.” One community described is the hill prairie.


Plant communities of the Paleozoic Plateau are described. Although the forest community is emphasized, also included is a fairly detailed description of hill prairies and a sand prairie-dune complex.


A small successional area located near Iowa State University, Story County, was studied to determine distribution and zonation of species relative to soils and slope. The area, formerly prairie, was degraded due to grazing. Species lists and maps of quadrats for some species are included.


Summarizes and documents the rate of settlement in Iowa. Describes population increase and lists over 40 sources of information.


Makes an argument for establishing a State Preserves System and provides an inventory and a classification of natural features.


Purchased by Grinnell College in 1968, the Cord Environmental Research Area (CERA), Poweshiek County, Iowa, is a highly diverse educational and research facility, dedicated to the study of the structure and function of the tallgrass prairie.


Includes many prairie species; descriptions of sand and tallgrass prairie habitats.


Personal experiences of a trek to Iowa, settling in Iowa City. Described are prairies, beginning in 1856, in the vicinity of Iowa City, Cedar Rapids, and Grundy Center.


An historical account of how the pioneers survived the prairie fire.


An investigation in the Lake Calvin area of Iowa on the rate of soil development under prairie vegetation.


A journal of a traveler across Iowa on a journey to California. The party was in Iowa from May 4 to May 25. The prairie of southern Iowa is often mentioned.


Describes and provides photographs of several prairie orchids and gives a brief description of their habitat.


Includes references to prairie species; species lists for characteristic sites are given. Distribution maps are included.


An annotated catalog of vascular plants, along with information on the geology, soils, and a history of plant studies, is given.


This study occurred in 1903-1907 in contiguous portions of Iowa, Nebraska, and South Dakota. Much of the information, however, came from a 49-ha (120 acre) area near Yankton, South Dakota.


A virgin prairie, probably in Story County, was studied to determine the identity of the plants and their location and to examine environmental factors which influenced the grouping of plants.


Original dissertation could not be located.


Analyzes formations of the prairie provinces in relation to geology, topography, edaphic features, water content, and temperature. Examples of plant formations are given, and reversion and succession are discussed. Prairie was located near Ames, Story County.


The anatomy of leaves of plants from 12 families taken from different sites on a prairie was studied to determine if special adaptations are present. Numerous illustrations are included.

HAYDEN, A. 1919b. The ecological subterranean
anatomy of some plants of a prairie province in central Iowa. Amer. J. Bot. 6:87-105, 28 plates.

The minute anatomy of the subterranean organs of prairie plants from 14 families was studied, described, and drawn. An historical perspective of research in subterranean organs is provided.


A summary of observation made during seven growing seasons beginning in April, 1934. Physiology, climate, soils, and the flora are all described. The prairie is briefly described and an annotated list of plants is presented.


Describes climatic aspects of Iowa, the value of prairie preserves, and provides a basis for selection of prairie tracts.


Gives locations and descriptions of 22 native prairie tracts. Included are reports by G. O. Hendrickson on mammals of the prairie and by F. F. Ricketts of soils.


Provides a rationale for preservation of small tracts and provides locations of some tracts worthy of permanent protection.


Gives background of Iowa Lakeside Laboratory, laments the fact that no prairies have been preserved, and reemphasizes the need for prairie preserves.


Provides an historic background of the true prairie biome, extent of the grassland formation, and management recommendations for Iowa prairies.


Provides an outline of the "Conservation of Iowa Prairie" project of the Conservation Committee of the Iowa Academy of Science.


Approximately 500 species of insects were collected from a 2 ha (five-acre) prairie near Ames. An annotated list is provided.


An annotated list of insects collected on a five-acre prairie, owned by Ada Hayden, near Ames, Story County.


During the years 1925-1928, the insect fauna of eight plant community-types at forty virgin prairie tracts was studied. Approximately 15,000 specimens, representing 1,175 species, subspecies, or varieties, were collected. An annotated list of insects and the locations of the prairies is given.


Gives observations on prairies near Ames, Stanhope, and Renwick. Fifteen vertebrates are listed.


A synopsis of his Ph.D. dissertation. During 1925-1928, forty prairies were sampled, and approximately 15,000 specimens were collected. Locations of prairies are given, as is an annotated list of insects, along with the plant community where collected.


This annotated list of 144 species represents an addition to the list presented in his 1930 paper resulting from more recent identification.


