



Annotated Checklist of Vascular Flora

Dinosaur National Monument

Natural Resource Technical Report NPS/NCPN/NRTR—2009/225



ON THE COVER

Paria evening-primrose (*Oenothera caespitosa* var. *navajoensis*). Photograph by Walter Fertig.

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Abstract

In 2005–2006, the National Park Service’s Northern Colorado Plateau Network received funding to develop a revised checklist of the vascular plant flora of Dinosaur National Monument. This entailed a thorough review of existing literature, re-examination of specimens from the Dinosaur National Monument herbarium and other state and national museum collections, and additional field work to corroborate unverified species reports or locate new species. Based on this study, 756 vascular plant taxa have been confirmed or reliably reported as occurring in the monument (705 are known from validated herbarium specimens and 51 from unvouchered literature reports). Another 123 species formerly considered part of the monument flora have now been shown to be falsely reported. The Utah portion of Dinosaur National Monument contains 484 species (13.5% of the state flora), and the Colorado segment contains 592 species (18.8% of the entire Colorado flora). Only one plant species from Dinosaur National Monument is listed as threatened or endangered under the U.S. Endangered Species Act: Ute ladies’-tresses (*Spiranthes diluvialis*), but at least 79 other species are either former candidates for listing, identified as sensitive by the U.S. Forest Service or Bureau of Land Management, or tracked as species of concern by state natural heritage programs. Introduced plants make up 10.3% of the monument flora (78 species), of which 22 species are considered noxious weeds by the states of Utah and Colorado. Further surveys in Dinosaur National Monument are likely to find additional new species (359 are known from similar habitats outside the monument boundary), especially among late-season flowering, weedy, or wetland taxa.

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I would like to thank the following individuals for their assistance with this project: Dr. Angela Evenden, botanist and former leader of the Northern Colorado Plateau Network (NCPN) program in Moab, Utah, was an active proponent of this project and helped secure funding for field work and herbarium studies in 2006. Tamara Naumann, Dinosaur National Monument (NM) botanist, provided digital data pertaining to her 1990 floristic report and herbarium and literature review, granted research permits, facilitated housing, and assisted this project in numerous other ways. Ann Elder, former curator of museum collections for Dinosaur NM, provided access to all mounted and unmounted herbarium specimens from Dinosaur NM. Melissa Powell, Emily Spencer, and Doug Perry recorded specimen-label data from all mounted collections in the Dinosaur NM herbarium. Libby Nance, former database specialist with the NCPN, assisted with development and quality control of the monument's NPSpecies database. Libby Nance, Janet Coles, and Helen Thomas also provided data from recent vegetation mapping and wetland inventories on the monument. Drs. Stanley Welsh and Duane Atwood provided access to herbarium collections at Brigham Young University. Dr. Michael Piep provided access to collections at the Utah State University (Intermountain) herbarium. Dr. Ron Hartman and Ernie Nelson provided access and specimen loans from the Rocky Mountain Herbarium at the University of Wyoming. Thanks to the technical reviewers (Dr. Angela Evenden, Dr. Dusty Perkins, and Libby Nance) for their comments and suggestions. To any others whom I may have inadvertently forgotten, please accept my apologies (and thanks).

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1 Introduction

In 2006, the National Park Service (NPS) established a cooperative agreement with the University of Wyoming, through the Rocky Mountains Cooperative Ecosystem Studies Unit, to produce a series of technical reports summarizing the vascular plant flora of each of the 16 national park units of the Northern Colorado Plateau Network (NCPN). These reports are based on existing information in the park service's NPSpecies database system and augmented by further data mining, reviews of state and regional herbaria, and new field surveys to resolve the status of many reported and unconfirmed species. The objective of these reports is to summarize the current state of knowledge of the flora of each park for the benefit of NPS biologists and interpretive staff, outside researchers, and the general public. The following report addresses the vascular flora of Dinosaur National Monument, in northeast Utah and northwest Colorado. Other NCPN park units are addressed in separate reports.

1.1 Background and justification

One of the primary missions of the NPS is “to conserve unimpaired the natural and cultural resources and values of the national park system for the enjoyment of this and future generations” (NPS 2000). Due to their high degree of protection and distribution across a wide variety of habitat types, the nation's national park units make a significant contribution to the protection of biological diversity (Noss and Cooperrider 1994). Unfortunately, the full contribution of the National Park System is not known, as many park units have traditionally lacked comprehensive biological inventories or monitoring programs to identify the composition and condition of their biota. Knowing the status of park flora and fauna is critical for effective park management and for systematically identifying and filling gaps in the nation's protected area network (Margules and Pressey 2000).

To rectify this shortcoming, Congress passed the National Parks Omnibus Management Act in 1998 to provide guidance and funding for an inventory and monitoring program across the entire National Park System. Since 2000, the NCPN Inventory and Monitoring Program has been developing and verifying species lists of vertebrates and

vascular plants for each park unit in the network (Evenden et al. 2002). This effort has entailed reviewing existing species checklists, corroborating the identification of specimens in park museum and herbarium collections, locating additional specimen records from other museums, mining relevant literature and datasets, and conducting field surveys to locate new taxa or confirm unsubstantiated reports.[†] All of these data have been synthesized in NPSpecies, the park service's standardized database for documenting park status (present, probably present, unconfirmed, falsely reported), abundance, residency, nativity, and rarity. With the production of a technical series of reports on the flora of each park, the NPSpecies data will now be available to a broader audience.

1.2 Objectives

The objectives of this project were to:

1. Document the current status (present, reported, potential, or falsely reported) of all vascular plant species that have been cited as occurring in Dinosaur National Monument based on a review of herbarium collections and past literature.
2. Develop an annotated checklist of the flora of Dinosaur National Monument, with supplemental information on taxonomic synonyms, distribution, within-park abundance, flowering period, growth form, nativity, habitat, and sources for each record.

1.3 Study area

1.3.1 History and setting

Human occupation of Dinosaur National Monument (NM) dates back 9,000–10,000 years. The earliest inhabitants were hunter-gatherers, who were ultimately replaced by the Fremont culture around 400 A.D. Fremont peoples practiced farming of maize, beans, and squash, in addition to hunting, and left behind an abundant archeological record of petroglyphs, masonry, baskets, and fashioned projectile points. Following a period of severe drought across the southwest in the thirteenth century, the Fremont culture gave way to nomadic Ute and Shoshone tribes practicing hunting and gathering. In the late 1800s, Euro-American settlers moved into the Yampa and Green River drainages to homestead and establish livestock ranches, though the area

[†]Taxa refer to all named species, subspecies, and varieties.

remained thinly populated (Harvey 1991).

Although John Wesley Powell's Colorado River expedition floated through Dinosaur NM in 1869, little scientific exploration of the surrounding uplands occurred until the early twentieth century. In 1909, Earl Douglass, a paleontologist with the Carnegie Museum in Pittsburgh, Pennsylvania, discovered dinosaur fossils in the Morrison Formation near Split Mountain, in Utah. Over the next 15 years, Douglass and colleagues from the Carnegie Museum, U.S. National Museum, and University of Utah excavated nearly 300 partial-to-complete skeletons of 14 dinosaur species, as well as fossils of crocodiles, freshwater turtles, bivalves, and silicified wood (Gregson and Chure 2003). Concerned over growing vandalism of the fossil beds, Douglass lobbied the U.S. Department of the Interior and President Woodrow Wilson to afford the quarry site federal protection. In October 1915, Wilson issued a presidential proclamation establishing Dinosaur National Monument (Elder 1999). Initially, the monument covered just 80 acres in the immediate area of the quarry. President Franklin Roosevelt later expanded the monument to more than 82,000 acres, to include the confluence of the Green and Yampa rivers. Following the controversy surrounding the proposed Echo Park dam in the 1950s, the monument was expanded again in 1960, before attaining its current configuration and size (210,276 acres/85,096 ha) in 1978 (Evenden et al. 2002).

Dinosaur NM is located in northeastern Utah (Uintah County) and northwestern Colorado (Moffat County), along the northern edge of the Uinta Basin and foothills of the Uinta Range (Figure 1.3.1). The monument is approximately 20 miles east of Vernal, Utah, and 50 miles west of Craig, Colorado. Visitor centers are located at the quarry (north of Jensen, Utah) and at monument headquarters in Dinosaur, Colorado. The Y-shape of the monument accommodates 46 river miles of the Yampa River (the last major undammed tributary of the Colorado River) and 45 river miles of the Green River. Elevations within the monument range from 4,750 feet (1,448 m) near the quarry to 9,000 feet (2,743 m) on the summit of Zenobia Peak, at the west end of Douglas Mountain. Average annual precipitation varies from 11 inches (280 mm) at low-elevation sites to 20 inches (508 mm) at high elevations on the Colorado side (Evenden et al. 2002). Temperatures average 0–30°F in January and 50–100°F in July.

1.3.2 Geology

Although Dinosaur NM was created primarily to protect its rich dinosaur fossil beds, the monument is equally noteworthy for having one of the most complete stratigraphic records of any NPS unit. Faulting associated with the rise of the Uinta Range and downcutting by the Green and Yampa rivers has exposed 23 major geologic formations within the monument, dating back nearly 1.1 billion years (Chronic 1990; Gregson and Chure 2003).

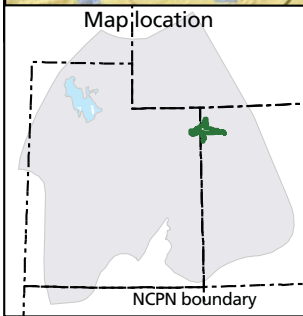
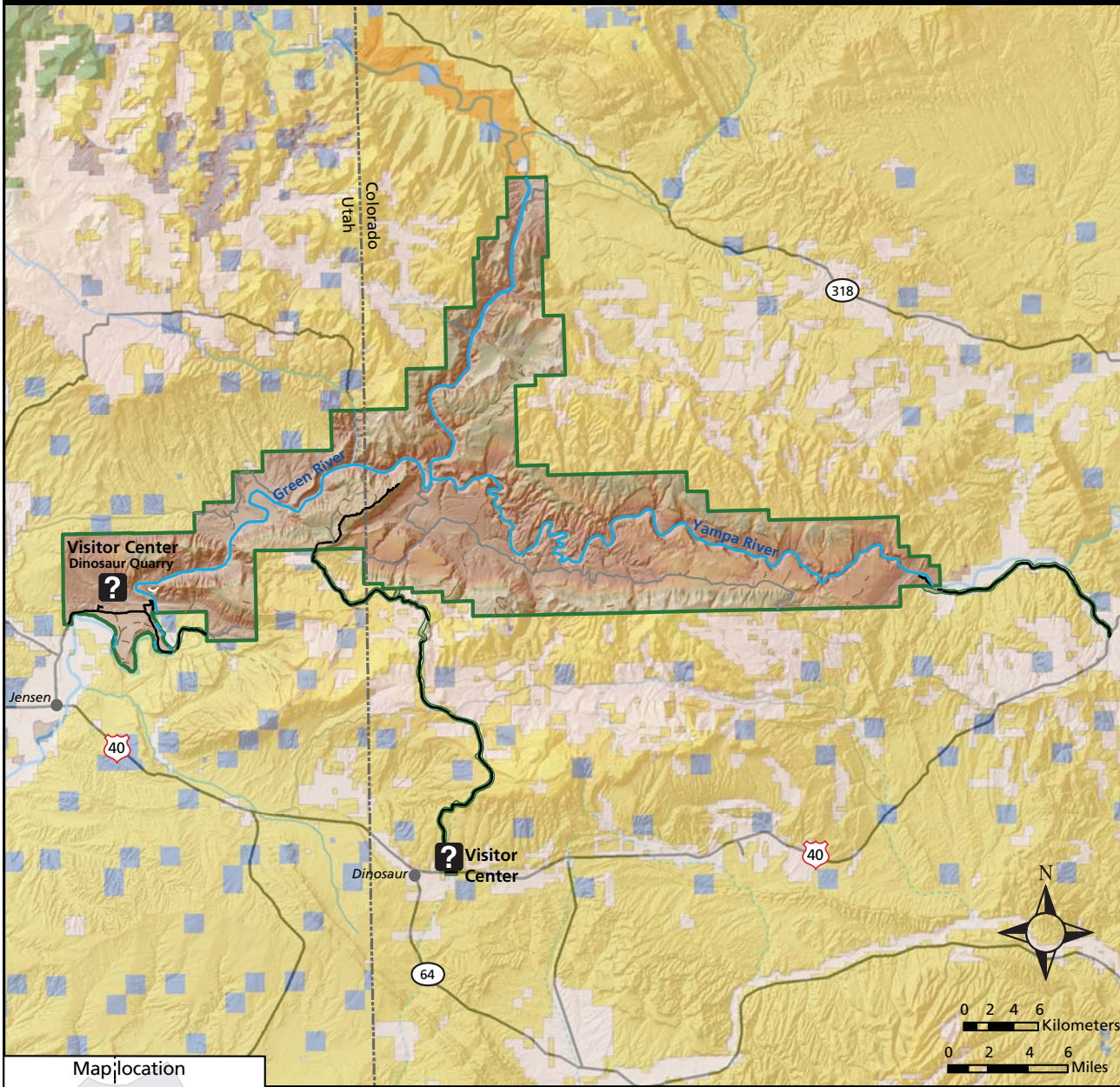
The oldest strata in Dinosaur NM are red quartzites and sandstones of the Precambrian Uinta Mountain Group. These outcrops are exposed along the north flank of Douglas Mountain, the Canyon of Lodore on the Green River, and in a narrow band on the north side of Blue Mountain (Gregson and Chure 2003). Sediments of the Uinta Mountain Group were deposited in a large trough that represents the failed arm of a rift valley system (analogous to the Rift Valley of east Africa today). These sediments were later uplifted and eroded to a smooth, beveled edge, before ultimately being buried by marine sandstones and shales of the Lodore Formation in the upper Cambrian, about 520 million years ago (Gregson and Chure 2003).

Rocks dating to the upper Paleozoic comprise the most widely exposed strata within Dinosaur NM, forming most of Split Mountain, the north slope of Blue Mountain, and the foothills at the base of Douglas Mountain. These sedimentary layers, including the Mississippian Madison Limestone and Doughnut Shale, Pennsylvanian Round Valley Limestone and Morgan Formation, and Permian Park City Formation, are all of marine origin and were deposited when northeastern Utah and northwestern Colorado were located along North America's continental shelf and influenced by sedimentation from ancestral mountain ranges to the south (Gregson and Chure 2003). Only the late Pennsylvanian–early Permian Weber Sandstone was formed in a terrestrial setting, as part of a massive sand dune or beach system. Weber Sandstone forms the cliff walls and large monoliths of the canyon bottoms (such as Steamboat and Jennie Lind rocks), and is noteworthy in the Uinta Basin as a reservoir of petrochemicals.

In the Mesozoic, Dinosaur NM was located along the boundary of the mid-continental sea and was affected by repeated cycles of marine inundation

Dinosaur National Monument

Colorado and Utah



Established October 4, 1915
 1,448–2,743 m elevation
 (4,750–9,000 ft elevation)
 85,096 ha (210,276 ac)



Legend			
	Intermittent streams		Park boundary (NPS)
	Perennial streams		U.S. Bureau of Land Management
	Rivers		U.S. Forest Service
	Paved roads		Private
	Unpaved roads		State
	Unimproved/4WD roads		U.S. Fish and Wildlife Service
			Other state or local ownership

MAP CREATED BY ANETH WIGHT, NCPN (DERIVED FROM EVENDEN ET AL. 2002)

Figure 1.3.1. Location of Dinosaur National Monument, Uintah County, Utah, and Moffat County, Colorado.

and regression. Mesozoic sediments are exposed primarily on Yampa Bench, Island Park, and in the vicinity of the Dinosaur Quarry (Gregson and Chure 2003). The lower Triassic Moenkopi Formation was deposited in a tidal flat or shallow lagoon environment favorable to formation of evaporites (such as gypsum). In the upper Triassic, these beds were buried by Chinle siltstones, sandstones, and shales deposited by coastal streams or lakes. Thick, wind-blown sand dunes inundated the area in the late Triassic–early Jurassic, forming the Glen Canyon Sandstone (equivalent to the extensive Nugget/Navajo dune system that covered much of the Colorado Plateau). Marine transgressions (Carmel and Stump formations) were interrupted by eolian Entrada Sandstone in the mid-to-late Jurassic. Later in the Jurassic, parts of the monument were buried by alluvial and flood deposits laid down by streams meandering across a steamy coastal flat. These sediments became the Morrison Formation, and contain the vast majority of the dinosaur fossils that have given Dinosaur NM its fame (Chronic 1990).

Cretaceous and younger strata are relatively poorly developed within Dinosaur NM. Marine sandstone and shales of the Dakota, Mowry, Frontier, and Mancos formations are exposed in the vicinity of the Dinosaur Quarry, Split Mountain, and Deerlodge Park. Other Cretaceous formations are exposed elsewhere in the Uinta Basin, but not within the monument, itself. Regional uplift in the late Cretaceous resulted in formation of the Uinta Range, but was immediately followed by a period of extensive erosion and sedimentation of adjacent valleys. This reached its extreme in the Oligocene, when much of the area was a beveled plane, locally preserved in areas of Blue Mountain, the Yampa Plateau, and Ruple Ridge as the Bishop Conglomerate. A repeated cycle of mountain building in the late Tertiary resulted in exhumation of much of this accumulated sediment by the modern Yampa and Green rivers (Gregson and Chure 2003).

1.3.3 Vegetation

The vegetation of Dinosaur NM and the Uinta Basin has been described in detail by Goodrich and Neese (1986), Graham (1937), Naumann (1990), and the NCPN (in ed.). In general, the monument's vegetation can be divided into 5–6 main subdivisions based on elevation, dominant growth form, and proximity to water.

Upland areas below 6,000 feet, with clay soils, are

mostly dominated by desert shrublands of shadscale (*Atriplex confertifolia*), mat saltbush (*Atriplex corrugata*), Wyoming big sagebrush (*Artemisia tridentata* var. *wyomingensis* or *Seriphidium tridentatum* ssp. *wyomingense*), budsage (*Artemisia spinescens* or *Picrothammus desertorum*), and greenish rabbitbrush (*Chrysothamnus nauseosus*). Basin big sagebrush (*Artemisia tridentata* var. *tridentata*) becomes locally dominant on low-elevation valley bottom sites with deeper soils or a higher water table, while black sagebrush (*Artemisia nova*) is common in areas with shallow soils over poorly drained bedrock (Goodrich and Neese 1986; Naumann 1990).

Woodlands of two-needle pinyon (*Pinus edulis*) and Utah juniper (*Juniperus osteosperma*) predominate over dry-to-mesic sandstone sites between 5,500 and 8,000 feet (Naumann 1990). The understory of pinyon-juniper woodlands is usually dominated by shrubs, such as basin big sagebrush, antelope bitterbrush (*Purshia tridentata*), and alder-leaf mountain mahogany (*Cercocarpus montanus*), but may also have a high concentration of perennial bunchgrasses, including Indian ricegrass (*Stipa hymenoides* or *Achnatherum hymenoides*), Sandberg's bluegrass (*Poa fendleriana*), muttongrass (*P. fendleriana*), or bluebunch wheatgrass (*Elymus spicatus* or *Pseudoroegneria spicata*). Rocky sites exposed to frequent blowing wind often support cushion-plant communities of low forbs and bunchgrasses, rather than pinyon-juniper stands. Such cushion communities support many of the monument's rarer species, especially on Blue Mountain and Zenobia Peak (Naumann 1990).

At elevations above 8,000 feet, or on lower sites with deep soils, pinyon-juniper woodlands give way to montane shrublands. Mountain big sagebrush (*Artemisia tridentata* var. *vaseyana* or *Seriphidium vaseyanum*) shrublands, mixed with Idaho fescue (*Festuca ovina* var. *ingrata* or *F. idahoensis*); bluebunch wheatgrass; and a variety of perennial forbs typically occur on drier, south exposures. Alder-leaf mountain mahogany, Saskatoon serviceberry (*Amelanchier alnifolia*), western chokecherry (*Prunus virginiana* or *Padus virginiana*), and squawbush (*Rhus aromatica* var. *trilobata*) become dominant on shadier or more-mesic slopes with deeper soils (Goodrich and Neese 1986; Naumann 1990).

Conifer and aspen forests occur at the highest elevations of Blue, Douglas, and Split mountains. Quaking aspen (*Populus tremuloides*) woodlands

occur in mesic sites with well-developed organic soils and support a rich understory of perennial grasses, tall forbs, and mountain snowberry (*Symphoricarpos oreophilus* or *S. rotundifolius*). Douglas-fir (*Pseudotsuga menziesii*) forests occur commonly on limestone or other non-quartzitic substrates, especially on north-facing slopes. Mixed stands of Douglas-fir and ponderosa pine (*Pinus ponderosa*) occur in well-shaded side canyons.

Riparian communities occur along the Green and Yampa rivers, or are associated with springs and seeps. Fremont cottonwood (*Populus fremontii*), box-elder (*Acer negundo* or *Negundo aceroides*), and willow species (*Salix* spp.) predominate along alluvial terraces bordering the major rivers, while narrowleaf cottonwood (*P. angustifolia*) becomes common along smaller streams draining the adjacent mountains. Five-stamen tamarisk (*Tamarix chinensis* or *T. ramosissima*) has become common along many reaches. Wet meadows at lower elevations are characterized by Baltic rush (*Juncus arcticus*) and three-square bulrush (*Scirpus pungens* or *Schoenoplectus pungens*), but often grade into big sagebrush–Great Basin wildrye (*Elymus cinereus* or *Leymus cinereus*) stands on terraces with a lower water table. Montane wet meadows tend to be locally dominated by Nebraska sedge (*Carex nebrascensis*) or smallwing sedge (*C. microptera*). Hanging gardens occur infrequently in Dinosaur NM, and are associated with shady seeps within sandstone ledges. Typical hanging-garden species include southern maidenhair fern (*Adiantum capillus-veneris*), alcove columbine (*Aquilegia micrantha*), giant helleborine (*Epipactis gigantea*), golden sedge (*Carex aurea*), and Jones' reedgrass (*Calamagrostis scopulorum*). Many hanging-garden taxa are considered species of concern, and the community itself is rare (Fowler et al. 2007; Naumann 1990).

1.3.4 Previous botanical studies

Western explorer and future presidential candidate John Charles Fremont led the first botanical expedition through the Uinta Basin of northwestern Utah in 1844 and 1845, but apparently did not collect specimens within Dinosaur NM, itself (Goodrich and Neese 1986). Paleontologist Earl Douglass and O. A. Peterson, of the Carnegie Museum, made the earliest collections from the future Dinosaur NM, taking 102 specimens (representing 85 taxa) from the Dinosaur Quarry near Split Mountain in 1912 (Table 1.3.4, Figure 1.3.4).

George Osterhout visited the quarry in 1925, and collected the type specimen of Uinta Basin cryptanth (*Cryptantha [Oreocarya] breviflora*), the first of more than one-half dozen holotypes from Dinosaur NM (Welsh 1982). As with several other type collections, however, the earliest specimen of this Uinta Basin endemic was taken by Douglass and Peterson in 1912.

Edward H. Graham, also of the Carnegie Museum, conducted an exhaustive floristic and ecological survey of the Uinta Basin of Utah and Colorado from 1931 to 1935 (Graham 1937). During this period, Graham obtained at least 225 collections from Dinosaur NM, representing 70 new species for the flora. Over the next dozen years, Bertrand Harrison, Bassett Maguire, Harold D. Harrington, and Cedric L. Porter (all herbarium curators from the leading herbaria of Utah, Colorado, and Wyoming) made several collecting trips to the area and added 40 more species to the monument checklist (Table 1.3.4).

Although Dinosaur NM had been greatly expanded to include much of the Green and Yampa river drainage in 1938, the Colorado portion of the monument remained poorly known, botanically, until the late 1940s. In 1948, Ruth Ann Bradley (née Wolf) and Kathleen Dever, of the University of Colorado, worked as fire lookouts on Roundtop Mountain and spent much of their free time collecting plant specimens for the Dinosaur NM and University of Colorado herbaria. Over a two-year period, Bradley and Dever collected more than 280 specimens and discovered 139 new plant taxa for the monument as part of Bradley's master's-degree work on the flora of Moffat County, Colorado (Bradley 1950). From 1948 to 1952, H. D. Harrington, William Weber (long-time curator of the University of Colorado herbarium), Hugo Rodeck, Alan Beetle, and C. L. Porter contributed 36 additional new species.