Provides ecological reasons for preserving prairies.


A study of Psoralea esculenta on Cayler Prairie, Dickinson County, Iowa, showed that buds are attacked by a host-specific weevil, which depresses seed production to 10-55%. Populations of this species consist of flowering, nonflowering, and dormant plants.


Provides documentation on distribution of woodlands and prairies in Story County prior to settlement, and shortly after settlement. Discusses the role of woodlands on settlement of the county.


Provides description, location, and extent of the northern wet prairie. Gives information on numerous Iowa counties regarding original drainage conditions and uses a township in Story County as a detailed example.


Examines the character of the occupation and utilization of wet prairie, using Story County, Iowa, for detailed examples.


Following a controlled burn on Cayler Prairie, Dickinson County, Iowa, two transects were established. Each extended into the burned and unburned portions. Four 60 × 60 meter quadrats were located along each transect. Species richness, diversity, and equivalency were all higher in the burned portion.


Effects of fire on the production, community organization, and relative abundance of dominant grasses on Cayler Prairie, Dickinson County, Iowa, by comparison of burned and unburned portions during the 1972 growing season.


The location, present condition, and recent history is presented for several prairies within the city limits of Dubuque, Iowa. A brief description of the vegetation and associated insects is given.


An account of the herds of cattle that used the prairie from the time of settlement until about 1890, before fences and a herd law.

HORACK, K. 1924. In quest of a prairie home.
IOWA PRAIRIE LITERATURE

The Palimpsest 5(7):249-257.

An account of an 1837-1845 journey across the Iowa prairie in search of a suitable home. Written by the granddaughters of one of the members.


A popular account of life in the pioneer era. It is basically an historical treatment, with prairies only mentioned in passing.


Describes selected examples of the butterflies, skippers, and birds of Iowa prairies, reasons for their decline, and why it is important to save prairie remnants.


A two-year progress report of the Iowa Natural Areas Inventory. Loss of hill prairie, tallgrass prairie, hill prairie, sand prairie, and Sioux Quartzite prairie are described on pp. 24-28.


Describes the Conservation Commission's program of providing switchgrass to private landowners for pasture use.


Natural areas, used by the staff of Iowa State University, were described. Several prairies are mentioned. The Ames High School Prairie was mapped and analyzed for species composition.


Includes description and distribution of some important prairie composites.


Includes descriptions, distribution, and habitat information on some important and common prairie species in Iowa.


An account of two missionaries driving a wagon from Eddyville to the Missouri River and back. Included are general comments about the Iowa prairie and the general pioneer way of life.


A study of Sheeder Prairie Preserve yielded a plant list of 180 species in 54 families. A stratified random sampling grid was arranged along two belt transects. Eighteen stands were ordinated using the prairie continuum index.


Two belt transects were established across the prairie and random quadrats sampled. Species frequency, dominance, and distribution are given and a species list is included.


Productivity and litter breakdown were analyzed for a prairie site in Missouri and Hayden Prairie in northern Iowa.


Two species of grasses and two species of legumes were compared with plants in current undisturbed stages of secondary plant succession for their effects on successional change and site improvement on an eroded Lindley silt loam in southeast Iowa.


Field and greenhouse experiments involving rates of seeding, composition of seed mixtures, effects of companion crops, and levels of fertility were conducted during 1954, 1955, and 1956. Native grass mixtures were used along Highway 37 near Dunlap in Harrison County.


Contains one experiment which used a mixture of native grass seed on backslps in western Iowa.


Includes keys, dot maps, and notes on habitat. Prairie species are occasionally mentioned under habitat.


Describes prairie types and provides a species list for each.


The vascular flora of the 1060 km² (409 sq. mi.) county, located in southeastern Iowa, was studied 1975-1980. A total of 809 species in 109 families was found; four species were new to Iowa.


States that management must be based on well-defined objectives and sound operational techniques, both of which have been lacking in many situations in Iowa. Proposals are made for an effective program.


A popular account meant to introduce readers to the prairie, provides examples of prairie plants and when they may be found in bloom.


Describes a prairie-planting project along I-80 in western Iowa and makes a plea for use of native plants along roadways.


An appraisal of present management of 11 midwest national parks or monuments. Herbert Hoover National Historic Site and Effigy Mounds National Monument, both in Iowa, are included.


A description of the prairie on 10 midwest national parks, national historic sites, or national monuments. Two are located in Iowa.


Various types of prairie restoration techniques are described. Seeds of 65 prairie species were planted in Webster soils under various levels of competition. Sod transplantation was attempted during early spring and was successful for 42 species. Seedlings grown in a greenhouse were transplanted into bluegrass sod. Of 16 species, 15 were present two years later. Prairie species were planted along highway rights-of-way with good success.


Argues for native species to be used on roadsides and provides management recommendations.


A total of 98 species in 53 families was found on this 2.64-acre tract.


The avifauna of a 110 acre native prairie was studied from 1980 through 1982. Singing male counts and nest searches were made and territories mapped. Of the 64 species found, 25 were considered to be nesting.


A description of the area now called Iowa. Prairies are described in several places.


An annotated catalogue of vascular plants. Hill prairies and sand prairies, with location and representative species lists, are described on pages 24-28.


Describes methods for restoring prairies, including types of drills, species to include, and how chemicals can be utilized. Also includes information on fire as a management tool.


Provides step-by-step instruction for restoring prairie vegetation, and gives a list of prairie seed dealers.


Provides a map of the major biomes in North America, and gives the main segments that outline the prairie boundary. Iowa lies mainly in the grassland and mixed grassland biome. Precipitation and temperature maps are also included.


During 1969-1970, diatoms were collected from Shooner Prairie, Guthrie County, Iowa. A total of 74 species, varieties, and forms representing 15 genera were encountered. Four taxa were new to Iowa.

LOESCHER, J. H. 1981. Diatoms (Bacillaro-phyceae) from Shooner Prairie, Guthrie Coun-

Seventy-four diatom species, varieties, and forms representing 15 genera were found in collections from 19 stations. Marked differences in the flora from upland collections were observed.


Lichen and bryophyte communities were sampled along an approximate 2,415 km2 (1,500 mile) triangle-shaped transect from Madison, Wisconsin, to Wyoming to Saskatchewan and back to Madison. Environmental gradients are drawn, species lists are given, and ordination values are given. Cayler Prairie State Preserve, Dickinson County and a private Cherokee County prairie were selected as Iowa stations.


The plants of sandy areas in southeastern Iowa and adjacent Illinois were studied and compared to a prairie climax forest. The areas were located along railroads in Muscatine, Louisa, Des Moines, and Johnson Counties, Iowa, and along a railroad right-of-way in Henderson County, Illinois.

LYON, B. L. 1940. The menace of the bluestem. The Palimpsest 21:247-250.

An account of prairie fires in Iowa. Included numerous descriptions of the consequences of uncontrolled fires, mainly from central Iowa.

MACBRIDE, T. H. 1926. Landscapes of early Iowa. The Palimpsest 70:283-293.

Contains a description of the original Iowa prairie. Many species are mentioned and the prairie fire described.


A story of the marvel of the tallgrass prairie. Iowa and its prairies are often mentioned.


An anecdotal account of a man's personal relationship with the prairie. Iowa prairies are frequently mentioned. An appendix of protected prairies in midwest states is given.


Provides population figures for Iowa for the period 1852-1850.


An attempt to meld the disciplines of history and ecology into an overview of the prairie of the Trans-Mississippi West. Early Iowa scientists are mentioned and an extensive bibliography is included. An earlier edition, without the final chapter, exists.


A checklist of Iowa lichens, consisting of 263 species in 74 genera, is presented. Included is substrate preference and county of occurrence. Fourteen taxa are reported from Sioux Quartzite outcrops in a prairie environment and seven taxa from exposed soil in loess bluff grasslands.


This species is resistant to drought and heat, and tolerate a wide range in the pH of soils. These traits, along with its prolific seeding and ability to propagate, make it a candidate for stabilizing sandy wastes and eroding hillside.


Basically, an historical documentation of pioneer life in Palo Alto County, Iowa. The prairie is often mentioned.


Gives evidence, gathered in central and western Iowa, that oak-hickory forest is a climax. In western Iowa, where climate approaches that of a prairie climax, soils become increasingly important. States that prairies are semi-permanent edaphic, but not climatic, climax. Examples were taken from Harrison, Monona, and Woodbury counties in western Iowa and Boone and Story counties in central Iowa.

An historical account of the settling of the prairie. It is principally about the region of central and northern Iowa commonly called the Des Moines Lobe.