Stanley Welsh, future curator of the Brigham Young University herbarium, spent two years surveying the Utah side of Dinosaur NM, starting in 1955, as part of his master's thesis on the monument's vegetation. During this time, Welsh and William Weber documented 65 new species for the monument flora. The new species included the holotype of Ownbey's thistle (*Cirsium ownbeyi*), taken by Welsh from the vicinity of Split Mountain in 1955. As part of his thesis, Welsh (1957) produced a revised species list for the Utah portion of Dinosaur NM, listing 360 taxa.

During the 1960s, local ranchers William MacLeod and his parents, Marian and Bruce MacLeod, collaborated with William Weber to collect extensively in the Colorado portion of Dinosaur NM (Weber et al. 1982). Arthur Holmgren and colleagues from Utah State University conducted a botanical survey of the Green River in 1961–1962, and documented 40 new species for the monument flora. Holmgren (1962) published a revised checklist with 553 plant taxa. Additional new taxa were collected by Jack Brotherson, Stan Welsh, Noel Holmgren, and James Reveal during the mid-to-late 1960s, including the types of Dinosaur wild buckwheat (*Eriogonum lonchophyllum* var. *saurinum*) and orchard snakeweed (*Gutierrezia pomariensis*).

Elizabeth Neese, Joan Friedlander, Steve Wathen, Scott Peterson, Dieter Wilken, and others conducted field work in Dinosaur NM in the early 1980s, and added nearly two dozen new species to the monument flora. Neese collected holotypes of two narrow endemics from Blue Mountain in 1982: rock hymenoxys (*Hymenoxys lapidicola*) and Blue Mountain penstemon (*Penstemon scarious* var. *cyanomontanus*). Goodrich and Neese (1986) published the *Uinta Basin Flora* in 1986, summarizing much of the floristic knowledge of the Dinosaur NM vicinity.

The most exhaustive botanical survey of Dinosaur NM to date was conducted by Steve O’Kane, Betsey Neely, Tamara Naumann, and collaborators from 1987 to 1989. This team collected more than 1,400 specimens for the Dinosaur NM herbarium (DINO) and other regional herbaria, and documented 130 new vascular plant taxa, increasing the known flora of the monument by 18.5%. Naumann (1990) described the results of this study, which included a detailed inventory of nearly 40 rare and endemic species.

Since 1990, more than 50 additional species have been recorded in Dinosaur NM. Lynn Reidel surveyed the Hog Canyon area in 1991, and added 19 new species to the flora, including the narrow endemic, Graham’s columbine (*Aquilegia grahamii*). Jim Fowler and C. L. May surveyed hanging gardens in the monument in 1993, and discovered one new species (Fowler et al. 2007). Tamara Naumann added three new early spring species in 1995–1996. Derek Tilley and colleagues collected 18 new species from 2002 to 2004. Vegetation mappers from the NCPN (in ed.) added eight new species reports in 2002. Dewey and Andersen (2006) conducted a weed inventory and mapping study in 2004, and reported three new invasive taxa. Rebecca Harms added four new wetland species to the flora during a survey of seeps and springs in 2005 (Springer et al. 2006).

Table 1.3.4. Chronology of plant-collecting efforts in Dinosaur National Monument.

Year	Collector(s)	# of new taxa	Comments
1912	E. Douglass and O. A. Peterson	85	Earl Douglass and O. A. Peterson collected 102 plant specimens from the Dinosaur Quarry area (representing 85 species) for the Carnegie Museum.
1925	G. Osterhout	0	George Osterhout collected the type specimen of Uinta Basin cryptanth (<i>Cryptantha [Oreocarya] breviflora</i>) from the Dinosaur Quarry area. Douglass and Peterson had previously documented this species from the same site in 1912, though it remained misidentified for several years.
1931–1935	E. H. Graham, B. F. Harrison, Larsen, B. Maguire, & G. Piranian	71 + 4 reported	Edward H. Graham collected at least 225 specimens in Dinosaur NM for the Carnegie Museum from 1931 to 1935, and discovered or reported 70 new species for the monument flora (Graham 1937). Bertrand Harrison, Bassett Maguire, and colleagues added 5 new species during field work in 1934–1935.
1945–1947	H. D. Harrington, C. L. Porter, D. Ripley, & R. Barneby	33 + 1 reported	Harold D. Harrington, of Colorado State University, and Cedric L. Porter, of the University of Wyoming, collected more than 40 specimens in the monument and discovered or reported 34 new species for the flora. Dwight Ripley and Rupert Barneby discovered the holotype of grass milkvetch (<i>Astragalus chloodes</i>) from a site southeast of Jensen, Utah (just outside the monument) in 1946.
1948–1949	R. A. Bradley, K. S. Dever, H. Rodeck, H. D. Harrington, A. A. Beetle, & C.L. Porter	141	Ruth Ann Bradley (née Wolf) and Kathleen Dever, students from the University of Colorado, worked as fire lookouts and collected more than 280 plant specimens and 139 new species from the monument, focusing mostly on the Colorado side (Bradley 1950). Harrington, Porter, Hugo Rodeck, and Alan Beetle added nearly 40 additional collections and 19 species for the flora in 1948.
1950–1952	W. A. Weber	17	William Weber, longtime curator of the University of Colorado herbarium, collected 85 specimens from the monument over a three-year period and discovered 17 new species for the flora.
1953	A. H. Holmgren & S. S. Tillett	0	Arthur Holmgren and S. S. Tillett collected the type specimen of Dinosaur milkvetch (<i>Astragalus saurinus</i>) from the vicinity of the Dinosaur Quarry. This species had first been collected (though misidentified) by Douglass and Peterson in 1912.
1955–1956	S. L. Welsh & W. A. Weber	65	Stanley Welsh conducted a floristic and ecological survey of Dinosaur NM for his master's thesis (Welsh 1957). In 1955, Welsh documented 45 new species for the monument and collected the holotype of Ownbey's thistle (<i>Cirsium ownbeyi</i>) from the Split Mountain area. Welsh and W. A. Weber combined to collect 20 new taxa in 1956. Welsh (1957) produced a checklist of 360 taxa from the Utah side of the monument.
1957–1959	H. D. Harrington & W. Barmore	3	H. D. Harrington discovered one new species in 1957, and W. Barmore added 2 new taxa in 1959, on the Colorado side of the monument.
1960–1962	W. A. MacLeod, M. MacLeod, A. Holmgren, N. Holmgren, T. Jensen, J. Reveal, & S. Welsh	54	William A. MacLeod and his mother, Marian, collected extensively in the Colorado section of Dinosaur NM in 1960–1961, adding 12 new species to the monument flora. Arthur Holmgren, of Utah State University, Noel Holmgren, Tom Jensen, and James Reveal made approximately 120 collections along the Green River in 1961–1962, and added 40 taxa to the flora. Holmgren (1962) published a revised monument checklist with 553 species. Stan Welsh discovered one new species in 1962.
1965–1966	J. Brotherson, N. Holmgren, J. Reveal, S. L. Welsh, M. MacLeod, W. A. Weber, & P. J. Salamun	12	Jack Brotherson discovered 6 new species for the monument in 1965–1966. Noel Holmgren and James Reveal added 1 new species and collected the holotype of Dinosaur wild buckwheat (<i>Eriogonum lonchophyllum</i> var. <i>saurinum</i>) along the Island Park Road in 1966. Stanley Welsh and colleagues collected the type of orchard snakeweed (<i>Gutierrezia pomariensis</i>) from Orchard Draw in 1965. Marian MacLeod, William Weber, and P. J. Salamun contributed 5 new species.
1967–1971	W. A. Weber & M. MacLeod	5	William Weber found 4 new species and Marian MacLeod added 1 additional species from the Colorado portion of the monument.

Table 1.3.4. Chronology of plant-collecting efforts in Dinosaur National Monument, cont.

Year	Collector(s)	# of new taxa	Comments
1978–1979	D. Wilken, E. Neese, S. L. Welsh, & W. A. Weber	1 + 1 reported	Dieter Wilken and colleagues collected pitseed goosefoot (<i>Chenopodium album</i> var. <i>berlandieri</i>) in the monument in 1978. Stanley Welsh and Elizabeth Neese collected the holotype of park rockcress (<i>Arabis vivariensis</i> , sometimes included with <i>A. fernaldiana</i>) from the Jones Hole National Fish Hatchery, just outside Dinosaur NM, in 1979. Weber and others (1982) reported discovering western aster (<i>Aster spathulatus</i>) in the monument in 1979. Other collectors who worked in Dinosaur NM in the late 1970s, but did not document new species for the flora, include Larry England, Duane Atwood, Glen Moore, Barry Johnston, Janet Wingate, Leila Shultz, and Sheryl Goodrich.
1982	E. Neese, K. Snyder, & J. Trent	2	Elizabeth Neese and colleagues discovered two new species for Dinosaur NM, and collected the type specimens of rock hymenoxys (<i>Hymenoxys lapidicola</i>) and Blue Mountain penstemon (<i>Penstemon scariosus</i> var. <i>cyanomontanus</i>) from Blue Mountain in 1982 (both had previously been collected in the monument by S. L. Welsh in 1955–1956).
1983–1984	J. Friedlander, S. Wathen, S. Peterson, & D. Wilken	22 + 2 reported	Joan Friedlander and Steve Wathen collected 120 specimens for the DINO herbarium and documented 22 new taxa for the monument. Scott Peterson and Dieter Wilken discovered two additional species, as reported by Goodrich and Neese (1986).
1986	B. Clarfield	3	Bonnie Clarfield collected 21 specimens for the DINO herbarium, including 3 new species for the monument.
1987–1989	S. O’Kane, B. Neely, L. Riedel, S. Galatowitsch, D. Kuntz, A. Roszczewski, T. Naumann, E. L. Painter, W. Kelley, H. Campbell, & W. Jennings	130	Steve O’Kane, Betsey Neely, Tamara Naumann, and colleagues conducted a major floristic and rare plant survey throughout Dinosaur NM (Naumann 1990). Over a three-year period, this group collected more than 1,400 specimens for the DINO herbarium and documented 130 new taxa for the monument, increasing the total flora by nearly 20%. In 1987, Steve O’Kane discovered the type of needle-leaf fleabane (<i>Erigeron wilkenii</i>) from Pool Canyon and named the species in 1990.
1991	L. Reidel	19	Lynn Reidel made more than 160 collections for the DINO herbarium and discovered 19 new taxa in the Hog Canyon area (including the first record of Graham’s columbine, <i>Aquilegia grahamii</i>).
1993	J. Fowler & C. L. May	1 reported	Jim Fowler and C. L. May conducted a survey of hanging gardens along the Colorado River drainage and reported one new species for the monument (Fowler et al. 2007).
1995–1996	T. Naumann	3	Tamara Naumann discovered 3 new species for the monument, including under-collected early spring species Indian-potato (<i>Orogenia linearifolia</i>) and Jupiter buttercup (<i>Ranunculus jovis</i>).
2002–2005	D. Tilley, Dewey and Andersen, & NCPN vegetation mapping crew	22 + 11 reported	Derek Tilley and colleagues collected 18 new species for Dinosaur NM in 2002–2004. Dewey and Andersen (2006) conducted a weed-mapping survey and reported 3 new invasive species for the flora. The NCPN (in ed.) vegetation mapping crew reported 8 new species during field surveys in 2002. Rebecca Harms added 4 new species to the flora during a survey of seeps and springs in 2005 (Springer et al. 2006).

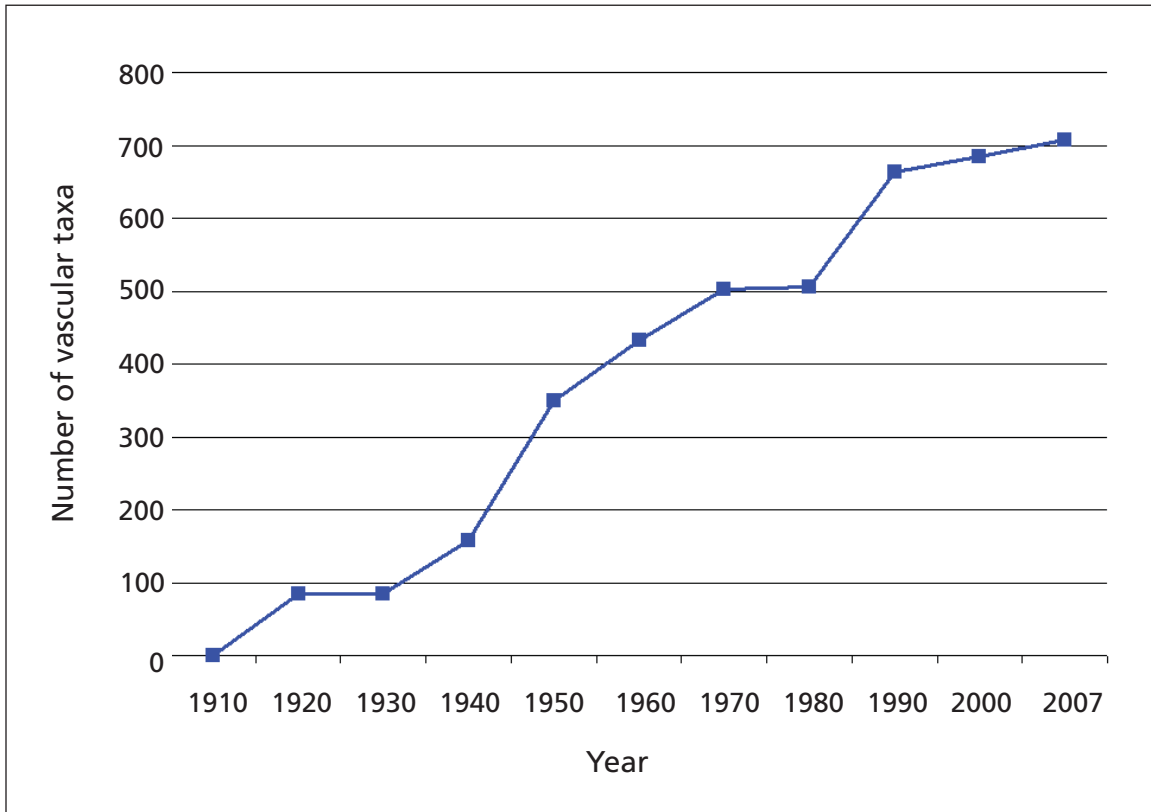


Figure 1.3.4. Increase in the number of plant taxa confirmed as present in Dinosaur National Monument by decade, 1910–2007.

2 Methods

In July 2005, I reviewed all mounted specimens in the Dinosaur National Monument herbarium to determine whether each was correctly identified to species, subspecies, or variety following the nomenclature of Welsh and others (2003). As necessary, I made corrections and annotations to each specimen and to the voucher records in the monument's Automated National Cataloging System (ANCS+) and NPSpecies database.

Based on this herbarium work and a review of monument references (Goodrich and Neese 1986; Graham 1937; Holmgren 1962; Naumann 2002; Weber et al. 1982), I developed four lists:

1. A revised checklist of species that were present in the monument (confirmed by an authenticated voucher; included in Appendices A and D);
2. A list of species that were reported in the literature but not corroborated with a voucher (equivalent to "probably present" in NPSpecies terminology; included in Appendices A and D);
3. A list of potential species ("unconfirmed" in NPSpecies) known from the vicinity of Dinosaur NM, using an unpublished list generated by Dr. N. Duane Atwood, of Brigham Young University, and Albee and others (1988); and
4. A list of species that are now known to be misidentified or highly questionable (Appendix C).

Each list was annotated with supplemental information on life form, geographic range (within the context of Utah and Colorado), population size in the monument (derived from NCPN in ed. and field observations), flowering period, distribution across general vegetation types, nativity, data source (collector and collection number from a sample specimen or literature citation), year of earliest collection (from herbarium records), and relevant synonymy and taxonomic problems (based on review of Barkworth et al. 2003, 2007; Barneby 1989; Cronquist 1994; Cronquist et al. 1972, 1977, 1984, 1997; Dorn 2001; Flora of North America Editorial Committee 1993, 1997, 2000, 2002a, 2002b, 2003, 2005, 2006a, 2006b, 2006c; Holmgren et al. 2005; and Weber and Wittmann 2001). The annotations to these lists and label data from the DINO herbarium review were then incorporated into the NPSpecies database for the monument.

Work in 2006–2007 focused on confirmation of reported and potential species for the monument flora through review of collections from state and regional herbaria not previously corroborated by Naumann (1990, 2002). Herbarium studies were undertaken at Brigham Young University (BRY), Utah State University (USU), and the University of Wyoming (RM) in March, June, and October 2006, and February and March 2007. I also documented monument specimens from the Virtual Herbarium website of the New York Botanical Garden (<http://sciweb.nybg.org/science2/hcol/intf/index.asp>). Finally, I found additional new species reports by examining plot data from the NCPN vegetation mapping project (NCPN in ed.) and reviewing recent literature (Dewey and Andersen 2006; Fowler et al. 2007).

3 Results

3.1 Summary of the flora of Dinosaur National Monument

Of the 2,235 vascular plant vouchers in the DINO herbarium that I examined in 2005–2006, 280 were misidentified (12.5%), 279 were revised to a more current name (12.5%), 522 had variety or subspecies names added (23.4%), and 1,154 were found to be correctly determined (51.6%). Based solely on these collections, the confirmed flora of Dinosaur National Monument stood at 705 taxa (Fertig 2006). No additional new species were discovered during a review of herbarium specimens at Brigham Young University, Utah State University, the University of Wyoming, and the

New York Botanical Garden digital plant database. As a result, the documented flora of Dinosaur NM remains at 705 taxa (Tables 3.1-1, 3.1-2, Appendices A, D).

Currently, 51 additional species have been reported for Dinosaur NM, but have yet to be corroborated with a voucher specimen (Table 3.1-1, Appendix A). Of these, 40 were reported by Fowler and others (2007), Goodrich and Neese (1986), Graham (1937), Holmgren (1962), Naumann (2002), and Weber and others (1982), and 11 others came from observations by recent weed and vegetation mapping crews (Dewey and Andersen 2005; NCPN in ed.). Taken together, the number of confirmed and reported vascular plant taxa in Dinosaur NM stands at 756 taxa (Table 3.1-1, Appendix A).

Table 3.1-1. Statistical summary of the flora of Dinosaur National Monument.

Category	Number confirmed in park	Number additionally reported for park	Total
Taxonomic diversity			
Total taxa (including varieties and subspecies)	705	51	756
Full species (excluding varieties and subspecies)	668	49	717
Families	78	2	80
Life form diversity			
Tree taxa	13	2	15
Shrub taxa	78	6	84
Perennial forb taxa	365	30	395
Annual forb taxa	124	7	131
Perennial graminoid taxa	101	5	106
Annual graminoid taxa	10	1	11
Fern taxa	14	0	14
Biogeographic diversity			
Introduced taxa	63	15	78
Native taxa			
Locally endemic taxa	18	1	19
Regionally endemic taxa	55	1	56
Disjunct taxa	0	0	0
Peripheral taxa	52	7	59
Sparse taxa	29	1	30
Widespread taxa	488	26	514
<i>Total native taxa</i>	<i>642</i>	<i>36</i>	<i>678</i>

The number of taxa and families is based on taxonomic concepts of Welsh and others (2003). See appendices for an explanation of the various categories. Species are listed as sparse or peripheral in the entire monument if they are considered sparse or peripheral in either Colorado or Utah.

Table 3.1-2. Statistical summary of the flora of Dinosaur National Monument, by state.

Category	Present and historical in park		Reported for park			Total	
	UT	CO	UT	CO	NA*	UT	CO
Taxonomic diversity							
Total taxa (including varieties and subspecies)	457	567	27	25	2	484	592
Full species (excluding varieties and subspecies)	445	556	26	24	2	471	580
Families	71	81**	2	1	1	73	82
Life form diversity							
Tree taxa	12	13	2	0	0	14	13
Shrub taxa	64	64	5	3	0	69	67
Perennial forb taxa	231	302	13	16	2	244	318
Annual forb taxa	88	77	5	2	0	93	79
Perennial graminoid taxa	51	89	2	3	0	53	92
Annual graminoid taxa	7	8	0	1	0	7	9
Fern taxa	4	14	0	0	0	4	14
Biogeographic diversity							
Introduced taxa	41	45	12	1	2	53	46
Native taxa							
Locally endemic taxa	14	9	1	0	0	15	9
Regionally endemic taxa	42	31	1	0	0	43	31
Disjunct taxa	0	1	0	0	0	0	1
Peripheral taxa	4	34	0	6	0	4	40
Sparse taxa	5	18	0	0	0	5	18
Widespread taxa	351	429	13	18	0	364	447
<i>Total native taxa</i>	<i>416</i>	<i>522</i>	<i>15</i>	<i>24</i>	<i>0</i>	<i>431</i>	<i>546</i>

The number of taxa and families is based on taxonomic concepts of Welsh and others (2003) for Utah species and Weber and Wittmann (2001) for Colorado taxa. See appendices for an explanation of the various categories.

*Not Available. Reported for Dinosaur NM by Dewey and Andersen (2006) without the state given (these are indicated by a ? in the state distribution column in Appendix A).

**The number of families recognized in Colorado is higher than that in Utah (and the park as a whole) in part because of the recognition of several segregate families within Caryophyllaceae, Liliaceae, Polypodiaceae, and Ranunculaceae by Weber and Wittmann (2001).

Entering the 2006 field season, I recognized 374 taxa as potentially occurring in Dinosaur NM, based on the proximity of the monument to known populations (Albee et al. 1988; Fertig 2006; Weber et al. 1982). Fifteen of these species were eliminated from the potential list based on their low probability of occurring in the monument. Most of these were species of montane coniferous forest or wetland habitats in the Uinta Mountains. The current number of potential species that I am recognizing for Dinosaur National

Monument is 359 (Appendix B).

Of the original pool of species documented or reported for Dinosaur NM, I found that 119 taxa were falsely reported based on misidentified voucher specimens in the DINO herbarium and other collections. I consider an additional four species cited (but not vouchered) by the NCPN vegetation mapping team (NCPN in ed.) and Holmgren (1962) to be questionable based on the absence of suitable habitat or the distance of Di-

nosaur NM to the known or expected range of each species (Appendix C).

The confirmed and reported flora of the Utah portion of Dinosaur NM consists of 484 taxa. These species represent 13.5% of the 3,594 native and naturalized taxa documented for the state of Utah by Welsh and others (2003), and 48.3% of the state's 151 plant families (Table 3.1-2). Within Uintah County, the monument flora captures 34.4% of the 1,406 taxa reported by Welsh and others (2003). At the ecoregional scale, the Utah portion of Dinosaur NM contains 28.6% of the 1,694 species reported for the Colorado Plateau in Utah (Shultz et al. 2006).

Species richness is higher in the Colorado section of Dinosaur NM. In all, 592 plant taxa are confirmed or reported from the monument, representing 18.8% of the 3,145 species in the flora of Colorado (Weber and Wittmann 2001), and 51.3% of the 160 recognized families (Table 3.1-2). The monument contains 71.6% of the 826 plant species known for Moffat County (Kartesz 2003). The Colorado segment of the monument contains 31.2% of the 1,898 species in the state's portion of the Colorado Plateau ecoregion (Kartesz 2003).

3.2 Life form and biogeographic diversity

Although ecologically dominant, tree and shrub species make up only 13.1% of the confirmed and reported plant taxa of Dinosaur NM (see Table 3.1-1). Perennial forbs are the most species-rich life form in the monument flora, with 395 known and reported taxa (52.2% of the total flora). Annual forbs and grass-like plants comprise approximately 19% of the flora. Like trees and shrubs, perennial graminoids are ecologically important but relatively species-poor, representing just 14% of the total flora. The diversity of ferns and fern-allies in Dinosaur NM is especially low (1.9%) (see Table 3.1-1).

Of the monument's 678 native taxa, 514 (75.8%) are widespread across Utah, Colorado, and western North America. Only 19 species (2.8% of the monument's native flora) have extremely limited global distributions (local endemics found within an area of less than 1° of latitude × 2° of longitude; see appendices for complete definitions of biogeographic categories). Regional endemics (largely restricted to the Colorado Plateau) comprise an additional 8.3% of the monument flora

(see Table 3.1-1). Species at the margin of their global range (peripheral), or that occur sparsely over their range in Utah or Colorado, contribute 13.1% of the native flora.

3.3 Plants of special concern

Ute ladies'-tresses (*Spiranthes diluvialis*) is the only plant species listed as threatened or endangered under the U.S. Endangered Species Act that is known to occur in Dinosaur NM (Table 3.3). At least 21 other monument taxa were formerly candidates for potential listing (Category 2 or 3C) under the act (Table 3.3) (CNHP 2007; UDWR 1998). Presently, two species from Dinosaur NM are listed as sensitive by the U.S. Forest Service, and 13 are considered sensitive by the Colorado or Utah state offices of the Bureau of Land Management (Table 3.3). The Utah Division of Wildlife Resources Conservation Data Center (UTCDC) lists 50 species from Dinosaur NM as species of concern due to their global or state rarity (UDWR 1998). The Colorado Natural Heritage Program tracks 47 taxa from the monument as species of concern (CNHP 2007). In all, 80 plant taxa from the monument are considered rare species by the state natural heritage programs. Naumann (1990) conducted a multi-year survey of rare species from Dinosaur NM, and provided detailed information on the identification, distribution, habitat, and management needs of nearly 40 species.

3.4 Non-native species and noxious weeds

Introduced plant species (not historically native to Utah, Colorado, or North America) make up 10.3% of the confirmed and reported flora of Dinosaur NM (see Table 3.1-1). This figure is lower than the statewide average of 13.5% non-native species in Utah (Fertig 2007; Welsh et al. 2003) and 15.6% for Colorado (Rejmanek and Randall 1994). Of the monument's 78 introduced taxa, 22 are listed as noxious by the states of Utah (SUDAF 2008) or Colorado (CDA 2007) (Table 3.4). Plants on the Colorado state noxious weed list fall into three categories with differing management objectives and requirements (Colorado Noxious Weed Act of 1996 Title 35 Article 5.5). Weeds on List A are designated for full eradication wherever they occur, while containment of infestations is the goal for species on List B, and voluntary control, education, and research is the objective for species on List C. Currently, 15 species from Dinosaur NM are on List B and 6 are on List C; none is on List A (Table 3.4).

Table 3.3. Plant species of conservation concern from Dinosaur National Monument.

Family	Species	Common name	TNC global rank	Legal status	State heritage status
Apocynaceae	<i>Amsonia jonesii</i>	Jones' amsonia	G4	CO BLM: Sensitive	CNHP: SOC, S1
Boraginaceae	<i>Cryptantha ambigua</i> ^H	obscure cryptanth	G4		UTCDC: Periph, S2?
Boraginaceae	<i>Cryptantha breviflora</i> (<i>Oreocarya breviflora</i>)	Uinta Basin cryptanth	G4		CNHP: SOC, S1
Boraginaceae	<i>Cryptantha rollinsii</i> (<i>Oreocarya rollinsii</i>)	Rollins' cryptanth	G3	CO BLM: Sensitive USFWS: former C2	CNHP: SOC, S2
Boraginaceae	<i>Cryptantha stricta</i> (<i>Oreocarya stricta</i>)	erect cryptanth	G3	USFWS: 3C	CNHP: SOC, S3 UTCDC: Watch, S2S3
Cactaceae	<i>Opuntia polyacantha</i> var. <i>trichophora</i>	slenderspine pricklypear	G5 T3T5		UTCDC: Periph, S2
Capparaceae (Cleomaceae)	<i>Cleomella palmeriana</i> var. <i>goodrichii</i> ^R	Goodrich's stinkweed	G3G4 T?	UT BLM: Sensitive	UTCDC: Rare, S1
Caprifoliaceae	<i>Symphoricarpos occidentalis</i> ^H	western snowberry	G5		UTCDC: Periph, S2?
Caryophyllaceae (Alsinaceae)	<i>Arenaria nuttallii</i> (<i>Minuopsis nuttallii</i>) ^R	Nuttall's sandwort	G5		CNHP: SOC, S1
Chenopodiaceae	<i>Monolepis pusilla</i> ^H	tiny poverty-weed	G5		CNHP: SOC, SH UTCDC: Periph., S1
Compositae (Asteraceae)	<i>Aster perelegans</i> (<i>Eucephalus elegans</i>)	elegant aster	G5		CNHP: SOC, S1
Compositae (Asteraceae)	<i>Cirsium ownbeyi</i>	Ownbey's thistle	G3	CO BLM: Sensitive UT BLM: Sensitive USFWS: former C2	CNHP: SOC, S2 UTCDC: Watch, S1
Compositae (Asteraceae)	<i>Erigeron wilkenii</i> (<i>E. nematophyllus</i>)	needle-leaf fleabane	G1 (G3)		CNHP: SOC, S1
Compositae (Asteraceae)	<i>Enceliopsis nudicaulis</i>	nakedstem	G5T5		CNHP: SOC, S1
Compositae (Asteraceae)	<i>Gaillardia aristata</i>	common blanketflower	G5		UTCDC: Periph, SR
Compositae (Asteraceae)	<i>Gutierrezia pomariensis</i>	orchard snakeweed	GQ	USFWS: 3C	UTCDC: Watch, S2S3
Compositae (Asteraceae)	<i>Hymenoxys lapidicola</i>	rock hymenoxys	G1	UT BLM: Sensitive USFWS: 3C	UTCDC: Rare, S1
Compositae (Asteraceae)	<i>Hymenoxys torreyana</i> (<i>Tetraneuris torreyana</i>)	Torrey's hymenoxys	G4		UTCDC: Periph, S1
Compositae (Asteraceae)	<i>Platyschukhria integrifolia</i> var. <i>ourolepis</i>	Uintah bahia	G5T3?		UTCDC: Watch, S3?
Compositae (Asteraceae)	<i>Sphaeromeria argentea</i> ^R	silver chicken-sage	G3G4		CNHP: SOC, S1
Compositae (Asteraceae)	<i>Thelesperma megapotamicum</i>	Hopi-tea	G5		UTCDC: Periph, S1
Compositae (Asteraceae)	<i>Townsendia mensana</i>	plateau townsendia	G3	USFWS: 3C	UTCDC: Watch, S3
Compositae (Asteraceae)	<i>Townsendia strigosa</i> ^H	hairy townsendia	G4	CO BLM: Sensitive	CNHP: SOC, S1
Crossosomataceae	<i>Glossopetalon spinesens</i> var. <i>meionandrum</i> (<i>Forsellesia meionandra</i>)	spiny greasebush	G5T3		CNHP: SOC, S3

Table 3.3. Plant species of conservation concern from Dinosaur National Monument, cont.

Family	Species	Common name	TNC global rank	Legal status	State heritage status
Cruciferae (Brassicaceae)	<i>Arabis demissa</i> var. <i>demissa</i> (<i>Boechera demissa</i> var. <i>demissa</i>)	nodding rockcress	G5 T3T4	USFWS: 3C	UTCDC: Watch, S2?
Cruciferae (Brassicaceae)	<i>Arabis nuttallii</i> (<i>Boechera nuttallii</i>)	Nuttall's rockcress	G5		UTCDC: Periph, S2?
Cruciferae (Brassicaceae)	<i>Arabis vivariensis</i> (<i>Boechera fernaldiana</i>)	park rockcress	G3G4	CO BLM: Sensitive UT BLM: Sensitive USFWS: former C2	CNHP: SOC, S2 UTCDC: Watch, S1
Cruciferae (Brassicaceae)	<i>Draba oligosperma</i> var. <i>juniperina</i> (<i>D. juniperina</i>)	Uinta draba	G5TQ	USFWS: former C2	UTCDC: Watch, S2
Cruciferae	<i>Draba oligosperma</i> var. <i>oligosperma</i>	few-seed whitlow-grass	G5		CNHP: SOC, S2
Cruciferae (Brassicaceae)	<i>Rorippa sinuata</i> ^H	spreading yellowcress	G5		UTCDC: Infreq, S2?
Cyperaceae	<i>Carex curatorum</i>	Canyonlands sedge	G2	USFWS: 3C	UTCDC: Watch, S2
Cyperaceae	<i>Scirpus pallidus</i>	pale bulrush	G5		UTCDC: Infreq, S1S2
Gentianaceae	<i>Centaurium exaltatum</i> ^R	Great Basin centaury	G5		CNHP: SOC, S1
Gramineae (Poaceae)	<i>Muhlenbergia thurberi</i>	Thurber's muhly	G3G4Q		CNHP: SOC, SR
Hydrophyllaceae	<i>Nama densum</i> var. <i>parviflorum</i> ^H	leafy fiddleleaf	G5T5		CNHP: SOC, S1
Hydrophyllaceae	<i>Phacelia demissa</i> var. <i>minor</i>	brittle phacelia	G5T3?		UTCDC: Watch, S3?
Juncaceae	<i>Juncus bryoides</i> ^R	minute rush	G4		CNHP: SOC, S1 UTCDC: Periph, S1
Leguminosae (Fabaceae)	<i>Astragalus argophyllus</i> var. <i>martinii</i>	Martin's milkvetch	G5T4		CNHP: SOC, S1
Leguminosae (Fabaceae)	<i>Astragalus chloodes</i>	grass milkvetch	G3	USFWS: 3C	CNHP: SOC, SNR UTCDC: Watch, S3
Leguminosae (Fabaceae)	<i>Astragalus duchesnensis</i>	Duchesne milkvetch	G3	CO BLM: Sensitive	CNHP: SOC, S1S2
Leguminosae (Fabaceae)	<i>Astragalus hamiltonii</i>	Hamilton's milkvetch	G1	USFWS: former C2	CNHP: SOC, S1 UTCDC: Rare, S1
Leguminosae (Fabaceae)	<i>Astragalus saurinus</i>	Dinosaur milkvetch	G3	USFWS: 3C	CNHP: SOC, SNR UTCDC: Watch, S3
Leguminosae (Fabaceae)	<i>Hedysarum boreale</i> var. <i>gremiale</i> ^H	Rollins' sweet-vetch	G5T1		UTCDC: Tax Prob., S?
Leguminosae (Fabaceae)	<i>Oxytropis besseyi</i> var. <i>obnapiformis</i>	Maybell locoweed	G5T2		CNHP: SOC, S2
Leguminosae (Fabaceae)	<i>Pediomelum megalanthum</i> ^H	large-flowered breadroot	G5T5		CNHP: Watch, S3S4
Leguminosae (Fabaceae)	<i>Thermopsis rhombifolia</i>	prairie golden-pea	G5		UTCDC: Periph, S2S3
Leguminosae (Fabaceae)	<i>Trifolium andinum</i>	Andean clover	G3		CNHP: SOC, S1

Table 3.3. Plant species of conservation concern from Dinosaur National Monument, cont.

Family	Species	Common name	TNC global rank	Legal status	State heritage status
Leguminosae (Fabaceae)	<i>Vicia americana</i> var. <i>minor</i>	plains vetch	G5T5		UTCDC: Periph, S2
Liliaceae (Alliaceae)	<i>Allium nevadense</i>	Nevada onion	G4		CNHP: SOC, S2
Liliaceae	<i>Fritillaria pudica</i>	yellow-bell	G5		CNHP: SOC, S1
Liliaceae (Melanthiaceae)	<i>Zigadenus vaginatus</i> (<i>Anticlea vaginatus</i>)	alcove death-camas	G2	USFWS: 3C	CNHP: SOC, S2 UTCDC: Rare, S2
Loasaceae	<i>Mentzelia multicaulis</i> var. <i>uintahensis</i> (<i>Nuttallia multicaulis</i>)	Uinta Basin stickleaf	G3		CNHP: SOC, S3
Loasaceae	<i>Mentzelia thompsonii</i> (<i>Acrolasia humilis</i>) ^h	Thompson's stickleaf	G4		UTCDC: Watch, S2
Onagraceae	<i>Epilobium palustre</i> ^R	marsh willow-herb	G5		UTCDC: Periph, SR
Onagraceae	<i>Oenothera flava</i> var. <i>acutissima</i> (<i>O. acutissima</i>)	large yellow evening-primrose	G2	CO BLM: Sensitive USFWS: 3C	CNHP: SOC, S2 UTCDC: Watch, S2
Onagraceae	<i>Oenothera pallida</i> var. <i>trichocalyx</i>	pale evening-primrose	G5 T3T5		UTCDC: Periph, S?
Orchidaceae	<i>Epipactis gigantea</i>	giant helleborine	G4	USFS R2: Sensitive	CNHP: SOC, S2
Orchidaceae	<i>Habenaria zothecina</i> (<i>Limnorchis zothecina</i>)	alcove bog-orchid	G2	UT BLM: Sensitive USFWS: former C2	CNHP: SOC, S1 UTCDC: Rare, S2
Orchidaceae	<i>Spiranthes diluvialis</i>	Ute ladies'-tresses	G2	USFWS: Threatened	CNHP: SOC, S2 UTCDC: Rare, S1
Polemoniaceae	<i>Gymnosteris parvula</i> ^h	gymnosteris	G4		UTCDC: Periph, S1S2
Polemoniaceae	<i>Leptodactylon watsonii</i>	Watson's prickly-phlox	G3G5		CNHP: SOC, S2
Polygonaceae	<i>Eriogonum brevicaulis</i> var. <i>viridulum</i> (<i>E. viridulum</i>)	Duchesne wild buckwheat	G4Q	CO BLM: Sensitive USFWS: 3C	CNHP: SOC, S1
Polygonaceae	<i>Eriogonum lonchophyllum</i> var. <i>saurinum</i> (<i>E. saurinum</i>)	Dinosaur wild buckwheat	G4T3	USFWS: 3C	CNHP: SOC, S1 UTCDC: Watch, S3
Polygonaceae	<i>Eriogonum tumulosum</i>	Woodside wild buckwheat	G3Q	CO BLM: Sensitive USFWS: 3C	CNHP: SOC, S2 UTCDC: Watch, S2
Polypodiaceae (Adiantaceae)	<i>Adiantum capillus-veneris</i>	southern maidenhair fern	G5		CNHP: SOC, S2
Polypodiaceae (Aspleniaceae)	<i>Asplenium septentrionale</i>	forked spleenwort	G4G5		CNHP: SOC, S1S2 UTCDC: Infreq, S1
Polypodiaceae (Adiantaceae, Sinopteridaceae)	<i>Pellaea breweri</i>	Brewer's cliff-brake	G5		CNHP: SOC, S2
Polypodiaceae (Adiantaceae, Sinopteridaceae)	<i>Pellaea glabella</i> var. <i>occidentalis</i>	western cliff-brake	G5T4		UTCDC: Periph, S2
Portulacaceae	<i>Lewisia rediviva</i>	Oregon bitter-root	G5		CNHP: SOC, S2
Primulaceae	<i>Androsace filiformis</i>	slender-stem rock-jasmine	G4		UTCDC: Periph, S1

Table 3.3. Plant species of conservation concern from Dinosaur National Monument, cont.

Family	Species	Common name	TNC global rank	Legal status	State heritage status
Primulaceae	<i>Androsace occidentalis</i>	western rock-jasmine	G5		UTCDC: Periph, S1
Ranunculaceae (Helleboraceae)	<i>Aquilegia grahamii</i>	Graham's columbine	G1	USFS R4: Sensitive	UTCDC: Rare, S1
Ranunculaceae	<i>Ranunculus gmelinii</i> ^R	lesser yellow water buttercup	G5		UTCDC: Periph, S1
Rubiaceae	<i>Galium multiflorum</i> var. <i>coloradoense</i> (<i>G. coloradoense</i>)	Colorado bedstraw	G4		UTCDC: Watch, S3?
Scrophulariaceae	<i>Penstemon angustifolius</i> var. <i>vernalensis</i> ^H	Vernal penstemon	G5T3	USFWS: 3C	UTCDC: Watch, S3
Scrophulariaceae	<i>Penstemon radicosus</i>	mat-root penstemon	G5		CNHP: SOC, S1
Scrophulariaceae	<i>Penstemon scariosus</i> var. <i>cyanomontanus</i>	Blue Mountain penstemon	G4T2		CNHP: SOC, S2 UTCDC: Rare, S2
Umbelliferae (Apiaceae)	<i>Cymopterus acaulis</i>	plains spring-parsley	G5		UTCDC: Periph, S2?
Umbelliferae (Apiaceae)	<i>Cymopterus duchesnensis</i>	Duchesne spring-parsley	G3	CO BLM: Sensitive USFWS: 3C	CNHP: SOC, S1 UTCDC: Watch, S3
Urticaceae	<i>Urtica gracilis</i> ssp. <i>holosericea</i>	stinging nettle	G5T5?		CNHP: SOC, S1

This list was derived from Colorado Natural Heritage Program (2007) and Utah Division of Wildlife Resources (1998). Species preceded by an "H" are known only from historical records. Taxa marked with an "R" are reported from the monument. All other species are confirmed as present with a voucher specimen.

Codes: **TNC global rank** assesses abundance and conservation priority on a scale of 1–5 (1 = extremely vulnerable; 5 = secure) for full species (G) and varieties or subspecies (T) across their entire range. A "?" indicates uncertainty in the rank, Q = taxonomic questions, U = unknown, and NR = not ranked. A comparable scoring system is used to measure state abundance (S) in Colorado and Utah under the column State Heritage Status. TNC = The Nature Conservancy. Under **legal status**, USFWS = U.S. Fish and Wildlife Service. C2 = Category 2 candidate (a former category used for taxa that might warrant being proposed for threatened or endangered status following additional research). 3C = Category 3 candidates (species dropped from consideration for listing). USFS = U.S. Forest Service. R2 = USFWS, Region 2. UT BLM = U.S. Bureau of Land Management, Utah office. **State heritage status/UTCDC** (Utah Conservation Data Center) includes conservation categories adopted by the state natural heritage program to prioritize endemic and rare plant taxa (UDWR 1998). These categories include: Historical (presumed extinct or only known historically through their range), Rare (plants with rangewide viability concerns), Watch (regional endemics without rangewide viability concerns), Peripheral (rare or uncommon in Utah, but more common rangewide), Infrequent (plants occur infrequently over western U.S.), Taxonomic Problems (validity of species, subspecies, or variety has been questioned), Additional Data (species appear rare, but more information needed before being assigned to a different category). Under **State heritage status/CNHP** (Colorado Natural Heritage Program), SOC denotes plants on the state "Species of Concern" list and Watch indicates species on the watch list that may ultimately warrant listing as species of concern (CNHP 2007).

Table 3.4. Noxious weed species of Dinosaur National Monument.

Family	Species	Common name	Park status	State weed list
Boraginaceae	<i>Cynoglossum officinale</i>	common hound's-tongue	Reported in UT	CO List B
Chenopodiaceae	<i>Halogeton glomeratus</i>	halogeton	Present in UT	CO List C
Compositae (Asteraceae)	<i>Arctium minus</i>	burdock	Reported in UT	CO List C
Compositae (Asteraceae)	<i>Carduus nutans</i> var. <i>macrolepis</i>	musk thistle	Present in CO	CO List B, UT Noxious
Compositae (Asteraceae)	<i>Centaurea diffusa</i> (<i>Acosta diffusa</i>)	diffuse knapweed	Reported in UT	CO List B, UT Noxious
Compositae (Asteraceae)	<i>Centaurea maculosa</i> (<i>Acosta maculosa</i>)	spotted knapweed	Reported in UT	CO List B, UT Noxious
Compositae (Asteraceae)	<i>Centaurea repens</i> (<i>Acroptilon repens</i>)	Russian knapweed	Present in UT	CO List B, UT Noxious
Compositae (Asteraceae)	<i>Cichorium intybus</i>	chicory	Present in UT	CO List C
Compositae (Asteraceae)	<i>Cirsium arvense</i> (<i>Breca arvense</i>)	Canada thistle	Present in UT	CO List B, UT Noxious
Compositae (Asteraceae)	<i>Cirsium vulgare</i>	bull thistle	Present in CO Present in UT	CO List B
Compositae (Asteraceae)	<i>Onopordum acanthium</i>	Scotch thistle	Reported in UT	CO List B, UT Noxious
Convolvulaceae	<i>Convolvulus arvensis</i>	field bindweed	Present in UT	CO List C, UT Noxious
Cruciferae (Brassicaceae)	<i>Cardaria chalepensis</i>	orbicular whitetop	Present in CO	UT Noxious
Cruciferae (Brassicaceae)	<i>Lepidium latifolium</i> (<i>Cardaria latifolia</i>)	broad-leaf pepperwort	Present in CO	CO List B, UT Noxious
Elaeagnaceae	<i>Elaeagnus angustifolia</i>	Russian olive	Reported in UT	CO List B
Euphorbiaceae	<i>Euphorbia esula</i> (<i>Tithymalus esula</i>)	leafy spurge	Reported in UT	CO List B, UT Noxious
Gramineae (Poaceae)	<i>Elymus repens</i> (<i>Elytrigia repens</i>)	quackgrass	Present in UT	CO List B, UT Noxious
Poaceae	<i>Bromus tectorum</i> (<i>Anisantha tectorum</i>)	cheatgrass	Present in CO Present in UT	CO List C
Scrophulariaceae	<i>Linaria dalmatica</i> (<i>L. genistifolia</i> ssp. <i>dalmatica</i>)	Dalmatian toadflax	Reported in UT	CO List B
Scrophulariaceae	<i>Linaria vulgaris</i>	butter-and-eggs	Present in UT	CO List B
Scrophulariaceae	<i>Verbascum thapsus</i>	woolly mullein	Reported in UT	CO List C
Tamaricaceae	<i>Tamarix chinensis</i> (<i>T. ramosissima</i>)	five-stamen tamarisk	Present in CO Present in UT	CO List B

List derived from the Colorado Department of Agriculture (2007) and State of Utah Department of Agriculture and Food (2008).

4 Discussion

Since the first plant collections of Earl Douglass and O.A. Peterson at the Dinosaur Quarry in 1912, the confirmed and reported flora of Dinosaur NM has increased from 85 to 756 taxa (see Tables 1.3.4, 3.1-1, Figure 1.3.4, Appendix A). Based on available habitats and proximity, at least another 359 plant taxa may occur within the monument (Appendix B). Should all of these potential species be found, the documented flora of the monument would increase by nearly 32%. Many of the “missing” potential or reported taxa consist of

cryptic species that flower late in the growing season, or occur in undersampled wetland or weedy habitats. Confirmation of reported species should remain a high priority, as some of these taxa may ultimately prove to be erroneous. Nearly 18% of the monument flora (138 taxa) consists of historic species that have not been relocated since 1970. Determining whether historic taxa are extirpated or still extant should be a high management priority. Additional studies would also be useful to better refine the abundance and distribution of species of high management interest (especially rare plants and invasive non-natives).