Water quality, habitat structure, and macroinvertebrates and fish communities were surveyed in 1979-1980 in 10 headwater streams in central Iowa. Through historical records, an attempt was made to show the degradation of streams between the present and when Iowa was a prairie state.

MILLER, L. S. 1954. The present status of systematic mammalogy in Iowa with some notes on recent mammal collecting within the state. Proc. Iowa Acad. Sci. 61:556-560.

Cites recent records of the Grasshopper Mouse from Cayler Prairie, Dickinson County, Iowa.


Describes some of the biota of a 81 ha (200-acre) prairie in northwest Iowa.


Keys to the vascular plants of the Des Moines Lobe, including specific citation of the less common species.


Sixteen stations were established on the bluffs between Sioux City and Hamburg. Collections were made at two-week intervals throughout the growing season. Plant communities are described and a species list is given. Several new state records were recorded.


Presents a description of a native prairie relic which lives within the city limits of Davenport, Scott County, Iowa. Included is a systematic list of species with relative abundance.


Research was conducted at the 13.3 ha (33-acre) Moekley Prairie, Polk County.


Soil samples from a 13.3 ha (33-acre) native prairie in Polk County yielded protozoa in 75 of 81 cultures. Drawings of many species are included.


A vegetation analysis was made of two Iowa tallgrass prairies, Kalsow in Pocahontas County, and Hayden in Howard County. Included also is information on soils.


Describes the demise of Iowa's prairies, and tells how newcomers become acquainted with a prairie.


A general description of the soil, timber, rivers, prairies, climate of the new state. Also, a brief description of many counties and towns is included.


A north-south transect was established across the greatest topographic variation in the preserve, running from the upland on one side of the ravine through a prairie opening to the opposite upland. Several prairie openings are found in the preserve. Included is a list of species found during the study.


Describes the distribution, abundance, and habitats of Iowa orchids, some of which are found in prairie habitats. Also contains a vegetation history of Iowa and physiogeological implications.


Discusses the relations of prairie opening within several forest types associated with Great Plains vegetation, and speculates about the physiogeography of certain species.


Bryophytes were collected from Freda Haffner Kettlehole, Dickinson County; Cayler Prairie, Black's Prairie, Story County; and Kalsow Prairie. Pocahontas County. Species lists for each site are included.


Bryophyte distribution and abundance was studied on Freda Haffner Kettlehole State Preserve, a native prairie remnant in Dickinson County. Of the 34 taxa found, most were common and widespread and many were typical weedy pioneers. Total bryophyte abundance correlated with slope steepness and ground-level light intensity.


A report on minerals, but pp. 70-115 contain information on the proportions of prairie and forest in over 250 townships in the Dubuque district, an area from Iowa City east to Davenport and north to Allamakee County.


Mainly a report on minerals, but it contains an appendix (pp. 100-115) that describes the proportion of prairie and timber of over 250 townships near Iowa City.
ships in the "Dubuque district," an area roughly from Iowa City to Prairie du Chien and east to the Mississippi River. There is information on pp. 189-191 on the ratio of prairies to timber in eastern and northeastern Iowa.


A general article, basically providing information on the flora of Harrison and Pottawattamie Counties, but also giving climatic and edaphic data and ecological conditions in other parts of Iowa. Numerous species lists are presented and numerous photographs are included.


Provides evidence that buffalo were once widespread in Iowa, mainly through carring bogs in which bones had been found.


Text of a speech to the Iowa Academy of Science on the 100th anniversary of the state of Iowa. Provides an historical background of the state's purchase of a Howard County prairie, now called Hayden Prairie.

PARKER, N. H. 1856. Iowa as it is in 1856. Keen and Lee, Chicago.

A gazetteer for citizens and immigrants on selection and cultivation of prairies. A series of three books, dated 1855, 1856, 1857, exist. All are essentially the same.


The vascular flora of this extreme southwest Iowa county totals 550 species in 97 families. Many are plants of the loess hill prairies.


Provides a checklist for entire flora, including prairie and hill prairie species; intact prairie was described as being "virtually nonexistent."


Based on field and herbaria studies, the Allamakee County vascular flora is composed of 1040 taxa, which represents approximately 50 percent of the species in the state flora. Many prairie species occur in the list, mainly from hill prairies.