5 Literature Cited

- Albee, B. J., L. M. Shultz, and S. Goodrich. 1988. Atlas of the vascular plants of Utah. +Occasional Publ. 7. Salt Lake City: Utah Museum of Natural History. 670 pp.
- Barkworth, M. E., K. M. Capels, S. Long, and M. B. Piep, eds. 2003. Magnoliophyta: Commelinidae (in part): Poaceae, part 2. Flora of North America north of Mexico, Volume 25. New York: Oxford University Press. 783 pp.
- Barkworth, M. E., K. M. Capels, S. Long, L. K. Anderton, and M. B. Piep, eds. 2007. Magnoliophyta: Commelinidae (in part): Poaceae, part 1. Flora of North America north of Mexico, Volume 24. New York: Oxford University Press. 911 pp.
- Barneby, R. C. 1989. Volume 3, Part B. Fabales. In Cronquist, A., A. H. Holmgren, N. H. Holmgren, J. L. Reveal, and P. K. Holmgren, eds. Intermountain flora: Vascular plants of the Intermountain West, U.S.A. Bronx, N.Y.: New York Botanical Garden. 279 pp.
- Bradley, R. A. W. 1950. The vascular flora of Moffat County, Colorado. Master's thesis, University of Colorado, Boulder, Co. 71 pp.
- Chronic, H. 1990. Roadside geology of Utah. Missoula, Mt.: Mountain Press Publishing Company. 325 pp.
- Colorado Department of Agriculture (CDA). 2007. Colorado noxious weed list. Available at www.cepep.colostate.edu/noxious.htm#CONWA.
- Colorado Natural Heritage Program (CNHP). 2007. Tracked vascular plant species (8/16/2007 version). www.cnhp.colostate.edu/tracking/vascular.html.
- Cronquist, A. 1994. Volume 5, Asterales. In Cronquist, A., A. H. Holmgren, N. H. Holmgren, J. L. Reveal, and P. K. Holmgren, eds. Intermountain flora: Vascular plants of the Intermountain West, U.S.A. New York Botanical Garden, Bronx, NY. 496 pp.
- Cronquist, A., A. H. Holmgren, N. H. Holmgren, and J. L. Reveal, eds. 1972. Volume 1, Geological and botanical history of the region, its plant geography and a glossary. The vascular cryptogams and the gymnosperms. Intermountain flora: Vascular plants of the Intermountain West, U.S.A. New York Botanical Garden, Bronx, NY. 270 pp.
- Cronquist, A., A. H. Holmgren, N. H. Holmgren, J. L. Reveal, and P. K. Holmgren, eds. 1977. Volume 6, The monocotyledons. Intermountain flora: Vascular plants of the Intermountain West, U.S.A. New York Botanical Garden, Bronx, NY. 584 pp.
- . 1984. Volume 4, Subclass Asteridae (except Asteraceae). Intermountain flora: Vascular plants of the Intermountain West, U.S.A. New York Botanical Garden, Bronx, NY. 573 pp.
- Cronquist, A., N. H. Holmgren, and P. K. Holmgren, eds. 1997. Volume 3, Part A, Subclass Rosidae (except Fabales). Intermountain flora: Vascular plants of the Intermountain West, U.S.A. Bronx, N.Y.: New York Botanical Garden. 446 pp.
- Dewey, S., and K. Andersen. 2006. An inventory of invasive non-native plants in Dinosaur National Monument: 2005 addendum report. Utah State University, Logan Ut. Weed Science Research Project Report #SD0517b.
- Dorn, R. D. 2001. Vascular plants of Wyoming. Third edition. Cheyenne, Wy.: Mountain West Publishing. 412 pp.
- Elder, A. S. 1999. The history of Dinosaur National Monument's Douglass Quarry: The park service years. Pages 71–76 in Gillette, D. D., ed., Vertebrate paleontology in Utah. Utah Geological Survey Misc. Publication 99-1.
- Evenden, A., M. Miller, M. Beer, E. Nance, S. Daw, A. Wight, M. Estenson, and L. Cudlip. 2002. Northern Colorado Plateau Vital Signs Network and Prototype Cluster, plan for natural resources monitoring: Phase I report. October 1. Two volumes. National Park Service, Northern Colorado Plateau Network, Moab, Ut. 138 pp + app.
- Fertig, W. 2006. Herbarium and field studies of vascular plant flora of DINO for National Park Service Inventory and Monitoring Program. Investigator's Annual Report, National Park Service. 2 pp.
- . 2007. Introduced and naturalized plants of Utah. *Sego Lily* 30(5):7–11.
- Flora of North America Editorial Committee. 1993. Pteridophytes and gymnosperms. Flora of North America north of Mexico,

- Volume 2. New York: Oxford University Press. 475 pp.
- . 1997. Magnoliophyta: Magnoliidae and Hamamelidae. *Flora of North America north of Mexico*, Volume 3. New York: Oxford University Press. 590 pp.
- . 2000. Magnoliophyta: Alismatidae, Arecidae, Commelinidae (in part), and Zingiberidae. *Flora of North America north of Mexico*, Volume 22. New York: Oxford University Press. 352 pp.
- . 2002a. Magnoliophyta: Commelinidae (in part): Cyperaceae. *Flora of North America north of Mexico*, Volume 23. New York: Oxford University Press. 608 pp.
- . 2002b. Magnoliophyta: Liliidae: Liliales and Orchidales. *Flora of North America north of Mexico*, Volume 26. New York: Oxford University Press. 723 pp.
- . 2003. Magnoliophyta: Caryophyllidae, part 1. *Flora of North America north of Mexico*. Volume 4. New York: Oxford University Press. 559 pp.
- . 2005. Magnoliophyta: Caryophyllidae, part 2. *Flora of North America north of Mexico*. Volume 5. New York: Oxford University Press. 656 pp.
- . 2006a. Magnoliophyta: Asteridae, part 6: Asteraceae, part 1. *Flora of North America north of Mexico*. Volume 19. New York: Oxford University Press. 579 pp.
- . 2006b. Magnoliophyta: Asteridae, part 7: Asteraceae, part 2. *Flora of North America north of Mexico*. Volume 20. New York: Oxford University Press. 666 pp.
- . 2006c. Magnoliophyta: Asteridae, part 8: Asteraceae, part 3. *Flora of North America north of Mexico*. Volume 21. New York: Oxford University Press. 616 pp.
- Fowler, J. F., N. L. Stanton, and R. L. Hartman. 2007. Distribution of hanging garden vegetation associations on the Colorado Plateau, USA. *Journal of the Botanical Research Institute of Texas* 1(1):585–607.
- Goodrich, S., and E. Neese. 1986. Uinta Basin flora. USDA Forest Service Intermountain Region, Ogden, Ut.; USDA Forest Service Ashley National Forest; and USDI Bureau of Land Management, Vernal District. 320 pp.
- Graham, E. H. 1937. Botanical studies in the Uinta Basin of Utah and Colorado. *Annals of the Carnegie Museum* 26:1–432.
- Gregson, J. D., and D. J. Chure. 2003. Geology and paleontology of Dinosaur National Monument. Pages 155–187 in Sprinkel, D. A., T. C. Chidsey, Jr., and P. B. Anderson, eds., *Geology of Utah's parks and monuments*. Utah Geological Association Publication 28 (second edition).
- Harvey, M. W. T. 1991. Utah, the National Park Service, and Dinosaur National Monument, 1909–1956. *Utah Historical Quarterly* 59:243–263.
- Holmgren, A. H. 1962. The vascular plants of the Dinosaur National Monument. Utah State University, Logan, Ut. 21 pp.
- Holmgren, N. H., P. K. Holmgren, and A. Cronquist. 2005. Volume 2, Part B Subclass Dilleniidae. *Intermountain flora: Vascular plants of the Intermountain West, U.S.A.* Bronx, N.Y.: New York Botanical Garden. 488 pp.
- Kartesz, J. T. 2003. *Synthesis of the North American flora*, Version 2.0.
- Margules, C. R., and R. L. Pressey. 2000. Systematic conservation planning. *Nature* 405:243–253.
- National Park Service (NPS). 2000. Management policies. U.S. Department of Interior, National Park Service, Washington, D.C. Publication #NPS D1416. 137 pp.
- Naumann, T. 1990. Inventory of plant species of special concern and the general flora of Dinosaur National Monument, 1987–1989. National Park Service Report, Rocky Mountain Region, Denver, Co. 116 pp.
- . 2002. Dinosaur National Monument plant list. Dinosaur National Monument, Dinosaur, Co. 19 pp.
- Northern Colorado Plateau Network (NCPN). in ed. *Dinosaur National Monument vegetation classification and mapping project*. Natural Resource Technical Report. National Park Service, Denver, Co.
- Noss, R. F., and A. Y. Cooperrider. 1994. *Saving nature's legacy: Protecting and restoring biodiversity*. Washington, D.C.: Island Press. 416 pp.

- Rejmanek, M., and J. M. Randall. 1994. Invasive alien plants in California: 1993 summary and comparison with other areas in North America. *Madrono* 41(3):161–177.
- Shultz, L. M., R. D. Ramsey, and W. Lindquist. 2006. Revised atlas of Utah plants. College of Natural Resources, Utah State University, Logan, Ut. <http://earth.gis.usu.edu/plants>.
- Springer, A. E., L. E. Stevens, and R. Harms. 2006. Inventory and classification of selected National Park Service springs on the Colorado Plateau. Northern Arizona University, Flagstaff, Az. NPS Cooperative Agreement #CA 1200-99-009; Task # NAU-118.
- State of Utah Department of Agriculture and Food (SUDAF). 2008. Utah noxious weed list. <http://ag.utah.gov/divisions/plant/noxious/documents/noxUtah.pdf>.
- Utah Division of Wildlife Resources (UDWR). 1998. Inventory of sensitive species and ecosystems in Utah. Endemic and rare plants of Utah: An overview of their distribution and status. Report prepared for the Utah Reclamation Mitigation and Conservation Commission and U.S. Department of the Interior. 566 pp + app.
- Weber, W. A., J. Wingate, B. MacLeod, and M. MacLeod. 1982. Checklist of vascular plants of Moffat County, Colorado. University of Colorado Museum, Boulder, Co. 66 pp.
- Weber, W. A., and R. C. Wittmann. 2001. Colorado flora: Western Slope. Third edition. Boulder: University Press of Colorado. 488 pp.
- Welsh, S. L. 1957. An ecological survey of the vegetation of the Dinosaur National Monument, Utah. Master's thesis, Brigham Young University, Provo, Ut.
- . 1982. Utah plant types - historical perspective 1840 to 1981 - annotated list, and bibliography. *Great Basin Naturalist* 42(2):129–195.
- Welsh, S. L., N. D. Atwood, S. Goodrich, and L. C. Higgins. 2003. A Utah flora. Third edition, revised. Provo, Ut: Brigham Young University. 912 pp.

Appendices

The following appendices contain annotated checklists of the vascular flora of Dinosaur National Monument.

Appendix A lists all species that have been confirmed for the flora with an authenticated voucher specimen (including extant and historical records) or that have been reliably reported for the monument in the literature (Dewey and Andersen 2005; Fowler et al. 2007; Goodrich and Neese 1986; Graham 1937; Holmgren 1962; Naumann 1990, 2002; NCPN in ed.; Springer et al. 2006; Weber et al. 1982). Vouchers were examined from the DINO herbarium and collections from Brigham Young University (BRY), Utah State University (USU), the University of Wyoming (RM), and the digital museum database of the New York Botanical Garden (NY). Species entries in Appendix A are organized alphabetically by family and genus.

Appendix B includes species that may potentially occur within Dinosaur NM, based on the proximity of the monument to other populations or the presence of suitable habitat.

Appendix C lists species that have been previously reported for Dinosaur NM, but are now considered erroneous because they are based on misidentified specimens or questionable literature records.

Appendix D contains the same confirmed, historical, and reported taxa as in Appendix A, but organized by life form rather than by family in order to better meet the needs of NPS interpretive specialists.

The codes and references for each field in the appropriate appendices are summarized below.

Family (Appendices A, B, C, and D)

Family concepts and nomenclature follow *A Utah Flora, third edition* (Welsh et al. 2003). Alternative family names and treatments from other regional floras (Dorn 2001; *Flora of North America* Editorial Committee 1993, 2002b; Holmgren et al. 2005; Weber and Wittman 2001) are listed in parentheses.

Species name (Appendices A, B, C, and D)

Because Dinosaur NM straddles Utah and Colorado, two sets of species names are provided using the scientific names and taxonomic concepts of the most recent flora of each state (Weber and Wittmann 2001 and Welsh et al. 2003). Scientific names are listed in alphabetical rather than phylogenetic order and according to the Utah names of Welsh and others (2003).

Synonyms/Taxonomic notes (Appendices A, B, and C)

Pertinent synonyms are included for species with alternative scientific names in other recent state and regional floras (Barkworth et al. 2003, 2007; Barneby 1989; Cronquist 1994; Cronquist et al. 1972, 1977, 1984, 1997; Dorn 2001; *Flora of North America* Editorial Committee 1993, 1997, 2000, 2002a, 2002b, 2003, 2005, 2006a, 2006b, 2006c; Holmgren et al. 2005). Only species not otherwise listed in the Utah or Colorado species name columns are included. No effort has been made to identify additional synonyms from monographs and floras preceding the early 1970s.

Common name (Appendices A, B, C, and D)

Common names are derived primarily from Welsh and others (2003) and the *Intermountain Flora* (Barneby 1989; Cronquist 1994; Cronquist et al. 1972, 1977, 1984, 1997; Holmgren et al. 2005).

Life form (Appendices A, B, C, and D)

Life form is based on the stature and growth habit of typical members of a species at reproductive maturity. **Trees** are woody perennials with a single stem or trunk and are typically over 3.5 m tall. **Shrubs** are woody perennials with one to many trunks arising from near the base of the plant and are usually less than 3.5 m tall. **Perennial Forbs (PerF)** are broad-leaved dicots or monocots with non-woody stems (at least above ground level) that live for multiple years. **Annual Forbs (AnnF)** are broad-leaved dicots or monocots with non-woody stems that complete their life cycle (mature, flower, and die) in one year. **Perennial Graminoids (PerG)** are linear-leaved, grass-like monocots that live for multiple years. **Annual Graminoids (AnnG)** are linear-leaved, grass-like monocots that complete their life cycle (mature, flower, and die) in one year. **Ferns and fern-allies (Fern)** are non-flowering vascular plants that reproduce by spores.

Range UT/CO (Appendices A, B, and C)

Range represents the distribution of a species within Utah or Colorado and each state's contribution to the plant's overall global range. Usually these values are the same for both states, but in some cases a species might be widespread in one state, but considered sparse, peripheral, or introduced in the other. **Disjunct (Disj)** taxa have their Utah or Colorado distribution separated from the main, contiguous portion of their range by a gap of more than 800 km (ca 500 miles). **Introduced (Intro)** taxa are those that are not native to Utah, Colorado, or North America but have become naturalized (breeding on their own without human assistance). **Local Endemics (LocEn)** are taxa whose entire global range is restricted to an area of less than 16,500 km² (ca 6,370 mi², or 1° of latitude × 2° of longitude). **Peripheral (Periph)** taxa have a widespread

global distribution but occur at the margin of their contiguous range in Utah or Colorado and occupy less than 5% of the state's area (usually only within a few miles of the state border). Regional Endemics (**RegEn**) are taxa with a global range of 16,500–250,000 km² (an area about the size of the state of Wyoming). **Sparse** taxa occur widely across Utah, Colorado, or North America but their range within a state is small and patchy, with populations restricted to specialized or uncommon habitats. Widespread (**Wide**) taxa have global ranges exceeding 250,000 km² and occur over at least 10% of each state.

Park status (Appendices A, C, and D)

Park status identifies whether a species is Present (**Pres**), Historical (**Hist**), or Reported (**Rep**) for Dinosaur NM. Species are considered Present if a confirmed voucher or documented observation has been made within monument boundaries since 1970. Historical species have been confirmed with a voucher from the monument but have not been relocated since before 1970. Reported species are listed for the monument in the literature (NCPN in ed.; Springer et al. 2006), but have not been corroborated with a voucher specimen. Species that may potentially occur in Dinosaur NM are listed in Appendix B. Rejected taxa (listed in Appendix C) have either been falsely reported (**FalsRep**) in the literature based on misidentified herbarium specimens or are considered Questionable (**Ques?**) because park reports are from well outside their known or expected range.

Pop. size (Appendix A)

Population size refers to the abundance and frequency with which a species occurs within Dinosaur NM. Abundance data are derived from NCPN (in ed.) and personal observations. Abundant (**Abun**) taxa have large populations, have a broad ecological amplitude (often being dominant in one to several vegetation types), or occur extensively across the monument. Common (**Com**) taxa have large local populations but may be restricted to a single vegetation type or do not occur across the entire monument. Uncommon (**Unc**) taxa have low to medium-sized populations, typically have a narrow ecological amplitude (or at least contribute relatively little to total vegetative cover), or have a small range across the monument. **Rare** taxa usually have low population numbers and are restricted to a single location within the monument. A “?” indicates that population size is unknown.

UT (Appendices A, C)

This column indicates whether a given species has been documented in the Utah portion of Dinosaur NM with a voucher (**X**). Species that are reported for the monument without the state indicated are marked by a ?.

CO (Appendices A, C)

This column indicates whether a given species has been documented in the Colorado portion of Dinosaur NM with a voucher (**X**). Species that are reported for the monument without the state indicated are marked by a ?.

Source (Appendix A)

Sources are the evidence for the assigned park status. In the case of Present and Historical taxa, sources are herbarium records (with collector, collection number, and repository) that were corroborated during this study. For reported taxa, the source is a published or unpublished reference citing the species within the monument. Specimen repositories include the Dinosaur NM herbarium (**DINO**), Brigham Young University (**BRY**), Utah State University (**USU**), New York Botanical Garden (**NY**), and the University of Wyoming's Rocky Mountain Herbarium (**RM**).

Year doc. (Appendix A)

Year documented indicates the first year in which a species was confirmed or reported to occur in Dinosaur NM. This year does not necessarily correspond with the date of the voucher specimen cited under Source. “NA” indicates that the first year is not known (used mostly for “reported” taxa).

Comments (Appendices A, B, C, and D)

This column includes additional comments on the status of a particular species in the monument, the place of origin for introduced species, legal status, and other data.

Nativity (Appendix D)

Nativity indicates whether a species is native to Utah or Colorado, or Introduced (Intro) based on Fertig (2007).

Flower time (Appendix D)

Flower time refers to the months in which a species is most likely to be in flower. NA indicates a species that is a non-flowering fern or gymnosperm.

Habitat (Appendix D)

The distribution of species across generalized habitats in Dinosaur NM is indicated by an “x” in the columns Pin-Jun through Wet, and is derived from the Dinosaur NM vegetation classification (NCPN in ed.) and Naumann (1990). **DesShr** = Desert shrub communities of saltbush and sagebrush. **PJ** = Pinyon-juniper woodlands. **MtCon** = Montane conifer forests and shrublands of Douglas-fir, aspen, and ponderosa pine. **Wet** = Wetlands (including hanging gardens). Additional comments are included for species that are restricted to a particular soil/geologic type (derived from Naumann 1990) or are found mostly in disturbed sites.