The combined vascular flora of Lyon and Sioux counties, Iowa, is composed of 612 species, of which 454 occur in both counties. Several prairie remnants yet occur in these counties, and many prairie species are represented in the checklist.


A bibliography of 350 references; some include information on low prairies and prairie potholes.


An exhaustive treatment of grassland biome literature, with nearly 7,000 entries.


An account of an 1834 dragoon expedition up the Des Moines River. The Iowa prairie is often mentioned.


An account of an 1835 buffalo hunting in what is now Franklin County, Iowa.


Presents a history of the Louisiana purchase, with a description of the land, the monetary considerations, and important persons who played a part.


Includes keys, habitats and dot maps. Prairies are often mentioned as habitat.


Describes the history and biota of a 8.5 ha (21-acre) native prairie in Story County.


Badger disturbances on Cayler Prairie, Dickinson County, Iowa, were observed over a four-year period to study colonization patterns and formation of equilibrium plant species associations.


A total of 72 terrestrial vertebrates were recorded during four years of observations. A species list is presented.


This perennial fugitive species was studied at Cayler Prairie, a 160-acre native prairie in Dickinson County, Iowa. Reproductive success of M. hirsuta is contingent upon success in colonization of badger den disturbance sites.


During August, 1971, the effect of different densities of Sorbus cinerea on density and species composition of invertebrate prey sets on two prairies in northwestern Iowa were studied.


The effects of pollination, pre-dispersal seed predation, and plant density upon seed production of Astragalus canadensis L. in Cayler Prairie, Dickinson County, Iowa, were studied by experimental manipulation of plant density. Seed production was greater at high than low plant densities.


Badger disturbances at Cayler Prairie, Dickinson County, Iowa, were studied to determine what plants colonized them, resource partitioning among fugitive species, and to compare empirical data with theoretical predictions.


Competition was assessed among five wind-dispersed perennial fugitive plant species existing on small open sites caused by foraging badgers on Cayler Prairie, Dickinson County, Iowa. The outcome of interactions depended on the intervals between immigrations.


Contains keys, habitats, and distribution maps for the grasses of Iowa.


Divides the Great Plains into a prairie region,
sandhill region, and a foothill region. Provides notes on the species characteristics of each region.


Describes some of the common showy members of Iowa’s prairie flora, as well as some of the most unusual. Photographs of selected species are included.


A popular history of Vandemark Township, Mon­tery County (probably fictitious, but events were drawn from real experiences). Contains many references to the Iowa prairie.


The family of Herbert Quick moved to the Grundy County area in 1857. This book contains many references to the Iowa prairie, including descriptions of prairie fires, prairie blizzards, the treelessness of the prairie, and perhaps the earliest reference to the pristine condition of prairie streams in Iowa.


Soil samples were taken during the summers of 1966, 1967, and 1968 from a 65 ha (160-acre) Dickinson County prairie. Of 70 taxa found, two were described as new forms. The upland soil flora was much less diverse than that of the swale.


Gives a chronology for the existence of mammals from the Pleistocene Ice Ages to present. The change from conifer forest to prairie is described.


Research was conducted on Kalsow Prairie State Preserve, Pocahontas County. Selected species were observed after a prescribed April burn. Plots were established in burned, unburned, and mowed areas and changes in dry weight, vegetative cover, and flowering response were recorded.


Describes five vegetation types and dominant plants of each. Discusses species distribution on the prairie. A species list is included.


A brief history of Kalsow Prairie, Pocahontas County, Iowa, is given, along with an assessment of current management practices and recommendations for management and use.


Selected prairie species were observed during the first growing season following a prescribed burn on Kalsow Prairie, Pocahontas County, Iowa. Changes in dry weight, vegetative cover, and flowering response were measured on burned, unburned, and mowed areas.


A popular account of the Iowa prairie — its beauty, blizzards, and fires.


An annotated catalog of vascular plants. Included is a description of the area, and species lists from the major habitats including low moist prairies and upland prairies.


Provides factors to be considered in selecting undis­turbed areas for preservation. Gives soil types and counties where they occur.


Available phosphorus was determined in prairie transition and forest soil profiles for well-drained and poorly drained soil sequences.


A synthesis of research on the prairie biome. It provides a description of grassland types, origin and biota of the prairie ecosystem, and a summary of research on major vertebrate and invertebrate groups. An extensive bibliography is included.


One collection was from a wetland on a sand prairie in Black Hawk County, Iowa.


Describes the prairies presently in Iowa’s state preserve system.


Gives brief history of prairie preservation in Iowa, what is currently being done, and what is hoped for the future. Also includes a status report on the prairie preserve system.


Included is an explanation Iowa’s state preserves law, and a brief description of the 20 prairies now designated as state preserves.


Gives results of a resurvey of the plots on a 24.3 ha (610-acre) grassland on the grounds of Iowa Lakeside Laboratory. Species lists are presented for all plots which were originally established by W. A. Anderson.


Uses radio carbon dating to age soil landscapes. A cool, moist, arboreal environment ended about 5,000 years ago, when a warmer subhumid to humid prairie environment became dominant.


Divides the central North America region into life zones. Most of Iowa is in the Central Prairies of the Middle Temperate zone.


https://scholarworks.uni.edu/pias/vol93/iss2/8
A taxonomic treatment of the prairie plants of the tallgrass biome and the Great Plains.


Gives the glacial history of the region of Iowa that includes the Kettlehole and provides maps of the Des Moines Lobe, a portion of Dickinson County, and several counties in Iowa and Minnesota. Pictures of the Kettlehole and Cayler Prairie are included. Although geological in orientation, prairie is mentioned and a plea for preservation of the Kettlehole is made.


Structure, environment, and reaction of an oak-hickory community was compared to a prairie community. Included were species abundance, soil moisture, soil temperature, and wind, and the reaction of plants to soil and light. The oak-hickory community was located in the North Woods (now called Pammel Woods); the prairie was a 1.3 ha (18-acre) tract owned by Dr. Ada Hayden. Both sites were close to Iowa State University, Story County. Many detailed quadrats are drawn.


Explains the link between the use of prairie vegetation for hay and the preservation of these remnants.


Fifteen sites were sampled from a variety of habitats on the 65 ha (160-acre) Kalsow Prairie Preserve, Pocahontas County, Iowa, in 1968. Samples were taken in February, early April, early May, late June-early July, and late August-early September. Tables of nematodes present and plants at each site are presented.


Ten soil samples from each of 15 sites on Kalsow Prairie, Pocahontas County, were analyzed for nematode populations. Species were found to have distinct habitat preferences.


Population density changes of selected plant parasitic nematodes were investigated at four bimonthly intervals beginning in February, 1968.


Soil samples from three native Iowa prairies, Cayler Prairie, Dickinson County; Hayden Prairie, Howard County; and Kalsow Prairie, Pocahontas County, were analyzed for plant parasitic nematodes. A list of plants with associated nematodes and similarity coefficients are included.


Personal experiences from his boyhood on a Boone County farm. He recounts the breaking of the prairie sod with three yoke of oxen, the dangerous prairie fires, and blizzards.


Twelve plots, totaling 13 acres, were burned in early spring, 1971, to determine how it affected use by bobwhite quail. Brome and bluegrass responded quickly, followed by goldenrod, common ragweed, and sericea lespedea. Prairie grasses became prominent in early June.


Iowa is prominently mentioned in the two chapters on grasslands. Maps which show the distribution of grassland types show the location of Iowa in the grassland biome.


Over 60 species, observed on a two-day visit in August, 1896, are given with notes on their abundance and distribution in Iowa.


Two areas of quartzite outcropping were studied and compared. Tables of plants from different habitat types are given.


Summarizes the reasons for the lack of trees on prairies. Divides Iowa prairies into six distinct types. Gives extensive species lists for 13 sites in Monona and Harrison counties. Includes detailed information on meteorological conditions.


Gives reasons for the occurrence of oak openings and presents a species list of plants collected on these openings. Collections are from eastern Iowa, chiefly Johnson County.


Provides an extensive species list for six different types of Iowa prairies and gives four sources for invasion of nonprairie plants. Examines the effects on the prairie of physical factors such as evaporation, rainfall, temperature, wind, and topography. Concludes that exposure to evaporation, as determined by wind, temperature, and topography is the primary cause of treelessness of the prairie.


Reports on a prairie that developed on an area bordering a highway when a cut was made through a wooded area north of Homestead, Iowa County. Speculates on sources of the prairie flora and give a species list.


Provides a physiographic description of the area and a summary of the plants of each ecological region. Included are lists of vascular plants of eight prairie sites, eight aquatic habitats, in addition to lists of lichens, fungi, and mosses.