Appendix A. Confirmed, historical, and reported vascular plant taxa of Dinosaur National Monument, organized by family and scientific name with taxonomic and biogeographic notes.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range UT/CO	Park stat.	UT	CO	Pop. size	Source	Year doc.	Comments
	Utah	Colorado											
Aceraceae	<i>Acer glabrum</i> var. <i>glabrum</i>	<i>Acer glabrum</i>	Includes vars. <i>neomexicanum</i> , <i>douglasii</i> , & <i>tripartitum</i>	Rocky Mountain maple	Shrub	Wide/ Wide	Pres	X	X	Unc	Neely 4000 (DINO)	1948	
Aceraceae	<i>Acer negundo</i>	<i>Negundo aceroides</i> ssp. <i>interius</i>	<i>A. negundo</i> var. <i>interius</i>	box elder	Tree	Wide/ Wide	Pres	X	X	Com	O'Kane 2823 (DINO)	1933	
Agavaceae	<i>Yucca harrimaniae</i> var. <i>harrimaniae</i>	<i>Yucca harrimaniae</i>		Harriman's yucca	Shrub	Wide/ Wide	Hist	X		?	Weber 5441 (DINO)	1950	Type locality is Helper, Carbon Co., UT (Trelease s.n. MO)
Alismataceae	<i>Alisma plantago- aquatica</i>	<i>Alisma triviale</i>	<i>A. plantago-aquatica</i> var. <i>americanum</i>	water- plantain	Perf	Wide/ Wide	Pres	X	X	Unc	Tilley 2874 (DINO)	2002	
Alismataceae	<i>Sagittaria cuneata</i>	<i>Sagittaria cuneata</i>		northern arrowhead	Perf	Wide/ Wide	Hist	X		?	Holmgren et al. 413 (DINO)	1961	
Amaranthaceae	<i>Amaranthus blitoides</i>	<i>Amaranthus blitoides</i>	<i>A. graecizans</i>	prostrate pigweed	AnnF	Wide/ Wide	Pres	X		Unc	Tilley 2897 (DINO)	2002	
Anacardiaceae	<i>Rhus aromatica</i> var. <i>trilobata</i>	<i>Rhus aromatica</i> ssp. <i>trilobata</i>	<i>R. trilobata</i> var. <i>trilobata</i>	squawbush	Shrub	Wide/ Wide	Pres	X	X	Com	Wolf & Dever 5046 (DINO)	1912	
Anacardiaceae	<i>Toxicodendron rydbergii</i>	<i>Toxicodendron rydbergii</i>	<i>Rhus radicans</i> , <i>T. radicans</i>	western poison ivy	Shrub	Wide/ Wide	Hist	X		Unc	Welsh 367 (BRY)	1935	
Apocynaceae	<i>Amsonia jonesii</i>	<i>Amsonia jonesii</i>		Jones' amsonia	Perf	RegEn/ RegEn	Pres	X		Rare	Weber 5333 (DINO)	1933	CO BLM: Sensitive
Apocynaceae	<i>Apocynum cannabinum</i>	<i>Apocynum cannabinum</i>	Includes vars. <i>cannabinum</i> , <i>glaberrimum</i> , & <i>angustifolium</i>	common dogbane	Perf	Wide/ Wide	Pres	X	X	Unc	Harrington 1955 (CSU)	1946	
Asclepiadaceae	<i>Asclepias asperula</i> var. <i>asperula</i>	<i>Asclepias asperula</i> ssp. <i>asperula</i>		spider milkweed	Perf	Wide/ Wide	Pres	X	X	Rare	Holmgren & Jensen 13961 (DINO)	1945	
Asclepiadaceae	<i>Asclepias cryptoceras</i> var. <i>cryptoceras</i>	<i>Asclepias cryptoceras</i>		pallid milkweed	Perf	Wide/ Wide	Pres	X	X	Unc	O'Kane 2759 (DINO)	1912	
Asclepiadaceae	<i>Asclepias incarnata</i>	<i>Asclepias incarnata</i>		swamp milkweed	Perf	Wide/ Wide	Pres	X		Unc	Reidel 111 (DINO)	1991	
Asclepiadaceae	<i>Asclepias speciosa</i>	<i>Asclepias speciosa</i>		showy milkweed	Perf	Wide/ Wide	Pres	X	X	Unc	O'Kane 3134 (DINO)	1946	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Dinosaur National Monument, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range UT/CO	Park stat.	UT	CO	Pop. size	Source	Year doc.	Comments
	Utah	Colorado											
Berberidaceae	<i>Mahonia repens</i>	<i>Mahonia repens</i>	<i>Berberis repens</i>	Oregon-grape	Shrub	Wide/ Wide	Pres	X	X	Unc	Wolf & Dever 5137 (DINO)	1933	
Betulaceae	<i>Alnus incana</i> var. <i>occidentalis</i>	<i>Alnus incana</i> ssp. <i>tenuifolia</i>	<i>A. tenuifolia</i>	thinleaf alder	Shrub	Wide/ Wide	Pres	X	X	Unc	Naumann 371 (DINO)	1989	
Betulaceae	<i>Betula occidentalis</i>	<i>Betula fontinalis</i>		water birch	Tree	Wide/ Wide	Pres	X	X	Unc	O'Kane 2818 (DINO)	1933	
Boraginaceae	<i>Cryptantha ambigua</i>	<i>Cryptantha ambigua</i>		obscure cryptanth	AnnF	Sparse/ Wide	Hist	X	X	?	Harrington 1987 (CSU)	1946	
Boraginaceae	<i>Cryptantha breviflora</i>	<i>Oreocarya breviflora</i>		Uinta Basin cryptanth	PerF	RegEn/ RegEn	Pres	X	X	Rare	O'Kane 2963 (DINO)	1912	Type locality is 6.5 miles N of Jensen, Dinosaur NM (Osterhout 6414 RM)
Boraginaceae	<i>Cryptantha crassipala</i> var. <i>elachantha</i>	<i>Cryptantha crassipala</i> var. <i>elachantha</i>		thick-sepaled cryptanth	AnnF	Wide/ Wide	Pres	X	X	?	Atwood 15119 (BRY)	1991	
Boraginaceae	<i>Cryptantha fendleri</i>	<i>Cryptantha fendleri</i>	<i>C. pattersonii</i>	sand dune cryptanth	AnnF	Wide/ Wide	Hist	X		?	Welsh 493 (BRY)	1956	
Boraginaceae	<i>Cryptantha flava</i>	<i>Oreocarya flava</i>		plateau yellow cryptanth	PerF	Wide/ Wide	Pres	X	X	Com	Neely 4151 (DINO)	1933	
Boraginaceae	<i>Cryptantha flavoculata</i>	<i>Oreocarya flavoculata</i>		yellow-eye cryptanth	PerF	Wide/ Wide	Pres	X	X	Com	Weber 5342 (DINO)	1933	
Boraginaceae	<i>Cryptantha gracilis</i>	<i>Cryptantha gracilis</i>		slender cryptanth	AnnF	Wide/ Wide	Pres	X		Unc	Reidel 36 (DINO)	1935	
Boraginaceae	<i>Cryptantha humilis</i>	<i>Oreocarya humilis</i> ssp. <i>nana</i>		dwarf cryptanth	PerF	Wide/ Wide	Pres		X	Unc	O'Kane & Roszcwski 3162 (DINO)	1987	
Boraginaceae	<i>Cryptantha kelseyana</i>	<i>Cryptantha kelseyana</i>		Kelsey's cryptanth	AnnF	Wide/ Sparse	Pres	X	X	Unc	Weber 5423 (DINO)	1912	
Boraginaceae	<i>Cryptantha pterocarya</i> var. <i>pterocarya</i>	<i>Cryptantha pterocarya</i>		wing-nut cryptanth	AnnF	Wide/ Periph	Hist	X		?	Weber 7405 (COLO)	1952	
Boraginaceae	<i>Cryptantha recurvata</i>	<i>Cryptantha recurvata</i>		recurved cryptanth	AnnF	Wide/ Periph	Hist	X		?	Weber 5445 (DINO)	1950	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Dinosaur National Monument, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range UT/CO	Park stat.	UT	CO	Pop. size	Source	Year doc.	Comments
	Utah	Colorado											
Boraginaceae	<i>Cryptantha rollinsii</i>	<i>Oreocarya rollinsii</i>		Rollins' cryptanth	PerF	RegEn/ RegEn	Pres	X		Rare	Simonsen DINO V-4 (DINO)	1950	Type locality is 22 miles S of Ouray, Uintah Co., UT (Rollins 1715 GH). CO BLIM: Sensitive, USFWS: former C2 candidate
Boraginaceae	<i>Cryptantha stricta</i>	<i>Oreocarya stricta</i>		erect cryptanth	PerF	RegEn/ RegEn	Pres		X	Unc	O'Kane & Reidel 2780 (DINO)	1960	USFWS: 3C
Boraginaceae	<i>Cynoglossum officinale</i>	<i>Cynoglossum officinale</i>		common hound's-tongue	PerF	Intro/ Intro	Rep	X		?	Naumann (2002)	NA	CO state noxious weed (List B). Native to Eurasia
Boraginaceae	<i>Hackelia floribunda</i>	<i>Hackelia floribunda</i>		showy stickseed	PerF	Wide/ Wide	Pres		X	Unc	O'Kane & Roszczewski 3209 (DINO)	1987	
Boraginaceae	<i>Lappula occidentalis</i> var. <i>cupulata</i>	<i>Lappula marginata</i>	<i>L. texana</i> , <i>L. redowskii</i> var. <i>cupulata</i>	cupseed stickseed	AnnF	Wide/ Wide	Pres	X	X	Unc	Weber 5375 (DINO)	1912	
Boraginaceae	<i>Lappula occidentalis</i> var. <i>occidentalis</i>	<i>Lappula redowskii</i>	<i>L. redowskii</i> var. <i>redowskii</i>	western stickseed	AnnF	Wide/ Wide	Pres	X	X	Unc	Painter 454 (DINO)	1933	
Boraginaceae	<i>Lithospermum incisum</i>	<i>Lithospermum incisum</i>		showy stoneseed	PerF	Wide/ Wide	Pres	X	X	Unc	Neely 3968 (DINO)	1912	
Boraginaceae	<i>Lithospermum ruderale</i>	<i>Lithospermum ruderale</i>		western stoneseed	PerF	Wide/ Wide	Pres	X	X	Unc	O'Kane 2940 (DINO)	1956	
Boraginaceae	<i>Mertensia fusiformis</i>	<i>Mertensia lanceolata</i> var. <i>coriacea</i>	Included in <i>M. oblongifolia</i>	spindle-rooted bluebell	PerF	RegEn/ RegEn	Pres		X	Unc	Neely 4162 (DINO)	1986	
Boraginaceae	<i>Mertensia lanceolata</i> var. <i>coriacea</i>	<i>Mertensia lanceolata</i> var. <i>coriacea</i>	Included in <i>M. viridis</i> in Cronquist et al. (1984)	lanceleaf bluebell	PerF	RegEn/ RegEn	Pres		X	Unc	Neely 4005 (DINO)	1948	
Boraginaceae	<i>Mertensia oblongifolia</i>	<i>Mertensia oblongifolia</i>		western bluebell	PerF	Wide/ Periph	Pres	X	X	Unc	O'Kane 2735 (DINO)	1955	
Boraginaceae	<i>Plagiobothrys scouleri</i> var. <i>penicillatus</i>	<i>Plagiobothrys scouleri</i> ssp. <i>penicillatus</i>	<i>P. scouleri</i> var. <i>hispidulus</i> , <i>P. nelsonii</i>	meadow popcorn-flower	AnnF	Wide/ Wide	Pres	X		Unc	Tilley s.n. (DINO)	2002	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Dinosaur National Monument, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range UT/CO	Park stat.	UT	CO	Pop. size	Source	Year doc.	Comments
	Utah	Colorado											
Cactaceae	<i>Echinocereus triglochidiatus</i> var. <i>melanacanthus</i>	<i>Echinocereus triglochidiatus</i>	Includes var. <i>inermis</i> . Vars. not recognized in <i>Flora of North America</i> (2003).	claretcup	Perf	Wide/ Wide	Pres	X	X	Unc	O'Kane 2775 (DINO)	1935	
Cactaceae	<i>Opuntia erinacea</i> var. <i>utahensis</i>		<i>O. polyacantha</i> var. <i>hystricina</i> . Var. not recognized in <i>Flora of North America</i> (2003).	Utah pricklypear	Perf	Wide/ NA	Hist	X		?	Weish 363 (BRY)	1935	
Cactaceae	<i>Opuntia fragilis</i>	<i>Opuntia fragilis</i> var. <i>brachyartha</i>		brittle prickly-pear	Perf	Wide/ Wide	Pres	X	X	Unc	O'Kane 3019 (DINO)	1987	
Cactaceae	<i>Opuntia polyacantha</i> var. <i>polyacantha</i>	<i>Opuntia polyacantha</i>	<i>O. rhodantha</i> . <i>Flora of North America</i> (2003) includes vars. <i>rufispina</i> & <i>trichophora</i>	plains prickly-pear	Perf	Wide/ Wide	Pres	X	X	Unc	Wolf & Dever s.n. (DINO)	1948	
Cactaceae	<i>Opuntia polyacantha</i> var. <i>trichophora</i>		Included with <i>O. polyacantha</i> var. <i>polyacantha</i> in <i>Flora of North America</i> (2003)	slenderspine pricklypear	Perf	Periph/ Periph	Pres	X	X	Unc	Weber s.n. (COLO)	1970	New record for Colorado?
Cactaceae	<i>Pediocactus simpsonii</i>	<i>Pediocactus simpsonii</i> var. <i>minor</i>	Includes var. <i>simpsonii</i>	Simpson's hedgehog cactus	Perf	Wide/ Wide	Pres	X	X	Unc	Neely & O'Kane 3927 (DINO)	1987	
Cannabaceae	<i>Humulus lupulus</i> var. <i>neomexicanus</i>	<i>Humulus lupulus</i> ssp. <i>americanus</i>		common hops	Perf	Wide/ Wide	Pres	X	X	Unc	Naumann 345 (DINO)	1989	
Capparaceae (Cleomaceae)	<i>Cleome lutea</i>	<i>Cleome lutea</i>		yellow beplant	AnnF	Wide/ Wide	Pres	X	X	Unc	Rodeck 4443 (DINO)	1912	
Capparaceae (Cleomaceae)	<i>Cleome serrulata</i>	<i>Cleome serrulata</i>		Rocky Mountain beplant	AnnF	Wide/ Wide	Pres	X	X	Unc	Holmgren et al. 483 (DINO)	1948	
Capparaceae (Cleomaceae)	<i>Cleomella palmeriana</i> var. <i>goodrichii</i>		<i>C. hillmanii</i> var. <i>goodrichii</i>	Goodrich's stinkweed	AnnF	LocEn/ NA	Rep	X		?	Graham (1937)	1935	Type locality is Rainbow Draw, Uintah Co., UT (Goodrich 12312 BRY). UT BLMI: Sensitive
Caprifoliaceae (Adoxaceae)	<i>Sambucus caerulea</i>	<i>Sambucus caerulea</i>	<i>S. nigra</i> ssp. <i>caerulea</i> , <i>S. cerulea</i>	blue elderberry	Shrub	Wide/ Wide	Pres	X	X	Unc	Neely 4328 (DINO)	1945	
Caprifoliaceae	<i>Symphoricarpos longiflorus</i>	<i>Symphoricarpos longiflorus</i>		long-flower snowberry	Shrub	Wide/ Periph	Pres	X	X	Unc	O'Kane 3173 (DINO)	1955	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Dinosaur National Monument, organized by family and scientific name with taxonomic and biogeographic notes, cont.

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	Utah	Colorado											
Caprifoliaceae	<i>Symphoricarpos occidentalis</i>	<i>Symphoricarpos occidentalis</i>		western snowberry	Shrub	Periph/ Wide	Hist	X		?	Welsh 315 (BRY)	1955	
Caprifoliaceae	<i>Symphoricarpos oreophilus</i> var. <i>utahensis</i>	<i>Symphoricarpos rotundifolius</i>		mountain snowberry	Shrub	Wide/ Wide	Pres	X	X	Com	Wolf & Dever 5145 (DINO)	1935	Type locality is Logan, Cache Co., UT (Rydberg s.n. US).
Caryophyllaceae (Aisinaceae)	<i>Arenaria congesta</i> var. <i>congesta</i>	<i>Eremogone congesta</i>	<i>E. congesta</i> var. <i>congesta</i> , includes var. <i>cephaloidea</i>	ball-head sandwort	PerF	Wide/ Wide	Pres	X	X	Unc	O'Kane 2733 (DINO)	1948	
Caryophyllaceae (Aisinaceae)	<i>Arenaria fendleri</i> var. <i>eastwoodiae</i>	<i>Eremogone eastwoodiae</i>	<i>E. eastwoodiae</i> var. <i>eastwoodiae</i>	Eastwood's sandwort	PerF	Wide/ Wide	Pres	X	X	Com	MacLeod 41a (DINO)	1912	
Caryophyllaceae (Aisinaceae)	<i>Arenaria hookeri</i> var. <i>desertorum</i>	<i>Eremogone hookeri</i>	Included in <i>E. hookeri</i> var. <i>hookeri</i> in <i>Flora of North America</i> (2005)	Hooker's sandwort	PerF	RegEn/ RegEn	Pres	X	X	Unc	O'Kane 2949 (DINO)	1987	Type locality is near Duchesne, Duchesne Co., UT (Ripley & Barneby 8701 NY).
Caryophyllaceae (Aisinaceae)	<i>Arenaria nuttallii</i>	<i>Minuopsis nuttallii</i>	<i>Minuartia nuttallii</i> var. <i>nuttallii</i>	Nuttall's sandwort	PerF	Wide/ Periph	Rep	X	X	?	Goodrich and Neese (1986)	1983	CO BLM: Sensitive
Caryophyllaceae (Aisinaceae)	<i>Cerastium arvense</i>	<i>Cerastium strictum</i>	<i>C. arvense</i> ssp. <i>strictum</i>	field chickweed	PerF	Wide/ Wide	Pres	X	X	Unc	Neely 3980 (DINO)	1987	
Caryophyllaceae (Aisinaceae)	<i>Holosteum umbellatum</i>	<i>Holosteum umbellatum</i>		holosteum	AnnF	Intro/ Intro	Rep	X		?	Naumann (2002)	NA	Native to Europe
Caryophyllaceae	<i>Saponaria officinalis</i>	<i>Saponaria officinalis</i>		bouncing-bet	PerF	Intro/ Intro	Pres	X	X	Unc	Reidel 116 (DINO)	1991	Native to Europe
Caryophyllaceae (Aisinaceae)	<i>Spergularia marina</i>	<i>Spergularia marina</i>	<i>S. salina</i>	salt sand-spurrey	AnnF	Intro/ Intro	Pres	X	X	Unc	Naumann 300 (DINO)	1988	Native to Europe
Caryophyllaceae (Aisinaceae)	<i>Stellaria jamesiana</i>	<i>Pseudostellaria jamesiana</i>		James' chickweed	PerF	Wide/ Wide	Pres	X	X	Unc	Wolf & Dever 5188 (DINO)	1948	
Celastraceae	<i>Pachystima myrsinites</i>	<i>Pachystima myrsinites</i>	<i>Pachystima myrsinites</i>	mountain-lover	Shrub	Wide/ Wide	Pres	X	X	Com	O'Kane 2682 (DINO)	1935	
Chenopodiaceae	<i>Atriplex argentea</i> var. <i>argentea</i>	<i>Atriplex argentea</i>		silver orach	AnnF	Wide/ Wide	Hist	X	X	?	MacLeod 374 (COLO)	1965	
Chenopodiaceae	<i>Atriplex canescens</i> var. <i>canescens</i>	<i>Atriplex canescens</i>	<i>A. canescens</i> var. <i>occidentalis</i>	fourwing saltbush	Shrub	Wide/ Wide	Pres	X	X	Com	Holmgren et al. 454 (DINO)	1912	

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Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range UT/CO	Park stat.	UT	CO	Pop. size	Source	Year doc.	Comments
	Utah	Colorado											
Chenopodiaceae	<i>Atriplex confertifolia</i>	<i>Atriplex confertifolia</i>		shadscale	Shrub	Wide/ Wide	Pres	X	X	Com	Weber 5424 (DINO)	1912	
Chenopodiaceae	<i>Atriplex corrugata</i>	<i>Atriplex corrugata</i>		mat saltbush	Shrub	RegEn/ RegEn	Pres	X		Unc	Wolf & Dever 5077 (DINO)	1912	
Chenopodiaceae	<i>Atriplex gardneri</i> var. <i>cuneata</i>	<i>Atriplex gardneri</i>	<i>A. cuneata</i>	Castle Valley saltbush	Shrub	RegEn/ RegEn	Pres	X		Unc	Weber 5365 (DINO)	1912	Type locality is near Emery, Emery Co., UT (Jones 5443 RM)
Chenopodiaceae	<i>Atriplex gardneri</i> var. <i>utahensis</i>		<i>A. tridentata</i> , includes <i>A.</i> <i>tridentata</i> var. <i>robusta</i>	basin saltbush	Shrub	Wide/ NA	Rep	X		?	Goodrich and Neese (1986)	NA	Type locality is Salt Lake City, Salt Lake Co., UT (Jones 1760 POM).
Chenopodiaceae	<i>Atriplex saccaria</i> var. <i>saccaria</i>	<i>Atriplex saccaria</i>	<i>A. saccaria</i> var. <i>caput-medusae</i>	stalked orach	AnnF	RegEn/ RegEn	Hist	X		?	Bradley 5355 (DINO)	1949	
Chenopodiaceae	<i>Atriplex truncata</i>	<i>Atriplex truncata</i>		wedge orach	AnnF	Wide/ Wide	Rep	X		?	Graham (1937)	1935	
Chenopodiaceae	<i>Atriplex wolfii</i> var. <i>tenuissima</i>	<i>Atriplex wolfii</i>	<i>A. tenuissima</i>	slender orach	AnnF	RegEn/ RegEn	Hist	X		?	Wolf & Dever 5235 (DINO)	1948	Type locality is Gunnison, Sanpete Co., UT (Jones 6525 POM)
Chenopodiaceae	<i>Bassia americana</i>	<i>Kochia americana</i>		greenmolly	PerF	Wide/ Wide	Pres	X		Unc	Weish 452 (BRY)	1955	
Chenopodiaceae	<i>Bassia hyssopifolia</i>	<i>Bassia hyssopifolia</i>		five-horn smotherweed	AnnF	Intro/ Intro	Hist		X	?	Holmgren et al. 450 (DINO)	1961	Native to Eurasia
Chenopodiaceae	<i>Bassia scoparia</i>	<i>Bassia sieversiana</i>	<i>Kochia scoparia</i>	summer- cypress	AnnF	Intro/ Intro	Hist	X		?	Wolf & Dever 5251 (DINO)	1948	Native to Eurasia
Chenopodiaceae	<i>Chenopodium</i> <i>album</i> var. <i>berlandieri</i>	<i>Chenopodium</i> <i>berlandieri</i>	<i>C. berlandieri</i> var. <i>zschackei</i>	pitseed goosefoot	AnnF	Wide/ Wide	Pres		X	Unc	Wilken et al. 13445 (CSU)	1978	
Chenopodiaceae	<i>Chenopodium</i> <i>atrovirens</i>	<i>Chenopodium</i> <i>atrovirens</i>	<i>C. fremontii</i> var. <i>atrovirens</i>	mountain goosefoot	AnnF	Wide/ Wide	Pres	X		Unc	Friedlander & Wathen 97 (DINO)	1983	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Dinosaur National Monument, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range UT/CO	Park stat.	UT	CO	Pop. size	Source	Year doc.	Comments
	Utah	Colorado											
Chenopodiaceae	<i>Chenopodium capitatum</i> var. <i>parvicapitatum</i>	<i>Chenopodium foliosum</i>	<i>C. overi</i>	smallhead goosefoot	AnnF	Wide/ Wide	Pres	X	X	Unc	MacLeod 49a (DINO)	1960	Type locality is Indian Creek, Tushar Mtns., Beaver Co., UT (Martin & Welsh 17148 BRY)
Chenopodiaceae	<i>Chenopodium fremontii</i> var. <i>fremontii</i>	<i>Chenopodium fremontii</i>		Fremont's goosefoot	AnnF	Wide/ Wide	Pres	X	X	Unc	Brotherson 793 (BRY)	1949	
Chenopodiaceae	<i>Chenopodium fremontii</i> var. <i>incanum</i>	<i>Chenopodium incanum</i>	<i>C. incanum</i> var. <i>incanum</i> , <i>C. incanum</i> var. <i>occidentale</i>	silvery goosefoot	AnnF	Wide/ Wide	Pres	X		Unc	Weber 5369 (DINO)	1950	
Chenopodiaceae	<i>Chenopodium glaucum</i> var. <i>salinum</i>	<i>Chenopodium glaucum</i>	<i>C. salinum</i>	oakleaf goosefoot	AnnF	Wide/ Wide	Pres	X	X	Unc	Naumann 283 (DINO)	1948	
Chenopodiaceae	<i>Chenopodium leptophyllum</i>	<i>Chenopodium leptophyllum</i>		narrow-leaf goosefoot	AnnF	Wide/ Wide	Pres	X	X	Unc	Friedlander & Wathen 128 (DINO)	1984	
Chenopodiaceae	<i>Chenopodium simplex</i>	<i>Chenopodium simplex</i>	<i>C. hybridum</i> , <i>C. gigantospermum</i> , <i>C. standleyanum</i>	maple-leaf goosefoot	AnnF	Wide/ Wide	Pres	X	X	Unc	Holmgren et al. 458 (DINO)	1961	
Chenopodiaceae	<i>Corispermum americanum</i>	<i>Corispermum americanum</i>	Includes vars. <i>americanum</i> & <i>rydbergii</i>	American bugseed	AnnF	Wide/ Sparse	Hist	X	X	?	Holmgren et al. 438 (DINO)	1961	
Chenopodiaceae	<i>Grayia spinosa</i>	<i>Atriplex grayi</i>	<i>Atriplex spinosa</i>	spiny hopsage	Shrub	Wide/ Wide	Pres	X	X	Unc	MacLeod 30b (DINO)	1933	
Chenopodiaceae	<i>Halogeton glomeratus</i>	<i>Halogeton glomeratus</i>		halogeton	AnnF	Intro/ Intro	Pres	X		Unc	Friedlander & Wathen 89 (DINO)	1983	CO state noxious weed (List C). Native to Eurasia
Chenopodiaceae	<i>Krascheninnikovia lanata</i> var. <i>lanata</i>	<i>Krascheninnikovia lanata</i>	<i>Ceratoides lanata</i> , <i>Eurotia lanata</i> . Vars. not recognized in <i>Flora of North America</i> (2003).	winterfat	Shrub	Wide/ Wide	Pres	X	X	Unc	Neely 4315 (DINO)	1935	
Chenopodiaceae	<i>Monolepis nuttalliana</i>	<i>Monolepis nuttalliana</i>		Nuttall's poverty-weed	AnnF	Wide/ Wide	Pres	X	X	Unc	Weber 5388 (DINO)	1950	
Chenopodiaceae	<i>Monolepis pusilla</i>	<i>Monolepis pusilla</i>	<i>Micromonolepis pusilla</i>	tiny poverty- weed	AnnF	Periph/ Periph	Hist	X		?	Graham 7742 (CM)	1933	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Dinosaur National Monument, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range UT/CO	Park stat.	UT	CO	Pop. size	Source	Year doc.	Comments
	Utah	Colorado											
Chenopodiaceae	<i>Salsola tragus</i>	<i>Salsola australis</i>	<i>S. kali</i> , <i>S. iberica</i> , <i>S. pestifer</i>	Russian thistle	AnnF	Intro/ Intro	Pres	X		Unc	Wolf & Dever 5225 (DINO)	1948	Native to Asia
Chenopodiaceae (Sarcobataceae)	<i>Sarcobatus vermiculatus</i>	<i>Sarcobatus vermiculatus</i>		greasewood	Shrub	Wide/ Wide	Pres	X	X	Com	O'Kane 2764 (DINO)	1948	
Chenopodiaceae	<i>Suaeda occidentalis</i>		Included in <i>S. calceoliformis</i> by some authors	western seepweed	AnnF	Wide/ NA	Pres	X		Unc	Friedlander & Wathen 127 (DINO)	1983	
Chenopodiaceae	<i>Suaeda torreyana</i> var. <i>torreyana</i>	<i>Suaeda moquinii</i>	<i>S. nigra</i> , <i>S. fruticosa</i>	Torrey's seepweed	AnnF	Wide/ Wide	Hist	X		?	Wolf & Dever 5055 (DINO)	1948	
Chenopodiaceae	<i>Zuckia brandegei</i> var. <i>plummeri</i>	<i>Atriplex brandegei</i>	<i>Z. brandegei</i> var. <i>plummeri</i> , <i>Grayia brandegei</i> var. <i>plummeri</i>	Plummer's siltbush	Shrub	RegEn/ RegEn	Hist	X		?	Weber 5430 (DINO)	1934	Type locality is 15 miles E of Roosevelt, Uintah Co., UT (Stutz 9325 BRY)
Compositae (Asteraceae)	<i>Achillea millefolium</i> ssp. <i>lanulosa</i>	<i>Achillea lanulosa</i>	<i>A. millefolium</i> var. <i>occidentalis</i> . Vars. not recognized in <i>Flora of North America</i> (2006)	common yarrow	PerF	Wide/ Wide	Pres	X	X	Com	MacLeod 39 (DINO)	1948	
Compositae (Asteraceae)	<i>Agoseris aurantiaca</i> var. <i>aurantiaca</i>	<i>Agoseris aurantiaca</i> var. <i>aurantiaca</i>		orange agoseris	PerF	Wide/ Periph	Pres	X	X	Unc	O'Kane 3056 (DINO)	1987	
Compositae (Asteraceae)	<i>Agoseris glauca</i> var. <i>glauca</i>	<i>Agoseris glauca</i> var. <i>glauca</i>		pale agoseris	PerF	Wide/ Wide	Pres	X	X	Com	O'Kane 3200 (DINO)	1987	
Compositae (Asteraceae)	<i>Agoseris glauca</i> var. <i>laciniata</i>	<i>Agoseris glauca</i> var. <i>laciniata</i>	<i>A. parviflora</i>	cutleaf agoseris	PerF	Wide/ Wide	Pres	X	X	Com	Wolf & Dever 5113 (DINO)	1948	
Compositae (Asteraceae)	<i>Ambrosia acanthicarpa</i>	<i>Ambrosia acanthicarpa</i>	<i>Franseria acanthicarpa</i>	bur ragweed	AnnF	Wide/ Wide	Pres	X	X	Unc	Holmgren et al. 485 (DINO)	1955	
Compositae (Asteraceae)	<i>Ambrosia tomentosa</i>	<i>Ambrosia tomentosa</i>	<i>Franseria tomentosa</i>	skeleton-leaf bursage	PerF	Wide/ Wide	Pres	X	X	Unc	Holmgren et al. 446 (DINO)	1961	
Compositae (Asteraceae)	<i>Antennaria anaphaloides</i>	<i>Antennaria pulcherrima</i> ssp. <i>anaphaloides</i>		tall pussytoes	PerF	Wide/ Wide	Pres	X	X	Unc	Friedlander & Wathen 42 (DINO)	1948	
Compositae (Asteraceae)	<i>Antennaria dimorpha</i>	<i>Antennaria dimorpha</i>		low pussytoes	PerF	Wide/ Wide	Pres	X	X	Com	Neely 3920 (DINO)	1955	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Dinosaur National Monument, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range UT/CO	Park stat.	UT	CO	Pop. size	Source	Year doc.	Comments
	Utah	Colorado											
Compositae (Asteraceae)	<i>Antennaria microphylla</i>	<i>Antennaria microphylla</i>	Includes <i>A. rosea</i>	small-leaf pussytoes	PerF	Wide/ Wide	Pres	X	X	Com	Neely 4187 (DINO)	1945	
Compositae (Asteraceae)	<i>Antennaria parvifolia</i>	<i>Antennaria parvifolia</i>		common pussytoes	PerF	Wide/ Wide	Pres	X	X	Unc	O'Kane 2689 (DINO)	1987	
Compositae (Asteraceae)	<i>Arctium minus</i>	<i>Arctium minus</i>		burdock	PerF	Intro/ Intro	Rep	X		?	Naumann (2002)	NA	
Compositae (Asteraceae)	<i>Arnica cordifolia var. cordifolia</i>	<i>Arnica cordifolia</i>	Vars. not recognized in <i>Flora of North America</i> (2006). Misspelled var. <i>cordata</i> in Welsh et al. (2003).	heartleaf arnica	PerF	Wide/ Wide	Pres		X	Unc	O'Kane 3185 (DINO)	1987	
Compositae (Asteraceae)	<i>Arnica fulgens</i>	<i>Arnica fulgens</i>		orange arnica	PerF	Periph/ Wide	Hist		X	?	MacLeod 14a (DINO)	1960	
Compositae (Asteraceae)	<i>Artemisia arbuscula</i>	<i>Seriphidium arbusculum</i> var. <i>arbusculum</i>	<i>A. arbuscula</i> var. <i>arbuscula</i> . Includes <i>A. longiloba</i> in Gronquist (1994)	low sagebrush	Shrub	Wide/ Wide	Rep	X		?	NCPN (in ed.)	2002	
Compositae (Asteraceae)	<i>Artemisia biennis</i>	<i>Artemisia biennis</i>	<i>A. biennis</i> var. <i>biennis</i>	biennial wormwood	PerF	Wide/ Wide	Pres		X	Unc	Holmgren et al. 405 (DINO)	1961	
Compositae (Asteraceae)	<i>Artemisia bigelovii</i>	<i>Artemisia bigelovii</i>		Bigelow's sagebrush	Shrub	Wide/ Wide	Pres	X		Unc	Reidel 156 (DINO)	1991	
Compositae (Asteraceae)	<i>Artemisia cana</i> var. <i>viscidula</i>	<i>Seriphidium canum</i> ssp. <i>viscidulum</i>		silver sagebrush	Shrub	Wide/ Wide	Rep	X	X	Unc	NCPN (in ed.)	2002	
Compositae (Asteraceae)	<i>Artemisia dracunculus</i> ssp. <i>glauca</i>	<i>Oligosporus dracunculus</i> ssp. <i>glauca</i>	Vars. not recognized in Cronquist (1994) and <i>Flora of North America</i> (2006)	tarragon	PerF	Wide/ Wide	Pres	X		Unc	Reidel 127 (DINO)	1955	
Compositae (Asteraceae)	<i>Artemisia frigida</i>	<i>Artemisia frigida</i>		fringed sagebrush	Shrub	Wide/ Wide	Pres		X	Unc	Holmgren et al. 480 (DINO)	1949	
Compositae (Asteraceae)	<i>Artemisia ludoviciana</i> var. <i>ludoviciana</i>	<i>Artemisia ludoviciana</i> ssp. <i>ludoviciana</i>		Louisiana wormwood	PerF	Wide/ Wide	Pres	X	X	Com	Wolf & Dever 5061 (DINO)	1948	
Compositae (Asteraceae)	<i>Artemisia nova</i> var. <i>nova</i>	<i>Seriphidium novum</i> <i>nova</i>	<i>A. arbuscula</i> var. <i>nova</i> . Vars. not recognized in <i>Flora of North America</i> (2006)	black sagebrush	Shrub	Wide/ Wide	Pres	X	X	Com	Naumann 263 (DINO)	1949	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Dinosaur National Monument, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range UT/CO	Park stat.	UT	CO	Pop. size	Source	Year doc.	Comments
	Utah	Colorado											
Compositae (Asteraceae)	<i>Artemisia spinescens</i>	<i>Picrothamnus desertorum</i>		budsage	Shrub	Wide/ Wide	Pres	X	X	Unc	Wolf & Dever 5067 (DINO)	1912	
Compositae (Asteraceae)	<i>Artemisia tridentata</i> var. <i>tridentata</i>	<i>Seriphidium tridentatum</i> ssp. <i>tridentatum</i>		basin big sagebrush	Shrub	Wide/ Wide	Pres	X	X	Abun	Naumann & Riedel 296 (DINO)	1955	
Compositae (Asteraceae)	<i>Artemisia tridentata</i> var. <i>vaseyana</i>	<i>Seriphidium vaseyanum</i>	Includes <i>A. tridentata</i> var. <i>pauciflora</i>	mountain big sagebrush	Shrub	Wide/ Wide	Pres	X	X	Unc	Naumann 229 (DINO)	1988	Type locality of var. <i>pauciflora</i> is Left Fork of Hobble Creek, Utah Co., UT (Goodrich et al. 21492 BRY)
Compositae (Asteraceae)	<i>Artemisia tridentata</i> var. <i>wyomingensis</i>	<i>Seriphidium tridentatum</i> ssp. <i>wyomingense</i>		Wyoming big sagebrush	Shrub	Wide/ Wide	Pres	X	X	Com	Wolf & Dever 5118 (DINO)	1948	
Compositae (Asteraceae)	<i>Aster ascendens</i>	<i>Virgularia ascendens</i>	<i>A. chilensis</i> ssp. <i>adscendens</i> , <i>A. adscendens</i> , <i>Symphotrichum</i> <i>ascendens</i>	Pacific aster	PerF	Wide/ Wide	Pres	X	X	Unc	Friedlander & Wathen 71 (DINO)	1983	
Compositae (Asteraceae)	<i>Aster brachyactis</i>	<i>Brachyactis ciliata</i> ssp. <i>angusta</i>	<i>Symphotrichum</i> <i>ciliatum</i>	rayless alkali aster	AnnF	Wide/ Wide	Rep	X	X	Unc	NCPN (in ed.)	2002	
Compositae (Asteraceae)	<i>Aster glaucodes</i>	<i>Eucephalus glaucus</i>	<i>Eurybia glauca</i> , <i>Herrickia glauca</i> var. <i>glauca</i>	blueleaf aster	PerF	Wide/ Wide	Pres	X	X	Unc	Naumann 383 (DINO)	1988	
Compositae (Asteraceae)	<i>Aster hesperius</i>	<i>Aster lanceolatus</i> ssp. <i>hesperius</i>	<i>Symphotrichum</i> <i>lanceolatum</i> var. <i>hesperium</i>	Siskiyou aster	PerF	Wide/ Wide	Pres	X	X	Unc	Reidel 145 (DINO)	1991	
Compositae (Asteraceae)	<i>Aster pansus</i>	<i>Virgulus ericoides</i>	<i>A. ericoides</i> var. <i>pansus</i> , <i>Symphotrichum</i> <i>ericoides</i> var. <i>pansum</i>	white heath aster	PerF	Wide/ Wide	Pres	X	X	Unc	Naumann 380 (DINO)	1989	
Compositae (Asteraceae)	<i>Aster perelegans</i>	<i>Eucephalus elegans</i>		elegant aster	PerF	Wide/ Periph	Pres	X	X	Rare	Naumann 392 (DINO)	1960	
Compositae (Asteraceae)	<i>Aster spathulatus</i>	<i>Aster spathulatus</i>	<i>A. occidentalis</i> , <i>Symphotrichum</i> <i>spathulatum</i>	western aster	PerF	Wide/ Wide	Rep	X	X	?	Weber et al. (1982)	1979	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Dinosaur National Monument, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range UT/CO	Park stat.	UT	CO	Pop. size	Source	Year doc.	Comments
	Utah	Colorado											
Compositae (Asteraceae)	<i>Balsamorhiza hookeri</i> var. <i>hispidula</i>	<i>Balsamorhiza hispidula</i>		hairy balsamroot	Perf	Wide/ Periph	Pres	X	X	Unc	Neely 4257 (DINO)	1987	Type locality is Lake Point, Tooele Co., UT (Jones 1727 UC)
Compositae (Asteraceae)	<i>Balsamorhiza sagittata</i>	<i>Balsamorhiza sagittata</i>		arrowleaf balsamroot	Perf	Wide/ Wide	Pres	X	X	Unc	Wolf & Dever 5105 (DINO)	1948	
Compositae (Asteraceae)	<i>Bidens frondosa</i>	<i>Bidens frondosa</i>		devil's-beggarsticks	Perf	Wide/ Wide	Rep	X	X	Unc	NCFN (in ed.)	2002	
Compositae (Asteraceae)	<i>Brickellia grandiflora</i>	<i>Brickellia grandiflora</i>		tassel-flower brickellbush	Perf	Wide/ Wide	Pres	X	X	Unc	Holmgren et al. 466 (DINO)	1948	
Compositae (Asteraceae)	<i>Brickellia microphylla</i> var. <i>scabra</i>	<i>Brickellia microphylla</i> var. <i>scabra</i>		rough brickellbush	Shrub	Wide/ Wide	Pres	X	X	Unc	Friedlander & Wathen 26 (DINO)	1946	
Compositae (Asteraceae)	<i>Brickellia oblongifolia</i> var. <i>linifolia</i>	<i>Brickellia oblongifolia</i>		Mohave brickellbush	Shrub	Wide/ Wide	Hist	X		?	Welsh 1779 (BRY)	1962	Type locality is American Fork, Jordan Valley, Utah Co., UT (Watson 493 YU)
Compositae (Asteraceae)	<i>Carduus nutans</i>	<i>Carduus nutans</i> var. <i>macrolepis</i>	Includes ssp. <i>leiophyllus</i>	musk thistle	Perf	Intro/ Intro	Pres	X	X	Unc	Richards DINO V-2 (DINO)	2004	UT state noxious weed, CO state noxious weed (List B). Native to Eurasia.
Compositae (Asteraceae)	<i>Centaurea diffusa</i>	<i>Acosta diffusa</i>		diffuse knapweed	Perf	Intro/ Intro	Rep	X		?	Naumann (2002)	NA	UT state noxious weed, CO state noxious weed (List B). Native to Mediterranean
Compositae (Asteraceae)	<i>Centaurea maculosa</i>	<i>Acosta maculosa</i>	<i>C. stoebe</i> ssp. <i>micranthos</i> , <i>C. biebersteinii</i>	spotted knapweed	Perf	Intro/ Intro	Rep	X		?	Naumann (2002)	NA	UT state noxious weed, CO state noxious weed (List B). Native to Europe