Lists additional species collected since the publication of the preceding paper.


Divides sandy areas in Iowa into five types and selects seven sites for study of the distribution of the flora. A table of nearly 400 species is given for these seven areas. Most are prairie species.


Points out the existence of hill prairies on the bluffs of the Mississippi River, tells how he feels they are maintained, and presents lists of species.


Reports on two areas, one near Wilton, Muscatine County, and one near Mason City, Cerro Gordo County, where the prairie flora has returned to a disturbed surface. Argues that the prairie flora
IOWA PRAIRIE LITERATURE

represents a climax stage. An extensive species list is presented.


Excerpts from an earlier paper mainly describing the seasonal aspect of prairies.


Argues that the prairie flora is a climax stage.


Gives examples of how introduced plants inhabit disturbed sites and sometimes compete with the native prairie flora. A plea for preservation of prairie is included.

SHIMEK, B. 1934. The Shimek Plan. Unpubl. manuscript at the University of Iowa. Original not seen.

States the problems of grassland preservation and outlines a strategy for prairie protection in Iowa.


A summation of Shimek’s observation on the vegetation of Iowa which is our best source of information on the native condition of Iowa. Contains his final thinking on the treeless nature of Iowa prairies.


A study of 65 prairie plants was made to determine the character of the structural adaptations to the environment. Plants were taken from the loess bluff, Harrison County; near Okoboji Lake, Dickinson County; and near Iowa City, Johnson County. A matrix of the results is included.


Gives personal reflections and examples from literature on the development, splendor, and demise of the prairie.


Describes the pre-settlement prairie, its demise, and current preservation attempts.


A personal description of one man’s reverence for the prairie. Included is a rationale for saving the remnants.


A popular account of the various types of prairie in Iowa, a description of a prairie year, and a listing of protected prairies.


Describes natural areas of the Great River Road corridor located during a preliminary survey. Species lists, site location forms, and maps are included. Hill prairies, prairie openings, and sand prairies are described. Corridor is located in portions of Allamakee, Clayton, Dubuque, Louisa, Muscorm, and Des Moines counties.


Results of a statewide survey by The Nature Conservancy to determine areas suitable for acquisition for preserves. Numerous prairies are described.


Includes a brief introduction and history of the prairie, a list of 266 species of 63 families; five species were new county records.


Includes keys, dor maps, notes on habitats, illustrations, and locational information on the rare species. Prairies are occasionally mentioned.


A series of letters, written by H. C. Kelley, describing aspects of northern Iowa as it was in 1858. The prairie and prairie soils are often mentioned.


Relates factors which led to the decline and demise of prairie chickens in Iowa. Habitat destruction and over-hunting were the principal factors identified. Gives characteristics of the last known Iowa booming and mating grounds.


Mass and energy data were collected and rates of litter decomposition were estimated on a monthly basis along two transects through a forest-prairie ecotone at Ledges State Park, Boone County, Iowa, during the growing season of 1969. The data were interpreted through the principles of thermodynamics.


Recounts the contributions of various scientists to the peninsula concept and analyzes the evolution of the concept since Transeau’s 1935 publication. Iowa is shown on several maps.


Provides documentation for the rate at which Iowa was settled. Includes many maps and tables giving amount of land sold during certain time periods. Prairie land is often mentioned or alluded to.


A history of distribution of public lands. Important dates are given and prices paid for land are listed.


Includes as a habitat type "openings of limestone ridges and bluff crests," and includes a short list of prairie species observed there. Also included is a list of the vascular flora, annotated with habitats of occurrence.


An in-depth historical review of the role of grasslands in the development of American plant ecology. Some Iowa researchers are discussed; however, the focus is on Nebraska.

A checklist of mosses, pteridophytes, gymnosperms, monocots and dicots, with comments on plant formations. Prairies are described under the "xerosere", along with lists of characteristic species.


Locates the eastern extension of the prairie at the time of settlement. Provides range maps for 17 species to help define the prairie peninsula.


An annotated catalog of the vascular flora, including dot mops, is presented for nine south-central Iowa counties.


The history of plant ecology in Iowa is examined by analyzing papers published in the Proceedings of the Iowa Academy of Science. A bibliography of 135 entries is included.


Includes a history of the preserve, information on the successional status of the plant communities, and an annotated list of plant species.


Includes soils map, history of the Lyon County preserve, an annotated catalog of plant species, and management recommendations.


The vascular flora of this preserve in Lyon County was studied in 1974-76. Included is a list of 328 species from 66 families. Seven plant communities are described.


Describes the demise of the Iowa prairie, and explains the importance of those remnants which still exist along roads.


Five species of grasses and four species of legumes were planted in randomized replications on five sites in Davis County. Soil structure was examined after three years and after eight years.


Studies were initiated in 1941 to determine the effects of different species of grasses and legumes on severely eroded Weller and Lindley soils at Floris, Davis County, Iowa. Five species were native prairie species.


The relation of plant cover to certain growth conditions on eroded soils was studied near Floris, Davis County, Iowa. Some prairie species were used. Species lists and photographs are included.


Describes the limits of the prairie in North America, mentions Iowa and Illinois as having "True Prairie," and makes a plea for prairie preservation.


A summation of Weaver's observations on prairies throughout the Midwest and Great Plains. Iowa's prairies are mentioned throughout and Iowa's prairie literature is cited extensively. Weaver concludes this book with a plea for all states to follow Iowa's example to preserve the remaining prairie (see p. 325).


The vegetation on 81 ha (200 acres) of prairie, consisting of tracts from near Guthrie Center, Guthrie County; Anita, Cass County; Corning and Creston, Union County is described. Observations from throughout the year are included.


The area examined extended about 564 km (350 miles) along the axis of the Missouri River and from the Mississippi-Missouri divide in Iowa westward about 322 km (200 miles) to the edge of the Great Plains. The emphasis is on woodlands and aquatic vegetation, but the woodland-prairie ecotone is described.


Data were taken during 1928-1932 from 63 prairies throughout a 60,000 sq. mi. area of the central Missouri River Valley. The study was concerned with the relative extent of the grassland types in relation to topography, soil, and other environmental conditions. Eleven of the prairies were located in western Iowa.


Published posthumously, this is a summation of 50 years of prairie research by Weaver and his students. A map shows the general location of 30 Iowa sites studied.


Prairies near Glenwood, Mills County; near Corning, Union County; near Anita, Cass County; and near Oakland, Pottawattamie County were studied in 1935 for effects of the previous year's drought.


A description of the very gradual change in vegetation from the true prairie to mixed prairie, which occurs in a broad ecotone about 81 km (50 miles) in width. This ecotone is in eastern Nebraska and Kansas. Iowa's prairies are mentioned as examples of mesic prairies.


Results of a ten-year study of the life histories, distribution, and relative importance of the dominant grasses in a central area of the tallgrass prairie. Study occurred in the western one-third of Iowa and the eastern one-third of Nebraska.


A synopsis of five years of studies involving 135 sites in eastern Nebraska, western Iowa, and adjacent areas in Kansas, Missouri, South Dakota, and Minnesota. Thirty sites in Iowa were chosen; several are shown by photographs.

The effect of microtine herbivory on a formerly heavily-grazed grassland, Dickinson County, Iowa, was studied by establishing four treatment quadrates in each of two blocks. An exclosure was erected and microtines removed. *Poa pratensis* increased within the exclosure, while *Andropogon* was greater outside. The total sample biomass did not differ significantly.


Comparisons were made of propagule characteristics and niche relationships among co-occurring species of goldenrods in a 23-year-old field in Michigan and a virgin tallgrass prairie in Dickinson County, Iowa.


An account of the completion of the first telegraph line across Iowa.


Five plots in Story County, Iowa, were chosen to test the effect of burning on woody plant survival. All plots contained some native prairie vegetation, and some invading woody species. Physical factors of spring and fall burns were recorded, and species were monitored for survival.


A description is given of the Emmet County vegetation of an area near the northern Iowa border before the native plants were seriously reduced. A total of 537 species are listed.


Since 1980, the Iowa Conservation Commission has attempted to reestablish the greater prairie chicken in the prairies of the Loess Hills of western Iowa. This report tells what progress has been made, what problems remain, and what future efforts are needed.


Greenhouse and field studies were conducted in Story County to determine the effect of planting depth, seed inoculation, and seed treatment. Seeds planted shallowly provided the best stands, and chemical treatment of seeds proved to increase stand and growth.


Describes a pilot program of roadside prairie plantings in Van Buren County and provides a rationale for expanded use of the program.