Appendix A. Confirmed, historical, and reported vascular plant taxa of Dinosaur National Monument, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range UT/CO	Park stat.	UT	CO	Pop. size	Source	Year doc.	Comments
	Utah	Colorado											
Compositae (Asteraceae)	<i>Centaurea repens</i>	<i>Acroptilon repens</i>		Russian knapweed	Perf	Intro/ Intro	Pres	X		Unc	Naumann 388 (DINO)	1989	UT state noxious weed, CO state noxious weed (List B). Native to Eurasia
Compositae (Asteraceae)	<i>Chaenactis douglasii</i>	<i>Chaenactis douglasii</i>	Includes vars. <i>douglasii</i> & <i>montana</i>	hoary dusty- maiden	Perf	Wide/ Wide	Pres	X	X	Com	Wolf & Dever 5117 (DINO)	1912	
Compositae (Asteraceae)	<i>Chaenactis stevioides</i>	<i>Chaenactis stevioides</i>		stevia dusty- maiden	AnnF	Wide/ Wide	Pres	X		Unc	Weber 5367 (DINO)	1912	
Compositae (Asteraceae)	<i>Chaetopappa ericoides</i>	<i>Leucelene ericoides</i>	<i>Aster arenosus</i>	rose-heath	Perf	Wide/ Wide	Pres	X	X	Com	Neely 3987 (DINO)	1912	
Compositae (Asteraceae)	<i>Chrysopsis villosa</i> var. <i>minor</i>	<i>Heterotheca villosa</i> var. <i>minor</i>	<i>C. villosa</i> var. <i>hispid</i> , <i>Heterotheca villosa</i> var. <i>hispid</i> , <i>H. villosa</i> var. <i>minor</i>	hispid golden- aster	Perf	Wide/ Wide	Pres	X	X	Com	Holmgren et al. 481 (DINO)	1935	
Compositae (Asteraceae)	<i>Chrysothamnus depressus</i>	<i>Chrysothamnus depressus</i>		dwarf rabbitbrush	Shrub	Wide/ Wide	Pres	X	X	Unc	Bradley 5369	1949	
Compositae (Asteraceae)	<i>Chrysothamnus linifolius</i>	<i>Chrysothamnus linifolius</i>	<i>Lorandersonia linifolia</i>	spear-leaf rabbitbrush	Shrub	Wide/ Wide	Pres	X	X	Unc	Naumann 384 (DINO)	1948	
Compositae (Asteraceae)	<i>Chrysothamnus nauseosus</i> var. <i>consimilis</i>	<i>Chrysothamnus nauseosus</i> ssp. <i>consimilis</i>	<i>Ericameria nauseosa</i> var. <i>consimilis</i> , <i>E. nauseosa</i> var. <i>oreophila</i> , <i>C. nauseosus</i> var. <i>oreophilus</i>	greenish rabbitbrush	Shrub	Wide/ Wide	Pres	X	X	Unc	Holmgren et al. 462 (DINO)	1961	
Compositae (Asteraceae)	<i>Chrysothamnus nauseosus</i> var. <i>graveolens</i>	<i>Chrysothamnus nauseosus</i> ssp. <i>graveolens</i>	<i>Ericameria nauseosa</i> var. <i>graveolens</i> , <i>E. nauseosa</i> var. <i>glabrata</i>	glabrate rabbitbrush	Shrub	Wide/ Wide	Pres	X	X	Unc	Bradley 5368 (DINO)	1949	
Compositae (Asteraceae)	<i>Chrysothamnus nauseosus</i> var. <i>leiospermus</i>	<i>Chrysothamnus nauseosus</i> ssp. <i>leiospermus</i>	<i>Ericameria nauseosa</i> var. <i>leiosperma</i>	smoothseed rabbitbrush	Shrub	RegEn/ RegEn	Pres	X		Unc	Reidel 157 (DINO)	1991	Type locality is St. George, Washington Co., UT (Palmer s.n. NY)
Compositae (Asteraceae)	<i>Chrysothamnus parryi</i> var. <i>howardii</i>	<i>Chrysothamnus parryi</i> ssp. <i>howardii</i>	<i>Ericameria parryi</i> var. <i>howardii</i>	longbract rabbitbrush	Shrub	Wide/ Wide	Pres	X	X	Unc	Naumann 301 (DINO)	1988	
Compositae (Asteraceae)	<i>Chrysothamnus parryi</i> var. <i>nevadensis</i>	<i>Chrysothamnus parryi</i> var. <i>nevadensis</i>	<i>Ericameria parryi</i> var. <i>nevadensis</i> , <i>C. parryi</i> var. <i>attenuatus</i>	Nevada rabbitbrush	Shrub	Wide/ NA	Pres	X		Unc	Brotherson 766 (BRY)	1965	

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Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range UT/CO	Park stat.	UT	CO	Pop. size	Source	Year doc.	Comments
	Utah	Colorado											
Compositae (Asteraceae)	<i>Chrysothamnus viscidiflorus</i> var. <i>stenophyllus</i>	<i>Chrysothamnus viscidiflorus</i> sp. <i>stenophyllus</i>	Included in var. <i>viscidiflorus</i> by some authors. Var. not recognized in <i>Flora of North America</i> (2006).	slenderleaf rabbitbrush	Shrub	Wide/ Wide	Pres	X	X	Com	Naumann & Campbell 309 (DINO)	1988	
Compositae (Asteraceae)	<i>Chrysothamnus viscidiflorus</i> var. <i>viscidiflorus</i>	<i>Chrysothamnus viscidiflorus</i> sp. <i>viscidiflorus</i>		green rabbitbrush	Shrub	Wide/ Wide	Pres	X	X	Com	Holmgren et al. 478 (DINO)	1955	
Compositae (Asteraceae)	<i>Cichorium intybus</i>	<i>Cichorium intybus</i>		chicory	PerF	Intro/ Intro	Pres	X		Unc	Naumann 389 (DINO)	1989	CO state noxious weed (List C). Native to Eurasia
Compositae (Asteraceae)	<i>Cirsium arvense</i>	<i>Breea arvensis</i>	Includes vars. <i>horridum</i> & <i>integrifolium</i>	Canada thistle	PerF	Intro/ Intro	Pres	X		Unc	MacLeod 213 (DINO)	1961	UT state noxious weed, CO state noxious weed (List B). Native to Eurasia
Compositae (Asteraceae)	<i>Cirsium ownbeyi</i>	<i>Cirsium ownbeyi</i>		Ownbey's thistle	PerF	LocEn/ LocEn	Pres	X	X	Rare	O'Kane 3168 (DINO)	1955	Type locality is Horse Trail Canyon, Dinosaur NM, Uintah Co., UT (Welsh 343 BRY). UT BLM: Sensitive, CO BLM: Sensitive, USFWS: former C2 candidate
Compositae (Asteraceae)	<i>Cirsium scariosum</i> var. <i>scariosum</i>	<i>Cirsium scariosum</i>		elk thistle	PerF	Wide/ Wide	Rep	X	X	?	Naumann (2002)	NA	
Compositae (Asteraceae)	<i>Cirsium undulatum</i> var. <i>undulatum</i>	<i>Cirsium undulatum</i>		wavy-leaved thistle	PerF	Wide/ Wide	Pres	X	X	Unc	Wolf & Dever 5285 (DINO)	1912	
Compositae (Asteraceae)	<i>Cirsium vulgare</i>	<i>Cirsium vulgare</i>		bull thistle	PerF	Intro/ Intro	Pres	X	X	Unc	Naumann 378 (DINO)	1988	CO state noxious weed (List B). Native to Europe
Compositae (Asteraceae)	<i>Conyza canadensis</i> var. <i>glabrata</i>	<i>Conyza canadensis</i>	Vars. not recognized in <i>Flora of North America</i> (2006)	Canadian horseweed	AnnF	Wide/ Wide	Pres	X	X	Unc	Friedlander & Wathen 82 (DINO)	1961	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Dinosaur National Monument, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range UT/CO	Park stat.	UT	CO	Pop. size	Source	Year doc.	Comments
	Utah	Colorado											
Compositae (Asteraceae)	<i>Crepis acuminata</i>	<i>Psilochenia acuminata</i>		mountain hawksbeard	PerF	Wide/ Wide	Pres	X	X	Unc	O'Kane 3220 (DINO)	1948	
Compositae (Asteraceae)	<i>Crepis intermedia</i>	<i>Psilochenia intermedia</i>		gray hawksbeard	PerF	Wide/ Wide	Pres	X	X	Unc	Neely 4399 (DINO)	1935	
Compositae (Asteraceae)	<i>Crepis modocensis</i>	<i>Psilochenia modocensis</i>	<i>C. modocensis</i> ssp. <i>modocensis</i>	Modoc hawksbeard	PerF	Wide/ Wide	Pres	X	X	Unc	Neely 4306b (DINO)	1948	
Compositae (Asteraceae)	<i>Crepis occidentalis</i> var. <i>occidentalis</i>	<i>Psilochenia occidentalis</i>		western hawksbeard	PerF	Wide/ Wide	Pres	X	X	Unc	O'Kane 3032 (DINO)	1987	
Compositae (Asteraceae)	<i>Crepis runcinata</i> var. <i>glauca</i>	<i>Psilochenia glauca</i> ssp. <i>runcinata</i>		glaucous hawksbeard	PerF	Wide/ Periph	Pres	X	X	Unc	Naumann 341 (DINO)	1912	
Compositae (Asteraceae)	<i>Encelolopsis nudicaulis</i> var. <i>nudicaulis</i>	<i>Encelolopsis nudicaulis</i>		nakedstem	PerF	Wide/ Periph	Pres	X	X	Rare	Neely 4131 (DINO)	1912	
Compositae (Asteraceae)	<i>Encelolopsis nutans</i>	<i>Encelolopsis nutans</i>	<i>Encelia nutans</i>	noddinghead	PerF	RegEn/ RegEn	Hist	X		?	Weish 170 (BRY)	1912	
Compositae (Asteraceae)	<i>Erigeron caespitosus</i>	<i>Erigeron caespitosus</i>		tufted fleabane	PerF	Wide/ Periph	Rep	X	X	?	Holmgren (1962) & Weber et al. (1982)	1947	
Compositae (Asteraceae)	<i>Erigeron compositus</i> var. <i>glabratus</i>	<i>Erigeron compositus</i>	<i>E. compositus</i> var. <i>discoideus</i>	cut-leaved daisy	PerF	Wide/ Wide	Pres	X	X	Unc	Neely 4460 (DINO)	1987	
Compositae (Asteraceae)	<i>Erigeron divergens</i> var. <i>divergens</i>	<i>Erigeron divergens</i>		spreading daisy	PerF	Wide/ Wide	Pres	X	X	Com	Wolf 5289 (DINO)	1948	
Compositae (Asteraceae)	<i>Erigeron eatonii</i>	<i>Erigeron eatonii</i>	<i>E. eatonii</i> var. <i>eatonii</i>	Eaton's daisy	PerF	Wide/ Wide	Pres	X	X	Unc	Wolf & Dever 5183 (DINO)	1948	Type locality is ridge above Bear River Canyon, Uinta Mtns., Watson 546 GH)
Compositae (Asteraceae)	<i>Erigeron engelmannii</i>	<i>Erigeron engelmannii</i>		Engelmann's daisy	PerF	Wide/ Wide	Pres	X	X	Unc	Neely 3984 (DINO)	1983	
Compositae (Asteraceae)	<i>Erigeron glabellus</i>	<i>Erigeron glabellus</i>	<i>E. glabellus</i> var. <i>glabellus</i>	smooth daisy	PerF	Wide/ Wide	Pres	X	X	Unc	Reidel 47 (DINO)	1991	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Dinosaur National Monument, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range UT/CO	Park stat.	UT	CO	Pop. size	Source	Year doc.	Comments
	Utah	Colorado											
Compositae (Asteraceae)	<i>Erigeron nematophyllus</i>	<i>Erigeron wilkenii</i>		needle-leaf fleabane	PerF	RegEn/ LocEn	Pres	X	X	Com	Neely 3934 (DINO)	1956	Type locality of <i>E. wilkenii</i> is near mouth of Pool Canyon, Dinosaur NM, Moffatt Co., CO (O'Kane 3014 NY)
Compositae (Asteraceae)	<i>Erigeron pulcherrimus</i>	<i>Erigeron pulcherrimus</i>		basin daisy	PerF	Wide/ Wide	Hist	X		?	Weber 5425 (DINO)	1950	
Compositae (Asteraceae)	<i>Erigeron pumilus</i> var. <i>concinus</i>	<i>Erigeron concinns</i>	<i>E. concinns</i> var. <i>concinus</i> , includes var. <i>subglaber</i>	Navajo fleabane	PerF	Wide/ Wide	Pres	X	X	Com	O'Kane 2650 (DINO)	1912	
Compositae (Asteraceae)	<i>Erigeron speciosus</i> var. <i>uintahensis</i>	<i>Erigeron uintahensis</i>		Uinta daisy	PerF	RegEn/ RegEn	Pres		X	Unc	Wolf & Dever 5162 (DINO)	1948	Type locality is Mill Creek, Summit Co., UT (Payson 4984 RM)
Compositae (Asteraceae)	<i>Eupatorium maculatum</i> var. <i>bruneri</i>	<i>Eupatorium maculatum</i>	<i>Eupatoriadelphus maculatus</i> var. <i>bruneri</i> , <i>Eutrochium maculatum</i> var. <i>bruneri</i>	spotted joe-pye weed	PerF	Wide/ Wide	Pres	X		Unc	Naumann 386 (DINO)	1989	
Compositae (Asteraceae)	<i>Euthamia occidentalis</i>	<i>Euthamia occidentalis</i>	<i>Solidago occidentalis</i>	western goldenrod	PerF	Wide/ Wide	Pres	X	X	Unc	Holmgren et al. 423 (DINO)	1955	
Compositae (Asteraceae)	<i>Gaillardia aristata</i>	<i>Gaillardia aristata</i>		common blanketflower	PerF	Wide/ Wide	Pres	X	X	Unc	Rodeck 4429 (DINO)	1948	
Compositae (Asteraceae)	<i>Gnaphalium exilifolium</i>	<i>Gnaphalium uliginosum</i>		slender cudweed	AnnF	Wide/ Wide	Pres		X	Unc	Naumann & Campbell 298 (DINO)	1988	
Compositae (Asteraceae)	<i>Gnaphalium palustre</i>	<i>Gnaphalium palustre</i>		lowland cudweed	AnnF	Wide/ Wide	Pres		X	Unc	Naumann & Reidel 285 (DINO)	1961	
Compositae (Asteraceae)	<i>Gnaphalium stramineum</i>	<i>Pseudognaphalium stramineum</i>	<i>G. chilense</i>	cottonbatting cudweed	AnnF	Wide/ Wide	Hist		X	?	Holmgren et al. 484 (DINO)	1961	
Compositae (Asteraceae)	<i>Grindelia squarrosa</i> var. <i>serrulata</i>	<i>Grindelia squarrosa</i> var. <i>serrulata</i>	Vars. not recognized in <i>Flora of North America</i> (2006)	curly-cup gumweed	PerF	Wide/ Wide	Pres	X	X	Unc	Wolf & Dever 5092 (DINO)	1948	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Dinosaur National Monument, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range UT/CO	Park stat.	UT	CO	Pop. size	Source	Year doc.	Comments
	Utah	Colorado											
Compositae (Asteraceae)	<i>Gutierrezia pomariensis</i>		<i>G. sarothrae</i> var. <i>pomariensis</i> , <i>Xanthocephalum sarothrae</i> var. <i>pomariensis</i>	orchard snakeweed	Shrub	LocEn/ NA	Pres	X		Rare	Welsh et al. 9471 (BRY)	1965	Type locality is Orchard Creek Draw, Dinosaur NM, Duchesne Co., UT (Welsh, Shaw, Matthews, & Moore 9471 BRY). USFWS: 3C
Compositae (Asteraceae)	<i>Gutierrezia sarothrae</i>	<i>Gutierrezia sarothrae</i>		broom snakeweed	Shrub	Wide/ Wide	Pres	X	X	Unc	Holmgren et al. 419 (DINO)	1948	
Compositae (Asteraceae)	<i>Haplopappus acaulis</i> var. <i>acaulis</i>	<i>Stenotus acaulis</i>	<i>S. acaulis</i> var. <i>acaulis</i>	stemless goldenweed	Perf	Wide/ Wide	Pres	X	X	Com	MacLeod 11a (DINO)	1948	
Compositae (Asteraceae)	<i>Haplopappus armerioides</i> var. <i>armerioides</i>	<i>Stenotus armerioides</i>	<i>S. armerioides</i> var. <i>armerioides</i>	thrift goldenweed	Perf	Wide/ Wide	Pres	X	X	Unc	O'Kane 2697 (DINO)	1987	
Compositae (Asteraceae)	<i>Helenium autumnale</i> var. <i>montanum</i>	<i>Helenium autumnale</i> var. <i>montanum</i>	Vars. not recognized in Flora of North America (2006).	fall sneezeweed	Perf	Wide/ Wide	Pres	X	X	Unc	Rodeck 4436 (DINO)	1948	
Compositae (Asteraceae)	<i>Helianthella microcephala</i>	<i>Helianthella microcephala</i>		purpldisk sunflower	Perf	RegEn/ RegEn	Pres	X		Unc	Naumann & Jennings 395 (DINO)	1989	Type locality is Abajo Mtns., San Juan Co., UT (Newberry s.n. GH)
Compositae (Asteraceae)	<i>Helianthella uniflora</i>	<i>Helianthella uniflora</i>		little sunflower	Perf	Wide/ Wide	Pres		X	Unc	Friedlander & Wathen 100 (DINO)	1983	
Compositae (Asteraceae)	<i>Helianthus annuus</i> ssp. <i>lenticularis</i>	<i>Helianthus annuus</i>	Ssp. not recognized in Flora of North America (2006).	common sunflower	AnnF	Wide/ Wide	Pres	X	X	Unc	Holmgren et al. 421 (DINO)	1935	
Compositae (Asteraceae)	<i>Helianthus nuttallii</i>	<i>Helianthus nuttallii</i>	<i>H. nuttallii</i> ssp. <i>nuttallii</i>	Nuttall's sunflower	Perf	Wide/ Wide	Pres	X		Unc	Naumann 387 (DINO)	1989	
Compositae (Asteraceae)	<i>Helianthus petiolaris</i> ssp. <i>fallax</i>	<i>Helianthus petiolaris</i>	Includes var. <i>petiolaris</i>	prairie sunflower	AnnF	Wide/ Wide	Pres	X		Unc	MacLeod 207 (DINO)	1955	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Dinosaur National Monument, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range UT/CO	Park stat.	UT	CO	Pop. size	Source	Year doc.	Comments
	Utah	Colorado											
Compositae (Asteraceae)	<i>Hymenopappus filifolius</i> var. <i>cinereus</i>	<i>Hymenopappus filifolius</i> var. <i>cinereus</i>	<i>H. filifolius</i> var. <i>lugens</i> , <i>H. filifolius</i> var. <i>pauciflorus</i> , <i>H. filifolius</i> var. <i>megacephalus</i> , <i>H. filifolius</i> var. <i>tomentosus</i>	common hyalineherb	Perf	Wide/ Wide	Pres	X	X	Com	O'Kane 3024 (DINO)	1912	
Compositae (Asteraceae)	<i>Hymenopappus filifolius</i> var. <i>luteus</i>	<i>Hymenopappus filifolius</i> var. <i>luteus</i>		Wyoming hyalineherb	PerF	RegEn/ RegEn	Pres	X	X	Unc	Wolf & Dever 5023 (DINO)	1948	
Compositae (Asteraceae)	<i>Hymenoxys acaulis</i> var. <i>arizonica</i>	<i>Tetranneuris acaulis</i>	<i>T. acaulis</i> var. <i>arizonica</i>	Arizona hymenoxys	Perf	Wide/ Wide	Pres	X	X	Unc	Neely 3983 (DINO)	1955	
Compositae (Asteraceae)	<i>Hymenoxys acaulis</i> var. <i>caespitosa</i>	<i>Tetranneuris brevifolia</i>	<i>H. acaulis</i> var. <i>lanata</i> , <i>Tetranneuris acaulis</i> var. <i>caespitosa</i>	lanate hymenoxys	Perf	Wide/ Wide	Pres	X	X	Unc	O'Kane 2977 (DINO)	1987	
Compositae (Asteraceae)	<i>Hymenoxys lapidicola</i>	<i>Hymenoxys lapidicola</i>	Included in <i>H. torreyana</i> by Cronquist (1994) and <i>Tetranneuris torreyana</i> in <i>Flora of North America</i> (2006)	rock hymenoxys	PerF	LocEn/ NA	Pres	X		Rare	Naumann 353 (DINO)	1955	Type locality is Blue Mountain, Uintah Co., UT (Neese & Fulmer 11734 BRY). UT BLM: Sensitive, USFWS: 3C
Compositae (Asteraceae)	<i>Hymenoxys richardsonii</i> var. <i>richardsonii</i>	<i>Picradenia richardsonii</i> var. <i>richardsonii</i>		Colorado rubber-plant	PerF	Wide/ Wide	Pres	X	X	Unc	Neely 4252 (DINO)	1955	
Compositae (Asteraceae)	<i>Hymenoxys torreyana</i>	<i>Tetranneuris torreyana</i>		Torrey's hymenoxys	Perf	RegEn/ RegEn	Pres		X	Unc	O'Kane 2661 (DINO)	1971	
Compositae (Asteraceae)	<i>Iva axillaris</i>	<i>Iva axillaris</i>	<i>I. axillaris</i> var. <i>axillaris</i> , vars. not recognized in <i>Flora of North America</i> (2006).	poverty-weed	Perf	Wide/ Wide	Pres	X	X	Unc	Neely 4265b (DINO)	1948	
Compositae (Asteraceae)	<i>Lactuca serriola</i>	<i>Lactuca serriola</i>		prickly lettuce	AnnF	Intro/ Intro	Pres		X	Unc	Friedlander & Wathen 108 (DINO)	1983	Native to Europe
Compositae (Asteraceae)	<i>Lactuca tatarica</i> var. <i>pulchella</i>	<i>Lactuca tatarica</i> var. <i>pulchella</i>	<i>L. pulchella</i> , <i>L. oblongifolia</i> , <i>Mulgedium pulchellum</i>	blue lettuce	Perf	Wide/ Wide	Pres	X	X	Unc	MacLeod 215 (DINO)	1961	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Dinosaur National Monument, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range UT/CO	Park stat.	UT	CO	Pop. size	Source	Year doc.	Comments
	Utah	Colorado											
Compositae (Asteraceae)	<i>Lygodesmia grandiflora</i> var. <i>grandiflora</i>	<i>Lygodesmia grandiflora</i>		showy rush-pink	PerF	Wide/ Wide	Pres	X	X	Unc	Neely 4141 (DINO)	1912	
Compositae (Asteraceae)	<i>Machaeranthera canescens</i> var. <i>canescens</i>	<i>Machaeranthera canescens</i>	<i>Aster canescens</i> , <i>Dieteria canescens</i> var. <i>canescens</i>	hoary aster	PerF	Wide/ Wide	Pres	X	X	Unc	Bradley 5361 (DINO)	1931	
Compositae (Asteraceae)	<i>Machaeranthera grindelioides</i> var. <i>grindelioides</i>	<i>Machaeranthera grindelioides</i>	<i>Haplopappus nuttallii</i> , <i>Xanthisma grindelioides</i> var. <i>grindelioides</i>	gumweed aster	PerF	Wide/ Wide	Pres	X	X	Com	O'Kane & Neely 2967 (DINO)	1948	
Compositae (Asteraceae)	<i>Malacothrix sonchoides</i>	<i>Malacothrix sonchoides</i>		sowthistle desert-dandelion	AnnF	Wide/ Wide	Hist	X		?	Weber 5377 (DINO)	1935	
Compositae (Asteraceae)	<i>Malacothrix torreyi</i>	<i>Malacothrix torreyi</i>		Torrey's desert-dandelion	AnnF	Wide/ Wide	Hist	X		?	Graham 7762 (CM)	1912	Type locality is shores of Great Salt Lake, UT (Stansbury s.n. GH)
Compositae (Asteraceae)	<i>Microseris nutans</i>	<i>Microseris nutans</i>		nodding microseris	PerF	Wide/ Wide	Hist		X	?	Dever & Wolf 5295 (DINO)	1948	
Compositae (Asteraceae)	<i>Onopordum acanthium</i>	<i>Onopordum acanthium</i>		Scotch thistle	PerF	Intro/ Intro	Rep	X		?	Naumann (2002)	NA	Utah state noxious weed. CO state noxious weed (List B). Native to Eurasia
Compositae (Asteraceae)	<i>Petradoria pumila</i> var. <i>pumila</i>	<i>Petradoria pumila</i>	<i>Solidago petradoria</i>	rock-goldenrod	PerF	Wide/ Wide	Pres	X	X	Unc	Kelley 88-80 (DINO)	1948	
Compositae (Asteraceae)	<i>Platyschukhria integrifolia</i> var. <i>ourolepis</i>	<i>Platyschukhria integrifolia</i> var. <i>ourolepis</i>	<i>Bahia nudicaulis</i> var. <i>ourolepis</i>	Uintah bahia	PerF	LocEn/ NA	Pres	X		Unc	Bradley 5302 (1949)	1912	Type locality is Green River, Emery Co., UT (Jones 54821 POM)
Compositae (Asteraceae)	<i>Senecio canus</i>	<i>Packera cana</i>		woolly groundsel	PerF	Wide/ Wide	Pres		X	Unc	O'Kane 2760 (DINO)	1987	
Compositae (Asteraceae)	<i>Senecio integerrimus</i> var. <i>exaltatus</i>	<i>Senecio integerrimus</i>		western groundsel	PerF	Wide/ Wide	Pres	X	X	Unc	Neely 3962 (DINO)	1948	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Dinosaur National Monument, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range UT/CO	Park stat.	UT	CO	Pop. size	Source	Year doc.	Comments
	Utah	Colorado											
Compositae (Asteraceae)	<i>Senecio multilobatus</i>	<i>Packera multilobata</i>		basin groundsel	PerF	Wide/ Wide	Pres	X	X	Com	O'Kane & Neely 2657 (DINO)	1956	Type locality is Uinta River, Uintah Co., UT (Fremont 549 GH)
Compositae (Asteraceae)	<i>Senecio spartioides</i> var. <i>spartioides</i>	<i>Senecio spartioides</i>	Vars. not recognized in <i>Flora of North</i> <i>America</i> (2006)	broom groundsel	PerF	Wide/ Wide	Pres	X		Unc	Friedlander & Wathen 107 (DINO)	1983	
Compositae (Asteraceae)	<i>Senecio streptanthifolius</i> var. <i>streptanthifolius</i>	<i>Packera streptanthifolia</i>	<i>P. streptanthifolia</i> var. <i>streptanthifolia</i> . Vars. not recognized in <i>Flora of North</i> <i>America</i> (2006)	Rocky Mountain groundsel	PerF	Wide/ Wide	Pres	X	X	Unc	Wolf & Dever 5123 (DINO)	1948	
Compositae (Asteraceae)	<i>Senecio werneriiifolius</i> var. <i>werneriiifolius</i>	<i>Packera werneriiifolia</i>	<i>P. werneriiifolia</i> var. <i>werneriiifolia</i> . Vars. not recognized in <i>Flora of North</i> <i>America</i> (2006).	montane groundsel	PerF	Wide/ Wide	Pres	X	X	Unc	Neely 4385 (DINO)	1987	
Compositae (Asteraceae)	<i>Solidago canadensis</i> var. <i>salebrosa</i>	<i>Solidago canadensis</i>	<i>S. altissima</i> , <i>S. lepida</i> var. <i>salebrosa</i>	Canadian goldenrod	PerF	Wide/ Wide	Pres	X	X	Unc	Naumann 376 (DINO)	1948	
Compositae (Asteraceae)	<i>Solidago missouriensis</i>	<i>Solidago missouriensis</i>	<i>S. missouriensis</i> var. <i>missouriensis</i> , includes var. <i>extraria</i> . Vars. not recognized in <i>Flora</i> of <i>North America</i> (2006).	Missouri goldenrod	PerF	Wide/ Wide	Pres	X	X	Unc	MacLeod 45b (DINO)	1955	
Compositae (Asteraceae)	<i>Solidago nana</i>	<i>Solidago nana</i>		baby goldenrod	PerF	Wide/ Wide	Pres	X	X	Unc	Naumann 289 (DINO)	1955	
Compositae (Asteraceae)	<i>Solidago velutina</i>	<i>Solidago velutina</i>	<i>S. sparsiflora</i> , <i>S. velutina</i> var. <i>sparsiflora</i>	three-nerve goldenrod	PerF	Wide/ Wide	Pres	X	X	Unc	Holmgren et al. 440 (DINO)	1961	
Compositae (Asteraceae)	<i>Sonchus arvensis</i>	<i>Sonchus arvensis</i>	<i>S. arvensis</i> var. <i>arvensis</i>	field sow- thistle	PerF	Intro/ Intro	Rep	?	?	Rare	Dewey & Andersen (2006)	2005	Native to Europe. Report from Holmgren (1962) based on misidentified specimen of <i>S. uliginosus</i> .

Appendix A. Confirmed, historical, and reported vascular plant taxa of Dinosaur National Monument, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range UT/CO	Park stat.	UT	CO	Pop. size	Source	Year doc.	Comments
	Utah	Colorado											
Compositae (Asteraceae)	<i>Sonchus uliginosus</i>	<i>Sonchus uliginosus</i>	<i>S. arvensis</i> var. <i>glabrescens</i> , <i>S. arvensis</i> ssp. <i>uliginosus</i>	marsh sow-thistle	Perf	Intro/ Intro	Pres	X	X	Unc	Naumann 379 (DINO)	1955	Native to Europe
Compositae (Asteraceae)		<i>Sphaeromeria argentea</i>	<i>Tanacetum nuttallii</i>	silver chicken-sage	Perf	NA/ Periph	Rep	X	X	?	Goodrich and Neese (1986)	1983	
Compositae (Asteraceae)	<i>Stephanomeria exigua</i>	<i>Stephanomeria exigua</i>	<i>S. exigua</i> ssp. <i>exigua</i>	white-plume wire-lettuce	AnnF	Wide/ Wide	Hist	X	X	Unc	Welsh 448 (BRY)	1955	
Compositae (Asteraceae)	<i>Stephanomeria runcinata</i>	<i>Stephanomeria runcinata</i>		desert wirelettuce	Perf	Wide/ Sparse	Pres	X	X	Unc	Wolf & Dever 5013 (DINO)	1948	
Compositae (Asteraceae)	<i>Stephanomeria tenuifolia</i> var. <i>tenuifolia</i>	<i>Stephanomeria tenuifolia</i>	<i>S. minor</i> var. <i>minor</i> . Vars. not recognized in <i>Flora of North America</i> (2006)	slender wirelettuce	Perf	Wide/ Wide	Pres	X	X	Unc	Holmgren & Jensen 13958 (DINO)	1945	
Compositae (Asteraceae)	<i>Taraxacum laevigatum</i>	<i>Taraxacum laevigatum</i>	<i>T. erythrospermum</i>	red-seed dandelion	Perf	Intro/ Intro	Pres	X	X	Unc	Neely 3978 (DINO)	1987	Native to Eurasia
Compositae (Asteraceae)	<i>Taraxacum officinale</i>	<i>Taraxacum officinale</i>		common dandelion	Perf	Intro/ Intro	Pres	X	X	Unc	O'Kane 2751 (DINO)	1933	Native to Eurasia
Compositae (Asteraceae)	<i>Tetradymia canescens</i>	<i>Tetradymia canescens</i>		spineless horsebrush	Shrub	Wide/ Wide	Pres	X	X	Unc	Wolf & Dever 5155 (DINO)	1948	
Compositae (Asteraceae)	<i>Tetradymia nuttallii</i>	<i>Tetradymia nuttallii</i>		Nuttall's horsebrush	Shrub	RegEn/ RegEn	Hist	X	X	Unc	Wolf & Dever 5031 (DINO)	1948	
Compositae (Asteraceae)	<i>Tetradymia spinosa</i>	<i>Tetradymia spinosa</i>	<i>T. spinosa</i> var. <i>spinosa</i>	shortspine horsebrush	Shrub	Wide/ Wide	Pres	X	X	Unc	Neely 4157 (DINO)	1912	
Compositae (Asteraceae)	<i>Thelesperma megapotamicum</i>	<i>Thelesperma megapotamicum</i>		Hopi-tea	Perf	Periph/ Wide	Pres	X	X	Unc	Tilley s.n. (DINO)	2002	
Compositae (Asteraceae)	<i>Townsendia hookeri</i>	<i>Townsendia hookeri</i>		Hooker's townsendia	Perf	Wide/ Wide	Hist	X	X	?	Wolf & Dever 5193 (DINO)	1948	
Compositae (Asteraceae)	<i>Townsendia incana</i>	<i>Townsendia incana</i>		hoary townsendia	Perf	Wide/ Wide	Pres	X	X	Com	O'Kane & Neely 2659 (DINO)	1912	
Compositae (Asteraceae)	<i>Townsendia leptotes</i>	<i>Townsendia leptotes</i>		common townsendia	Perf	Wide/ Wide	Hist	X	X	Unc	Weber & Welsh 9625 (COLO)	1956	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Dinosaur National Monument, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range UT/CO	Park stat.	UT	CO	Pop. size	Source	Year doc.	Comments
	Utah	Colorado											
Compositae (Asteraceae)	<i>Townsendia mensana</i>	<i>Townsendia mensana</i>		plateau townsendia	Perf	LocEn/ LocEn	Pres	X	X	Unc	O'Kane 2742 (DINO)	1987	Type locality is 'near Duchesne', Duchesne Co., UT (Jones s.n. POM). USFWS: 3C. New to Colorado?
Compositae (Asteraceae)	<i>Townsendia strigosa</i> var. <i>strigosa</i>	<i>Townsendia strigosa</i>		hairy townsendia	Perf	RegEn/ RegEn	Hist	X		?	Weber 5334 (DINO)	1950	
Compositae (Asteraceae)	<i>Tragopogon dubius</i>	<i>Tragopogon dubius</i> var. <i>major</i>		yellow salsify	Perf	Intro/ Intro	Pres	X	X	Unc	Wolf 5291 (DINO)	1948	Native to Europe
Compositae (Asteraceae)	<i>Viguiera multiflora</i> var. <i>multiflora</i>	<i>Helioomeris multiflora</i> var. <i>multiflora</i>		showy goldeneye	Perf	Wide/ Wide	Pres	X	X	Unc	Friedlander & Wathen 101 (DINO)	1948	
Compositae (Asteraceae)	<i>Wyethia scabra</i>	<i>Wyethia scabra</i>	<i>Scabrethia scabra</i> ssp. <i>scabra</i>	rough mule's-ears	Perf	Wide/ Periph	Pres	X	X	Unc	O'Kane & Kuntz 3050 (DINO)	1949	
Compositae (Asteraceae)	<i>Xanthium strumarium</i> var. <i>canadense</i>	<i>Xanthium strumarium</i>	<i>X. pensylvanicum</i> , <i>X. saccharatum</i> , vars. not recognized in <i>Flora of North America</i> (2006).	rough cocklebur	AnnF	Wide/ Wide	Pres	X	X	Unc	Holmgren et al. 431 (DINO)	1949	
Compositae (Asteraceae)	<i>Xylorhiza venusta</i>	<i>Xylorhiza venusta</i>	<i>Machaeranthera venusta</i>	Cisco woodyaster	Perf	RegEn/ RegEn	Pres	X		Unc	Weish 178 (BRY)	1933	Type locality is Cisco, Grand Co., UT (Jones s.n. POM)
Convolvulaceae	<i>Convolvulus arvensis</i>	<i>Convolvulus arvensis</i>		field bindweed	Perf	Intro/ Intro	Pres	X		Unc	Reidel 147 (DINO)	1991	Utah state noxious weed, CO state noxious weed (List C). Native to Eurasia
Cornaceae	<i>Cornus sericea</i> var. <i>sericea</i>	<i>Swida sericea</i>	<i>C. stolonifera</i>	red-osier dogwood	Shrub	Wide/ Wide	Pres	X	X	Unc	Naumann 275 (DINO)	1935	
Crassulaceae	<i>Sedum lanceolatum</i>	<i>Amerosedum lanceolatum</i>	Includes ssp. <i>lanceolatum</i> & <i>subpalpinum</i>	lance-leaved stonecrop	Perf	Wide/ Wide	Pres	X	X	Com	Wolf & Dever 5120 (DINO)	1948	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Dinosaur National Monument, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range UT/CO	Park stat.	UT	CO	Pop. size	Source	Year doc.	Comments
	Utah	Colorado											
Crossosomataceae	<i>Glossopetalon spinescens</i> var. <i>meionandrum</i>	<i>Forsellesia meionandra</i>		spiny greasewebush	Shrub	RegEn/ RegEn	Pres	X	X	Unc	O'Kane 2675b (DINO)	1950	
Cruciferae (Brassicaceae)	<i>Alyssum desertorum</i>	<i>Alyssum desertorum</i>		desert madwort	AnnF	Intro/ Intro	Pres		X	Unc	O'Kane & Neely 2672 (DINO)	1983	Native to Europe
Cruciferae (Brassicaceae)	<i>Arabis demissa</i>	<i>Boecheira demissa</i> var. <i>demissa</i>	<i>B. demissa</i> var. <i>languida</i> , <i>B. oxylobula</i> , includes var. <i>russeola</i>	nodding rock cress	PerF	Wide/ Wide	Pres		X	Unc	Neely 3955 (DINO)	1948	Type locality of var. <i>russeola</i> is 18 miles N of Vernal, Uintah Co., UT (Rollins 1757 GH). USFWS: 3C
Cruciferae (Brassicaceae)	<i>Arabis drummondii</i>	<i>Boecheira drummondii</i>	<i>Boecheira angustifolia</i> , <i>B. stricta</i>	Drummond's rockcress	PerF	Wide/ Wide	Pres		X	Unc	Wolf & Dever 5153 (DINO)	1948	
Cruciferae (Brassicaceae)	<i>Arabis glabra</i>	<i>Turritis glabra</i>	Vars. not recognized in Intermountain Flora (2005)	tower-mustard	PerF	Wide/ Wide	Pres	X	X	Unc	Neely 4371 (DINO)	1956	
Cruciferae (Brassicaceae)	<i>Arabis hirsuta</i>	<i>Arabis hirsuta</i>	Includes vars. <i>glabrata</i> & <i>pyncocarpa</i>	hairy rockcress	PerF	Wide/ Wide	Pres		X	Unc	Neely 4322 (DINO)	1987	
Cruciferae (Brassicaceae)	<i>Arabis holboellii</i> var. <i>brachycarpa</i>	<i>Boecheira divaricarpa</i>	<i>A. confinis</i> , <i>A. x divaricarpa</i> , <i>B. brachycarpa</i>	spreadingpod rockcress	PerF	Wide/ Wide	Pres		X	Unc	Neely 4104 (DINO)	1987	Often considered a hybrid swarm involving <i>A. drummondii</i> with <i>A. holboellii</i> , <i>A. sparsiflora</i> , <i>A. pendulina</i> , & <i>A. perennans</i> .
Cruciferae (Brassicaceae)	<i>Arabis holboellii</i> var. <i>fendleri</i>	<i>Boecheira fendleri</i>	<i>B. fendleri</i> var. <i>spatifolia</i> , <i>A. fendleri</i> . Vars. not recognized in Holmgren et al. (2005)	Fendler's rockcress	PerF	Wide/ Wide	Pres		X	Unc	Wolf & Dever 5195 (DINO)	1948	
Cruciferae (Brassicaceae)	<i>Arabis holboellii</i> var. <i>secunda</i>	<i>Boecheira retrofracta</i>	<i>A. holboellii</i> var. <i>retrofracta</i> , <i>B. holboellii</i> var. <i>secunda</i>	Holboell's rockcress	PerF	Wide/ Wide	Pres	X	X	Unc	O'Kane & Reidel 2791 (DINO)	1933	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Dinosaur National Monument, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range UT/CO	Park stat.	UT	CO	Pop. size	Source	Year doc.	Comments
	Utah	Colorado											
Cruciferae (Brassicaceae)	<i>Arabis lignifera</i>	<i>Boechea lignifera</i>		Sweetwater rockcress	PerF	Sparse/Wide	Pres	X	X	Unc	Friedlander & Wathen 5 (DINO)	1983	
Cruciferae (Brassicaceae)	<i>Arabis nuttallii</i>	<i>Boechea nuttallii</i>		Nuttall's rockcress	PerF	Wide/Periph	Pres	X	X	Unc	Neely 4103 (DINO)	1987	First report for Colorado?
Cruciferae (Brassicaceae)	<i>Arabis perennans</i> var. <i>perennans</i>	<i>Boechea perennans</i>		perennial rockcress	PerF	Wide/Wide	Pres	X	X	Unc	Neely 4343 (DINO)	1933	
Cruciferae (Brassicaceae)	<i>Arabis pulchra</i> var. <i>pallens</i>	<i>Boechea pulchra</i> ssp. <i>pallens</i>		desert rockcress	PerF	Wide/Wide	Pres	X	X	Unc	Weber 5335 (DINO)	1912	Type locality is Westwater, Grand Co., UT (Jones s.n. US)
Cruciferae (Brassicaceae)	<i>Arabis selbyi</i>	<i>Boechea selbyi</i>	<i>B. selbyi</i> var. <i>selbyi</i>	Selby's rockcress	PerF	Wide/Wide	Pres	X	X	Unc	Neely 4036 (DINO)	1955	
Cruciferae (Brassicaceae)	<i>Arabis vivariensis</i>	<i>Boechea fernaldiana</i>	<i>A. fernaldiana</i>	park rockcress	PerF	LocEn/Disj	Pres	X	X	Unc	Naumann 163 (DINO)	1948	Type locality is Jones Hole National Fish Hatchery, Uintah Co., UT (Welsh & Neese 18341 BRY). UT BLM: Sensitive, CO BLM: Sensitive, USFWS: former C2 candidate
Cruciferae (Brassicaceae)	<i>Camelina microcarpa</i>	<i>Camelina microcarpa</i>		little-pod false flax	AnnF	Intro/Intro	Pres	X	X	Unc	Neely 4066 (DINO)	1987	Native to Asia
Cruciferae (Brassicaceae)	<i>Capsella bursa-pastoris</i>	<i>Capsella bursa-pastoris</i>		shepherd's-purse	AnnF	Intro/Intro	Hist	X	X	?	Harrington 2038 (GSU)	1946	Native to Europe
Cruciferae (Brassicaceae)	<i>Cardaria chalapensis</i>	<i>Cardaria chalapensis</i>	<i>C. draba</i> ssp. <i>chalapensis</i> , <i>C. draba</i> var. <i>repens</i>	orbicular whitetop	PerF	Intro/Intro	Pres	X	X	Unc	Richards DINO V-3 (DINO)	2003	UT state noxious weed. Native to Europe
Cruciferae (Brassicaceae)	<i>Cardaria pubescens</i>	<i>Cardaria pubescens</i>		hairy whitetop	PerF	Intro/Intro	Pres	X	X	Unc	Tilley s.n. (DINO)	2002	Native to Asia
Cruciferae (Brassicaceae)	<i>Caulanthus crassicaulis</i> var. <i>crassicaulis</i>	<i>Caulanthus crassicaulis</i>		spindlestem	PerF	Wide/Periph	Pres	X	X	Unc	Neely 4042 (DINO)	1952	Type locality is W shore Great Salt Lake, UT (Stansbury s.n. NY)

Appendix A. Confirmed, historical, and reported vascular plant taxa of Dinosaur National Monument, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range UT/CO	Park stat.	UT	CO	Pop. size	Source	Year doc.	Comments
	Utah	Colorado											
Cruciferae (Brassicaceae)	<i>Chorispora tenella</i>	<i>Chorispora tenella</i>		blue mustard	AnnF	Intro/ Intro	Pres	X	X	Unc	Neely 4065 (DINO)	1987	Native to Asia
Cruciferae (Brassicaceae)	<i>Descurainia californica</i>	<i>Descurainia californica</i>		California tansy-mustard	PerF	Wide/ Wide	Pres	X	X	Unc	Painter 413 (DINO)	1988	
Cruciferae (Brassicaceae)	<i>Descurainia incana</i> var. <i>sonnei</i>	<i>Descurainia incana</i> ssp. <i>incisa</i>	<i>D. richardsonii</i> var. <i>sonnei</i> , <i>D. incana</i> ssp. <i>incisa</i> , <i>D. incana</i> var. <i>incana</i>	mountain tansy-mustard	AnnF	Wide/ Wide	Pres	X	X	Unc	O'Kane & Roszczevski 3197 (DINO)	1948	
Cruciferae (Brassicaceae)	<i>Descurainia pinnata</i> var. <i>intermedia</i>	<i>Descurainia pinnata</i> ssp. <i>intermedia</i>	Included in <i>D. pinnata</i> var. <i>osmiarium</i> in Holmgren et al. (2005)	western tansy-mustard	AnnF	Wide/ Periph	Hist	X		?	Welsh 221 (BRY)	1955	
Cruciferae (Brassicaceae)	<i>Descurainia pinnata</i> var. <i>osmiarium</i>	<i>Descurainia pinnata</i> ssp. <i>halictorum</i>		western tansy-mustard	AnnF	Wide/ Sparse	Pres	X	X	Com	Painter 455 (DINO)	1912	
Cruciferae (Brassicaceae)	<i>Descurainia sophia</i>	<i>Descurainia sophia</i>		flixweed	AnnF	Intro/ Intro	Pres	X		Unc	Wolf & Dever 5226 (DINO)	1948	Native to Europe
Cruciferae (Brassicaceae)	<i>Draba nemorosa</i>	<i>Draba nemorosa</i>		woods draba	AnnF	Intro/ Intro	Pres	X	X	Unc	O'Kane 2703 (DINO)	1948	Native to Eurasia
Cruciferae (Brassicaceae)	<i>Draba oligosperma</i> var. <i>juniperina</i>	<i>Draba juniperina</i>	Included in <i>D. oligosperma</i> or <i>D. pectinipila</i> by some authors	Uinta draba	PerF	RegEn/ RegEn	Pres	X	X	Rare	Naumann 231 (DINO)	1956	USFWS; former C2 candidate
Cruciferae (Brassicaceae)	<i>Draba oligosperma</i> var. <i>oligosperma</i>	<i>Draba oligosperma</i>		few-seed whitlow-grass	PerF	Wide/ Sparse	Pres		X	Unc	O'Kane 2747 (DINO)	1987	
Cruciferae (Brassicaceae)	<i>Draba reptans</i>	<i>Draba reptans</i>		dwarf draba	AnnF	Wide/ Wide	Pres	X	X	Unc	O'Kane & Neely 2678 (DINO)	1955	
Cruciferae (Brassicaceae)	<i>Erysimum asperum</i> var. <i>elatum</i>	<i>Erysimum capitatum</i>	<i>E. capitatum</i> var. <i>capitatum</i> , <i>E. asperum</i> var. <i>arkansanum</i>	western wallflower	PerF	Wide/ Wide	Pres		X	Unc	Holmgren et al. 457 (DINO)	1961	
Cruciferae (Brassicaceae)	<i>Erysimum asperum</i> var. <i>purshii</i>	<i>Erysimum asperum</i>	<i>E. asperum</i> var. <i>arkansanum</i> , <i>E. capitatum</i> var. <i>purshii</i> . Included in var. <i>capitatum</i> in Holmgren et al. (2005)	sand dune wallflower	PerF	Wide/ Wide	Pres	X	X	Com	Wolf & Dever 5074 (DINO)	1912	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Dinosaur National Monument, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range UT/CO	Park stat.	UT	CO	Pop. size	Source	Year doc.	Comments
	Utah	Colorado											
Cruciferae (Brassicaceae)	<i>Erysimum inconspicuum</i>	<i>Erysimum inconspicuum</i>		shy wallflower	PerF	Wide/ Wide	Pres	X	X	Unc	Wolf & Dever 5138 (DINO)	1948	
Cruciferae (Brassicaceae)	<i>Hutchinsia procumbens</i>	<i>Hymenolobus procumbens</i>	<i>Hornungia procumbens</i>	ovalpurse	AnnF	Wide/ Sparse	Hist	X		?	Weber 5437 (DINO)	1950	
Cruciferae (Brassicaceae)	<i>Lepidium densiflorum</i> var. <i>ramosum</i>	<i>Lepidium densiflorum</i> var. <i>ramosum</i>	Includes var. <i>macrocarpum</i>	prairie pepperwort	AnnF	Wide/ Wide	Hist	X		?	Graham 7688 (CM)	1912	
Cruciferae (Brassicaceae)	<i>Lepidium lasiocarpum</i> var. <i>georginum</i>			St. George pepperwort	AnnF	Wide/ NA	Hist	X		Unc	Brotherson 809 (BRY)	1965	
Cruciferae (Brassicaceae)	<i>Lepidium latifolium</i>	<i>Cardaria latifolia</i>		broad-leaf pepperwort	PerF	Intro/ Intro	Pres	X	X	Unc	Naumann & Campbell 306 (DINO)	1983	UT state noxious weed, CO state noxious weed (List B). Native to Eurasia
Cruciferae (Brassicaceae)	<i>Lepidium montanum</i> var. <i>jonesii</i>	<i>Lepidium montanum</i> var. <i>jonesii</i>		Jones' pepperwort	PerF	Wide/ Wide	Pres	X	X	Com	Holmgren et al. 464 (DINO)	1912	
Cruciferae (Brassicaceae)	<i>Lepidium perfoliatum</i>	<i>Lepidium perfoliatum</i>		clasping pepperwort	AnnF	Intro/ Intro	Pres	X	X	Unc	O'Kane 2755 (DINO)	1987	Native to Europe
Cruciferae (Brassicaceae)	<i>Lepidium ramosissimum</i> var. <i>bourgeauanum</i>	<i>Lepidium ramosissimum</i> var. <i>bourgeauanum</i>	<i>L. bourgeauanum</i>	branched pepperwort	PerF	NA/ Periph	Pres	X	X	Unc	Neely 4050 (DINO)	1948	
Cruciferae (Brassicaceae)	<i>Malcolmia africana</i>	<i>Malcolmia africana</i>		African mustard	AnnF	Intro/ Intro	Pres	X	X	Unc	Neely 4216 (DINO)	1956	Native to Africa
Cruciferae (Brassicaceae)	<i>Nasturtium officinale</i>	<i>Nasturtium officinale</i>	<i>Rorippa nasturtium- aquaticum</i>	watercress	PerF	Intro/ Intro	Pres	X	X	Unc	Naumann 189 (DINO)	1949	Native to Europe
Cruciferae (Brassicaceae)	<i>Physaria acutifolia</i> var. <i>acutifolia</i>	<i>Physaria acutifolia</i>	<i>P. australis</i>	sharp-leaf twinpod	PerF	Wide/ Wide	Pres	X	X	Com	O'Kane & Neely 2666 (DINO)	1912	
Cruciferae (Brassicaceae)	<i>Physaria ludoviciana</i>	<i>Lesquerella ludoviciana</i>		silver bladderpod	PerF	Wide/ Wide	Pres	X	X	Unc	O'Kane 2771 (DINO)	1912	
Cruciferae (Brassicaceae)	<i>Physaria subumbellata</i>	<i>Lesquerella subumbellata</i>		Rollins' bladderpod	PerF	RegEn/ RegEn	Pres	X	X	Unc	O'Kane 2746 (DINO)	1948	Type locality is 18 miles N of Vernal, Uintah Co., UT (Rollins 1758 GH)

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Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range UT/CO	Park stat.	UT	CO	Pop. size	Source	Year doc.	Comments
	Utah	Colorado											
Cruciferae (Brassicaceae)	<i>Rorippa islandica</i> var. <i>glabra</i>	<i>Rorippa palustris</i> var. <i>glabra</i>	<i>R. palustris</i> var. <i>fernaldiana</i>	smooth yellowcress	Perf	Wide/ Sparse	Hist	X	X	?	Holmgren et al. 401 (DINO)	1961	
Cruciferae (Brassicaceae)	<i>Rorippa islandica</i> var. <i>hispida</i>	<i>Rorippa palustris</i> var. <i>hispida</i>		hairy yellowcress	Perf	Wide/ Wide	Hist	X		?	Wolf & Dever 5231 (DINO)	1948	
Cruciferae (Brassicaceae)	<i>Rorippa sinuata</i>	<i>Rorippa sinuata</i>		spreading yellowcress	Perf	Sparse/ Wide	Hst	X	X	?	Wolf & Dever 5224 (DINO)	1948	
Cruciferae (Brassicaceae)	<i>Schoenocrambe linifolia</i>	<i>Schoenocrambe linifolia</i>	<i>Sisymbrium linifolium</i>	flax-leaved plainsmustard	Perf	Wide/ Wide	Pres	X	X	Unc	Wolf & Dever 5196 (DINO)	1948	
Cruciferae (Brassicaceae)	<i>Sisymbrium altissimum</i>	<i>Sisymbrium altissimum</i>		tumble mustard	AnnF	Intro/ Intro	Pres	X	X	Unc	MacLeod 210 (DINO)	1961	Native to Europe
Cruciferae (Brassicaceae)	<i>Stanleya integrifolia</i>	<i>Stanleya pinnata</i> var. <i>integrifolia</i>		smoothleaf prince's-plume	Perf	Wide/ Wide	Pres	X	X	Unc	Brotherson 770 (BRY)	1948	
Cruciferae (Brassicaceae)	<i>Stanleya pinnata</i>	<i>Stanleya pinnata</i> var. <i>pinnata</i>		prince's-plume	Perf	Wide/ Wide	Pres	X	X	Unc	Weish 376 (BRY)	1912	
Cruciferae (Brassicaceae)	<i>Streptanthella longirostris</i>	<i>Streptanthella longirostris</i>		long-beak fiddle-mustard	AnnF	Wide/ Periph	Pres	X		Unc	Weber 5317 (DINO)	1950	Type locality is Stansbury Island, Tooele Co., UT (Watson 72 NY)
Cruciferae (Brassicaceae)	<i>Streptanthus cordatus</i>	<i>Streptanthus cordatus</i>	<i>S. cordatus</i> var. <i>cordatus</i>	heart-leaf jewelflower	Perf	Wide/ Wide	Pres	X	X	Unc	Neely 4041 (DINO)	1987	
Cruciferae (Brassicaceae)	<i>Thelypodopsis elegans</i>	<i>Thelypodopsis elegans</i>		elegant thelypod	Perf	RegEn/ RegEn	Pres	X	X	Unc	O'Kane 3027 (DINO)	1933	Type locality is Westwater, Grand Co., UT (Jones s.n. POM)
Cruciferae (Brassicaceae)	<i>Thelypodium integrifolium</i> var. <i>gracilipes</i>	<i>Thelypodium integrifolium</i>		Moab thelypod	Perf	RegEn/ RegEn	Pres	X	X	Unc	Naumann 375 (DINO)	1948	
Cruciferae (Brassicaceae)	<i>Thlaspi montanum</i> var. <i>montanum</i>	<i>Nocca montana</i>	<i>N. montana</i> var. <i>montana</i>	alpine pennycress	Perf	Wide/ Wide	Pres	X	X	Unc	Neely 4093 (DINO)	1987	
Cupressaceae	<i>Juniperus communis</i> var. <i>depressa</i>	<i>Juniperus communis</i> ssp. <i>alpina</i>		common juniper	Shrub	Wide/ Wide	Pres	X	X	Unc	Wolf & Dever 5167 (DINO)	1948	
Cupressaceae	<i>Juniperus osteosperma</i>	<i>Sabina osteosperma</i>		Utah juniper	Shrub	Wide/ Wide	Pres	X	X	Abun	Rodeck 4430 (DINO)	1933	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Dinosaur National Monument, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range UT/CO	Park stat.	UT	CO	Pop. size	Source	Year doc.	Comments
	Utah	Colorado											
Cupressaceae	<i>Juniperus scopulorum</i>	<i>Sabina scopulorum</i>		Rocky Mountain juniper	Tree	Wide/ Wide	Pres	X	X	Unc	Bradley 5341 (DINO)	1948	
Cyperaceae	<i>Carex aquatilis</i>	<i>Carex aquatilis</i>	<i>C. aquatilis</i> var. <i>aquatilis</i>	water sedge	PerG	Wide/ Wide	Rep	X	X	Rare	Fowler et al. (2007)	1993	Other reports from DINO herbarium are based on misidentified specimens of <i>C. nebrascensis</i> .
Cyperaceae	<i>Carex athrostachya</i>	<i>Carex athrostachya</i>		slender-beaked sedge	PerG	Wide/ Wide	Hist	X	X	?	Holmgren et al. 451 (DINO)	1961	
Cyperaceae	<i>Carex aurea</i>	<i>Carex aurea</i>	<i>C. garberi</i>	golden sedge	PerG	Wide/ Wide	Pres	X	X	Unc	O'Kane 2817 (DINO)	1987	
Cyperaceae	<i>Carex curatorum</i>	<i>Carex curatorum</i>	<i>C. scirpoidea</i> var. <i>curatorum</i>	Canyonlands sedge	PerG	RegEn/ NA	Pres	X	X	Rare	Naumann 340 (DINO)	1989	USFWS: 3C
Cyperaceae	<i>Carex duriuscula</i>	<i>Carex stenophylla</i> ssp. <i>eleocharis</i>	<i>C. eleocharis</i> , <i>C. stenophylla</i>	narrowleaf sedge	PerG	Wide/ Wide	Pres	X	X	Unc	Painter 486 (DINO)	1988	
Cyperaceae	<i>Carex geyseri</i>	<i>Carex geyseri</i>		elk sedge	PerG	Wide/ Wide	Pres	X	X	Unc	O'Kane 3189 (DINO)	1987	
Cyperaceae	<i>Carex hoodii</i>	<i>Carex hoodii</i>		Hood's sedge	PerG	Wide/ Wide	Pres	X	X	Unc	Wolf & Dever 5213 (DINO)	1948	
Cyperaceae	<i>Carex hystericina</i>	<i>Carex hystericina</i>	<i>C. hystericina</i>	bottlebrush sedge	PerG	Wide/ Wide	Pres	X	X	Unc	Holmgren & Jensen 13980 (DINO)	1961	
Cyperaceae	<i>Carex illota</i>	<i>Carex illota</i>		sheep sedge	PerG	Wide/ Wide	Pres	X	X	Unc	Harms s.n.	2005	
Cyperaceae	<i>Carex microptera</i>	<i>Carex microptera</i>	<i>C. microptera</i> var. <i>microptera</i> , <i>C. festivella</i> , <i>C. macloviana</i> var. <i>microptera</i> , includes <i>C. limnophila</i>	small-wing sedge	PerG	Wide/ Wide	Pres	X	X	Com	Neely 4383 (DINO)	1987	
Cyperaceae	<i>Carex nebrascensis</i>	<i>Carex nebrascensis</i>	<i>C. nebrascensis</i>	Nebraska sedge	PerG	Wide/ Wide	Pres	X	X	Com	O'Kane & Neely 3080 (DINO)	1987	
Cyperaceae	<i>Carex occidentalis</i>	<i>Carex occidentalis</i>		western sedge	PerG	Wide/ Wide	Pres	X	X	Unc	Neely 4368 (DINO)	1948	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Dinosaur National Monument, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range UT/CO	Park stat.	UT	CO	Pop. size	Source	Year doc.	Comments
	Utah	Colorado											
Cyperaceae	<i>Carex parryana</i>	<i>Carex parryana</i>	<i>C. parryana</i> var. <i>parryana</i> , includes UT specimens previously assigned to <i>C. specuicola</i>	Parry's sedge	PerG	Wide/ Wide	Pres	X	X	Unc	Naumann 323 (DINO)	1988	<i>C. specuicola</i> is listed as Threatened by USFWS
Cyperaceae	<i>Carex pellita</i>	<i>Carex lanuginosa</i>		woolly sedge	PerG	Wide/ Wide	Pres	X	X	Unc	O'Kane 2754 (DINO)	1987	
Cyperaceae	<i>Carex praegracilis</i>	<i>Carex praegracilis</i>		blackcreeper sedge	PerG	Wide/ Wide	Pres	X	X	Unc	Painter 407 (DINO)	1988	
Cyperaceae	<i>Carex rossii</i>	<i>Carex rossii</i>	<i>C. deflexa</i> var. <i>boottii</i> , <i>C. brevipes</i> , <i>C. pityophila</i>	Ross' sedge	PerG	Wide/ Wide	Pres	X	X	Com	O'Kane 2694 (DINO)	1987	
Cyperaceae	<i>Carex taхоensis</i>	<i>Carex xerantica</i>		dryland sedge	PerG	Wide/ Wide	Pres	X	X	Unc	Neely 4369 (DINO)	1987	
Cyperaceae	<i>Carex vallicola</i>	<i>Carex vallicola</i>		valley sedge	PerG	Wide/ Wide	Pres	X	X	Unc	Neely 4085 (DINO)	1948	
Cyperaceae	<i>Cyperus squarrosus</i>	<i>Cyperus aristatus</i>		bearded flat- sedge	AnnG	Wide/ Wide	Pres	X	X	Unc	Holmgren et al. 436 (DINO)	1961	
Cyperaceae	<i>Eleocharis palustris</i>	<i>Eleocharis macrostachya</i>	Includes <i>E. erythropoda</i> & <i>E. uniglumis</i>	common spikerush	PerG	Wide/ Wide	Pres	X	X	Com	Dever & Wolf 5266 (DINO)	1946	
Cyperaceae	<i>Eleocharis quinqueflora</i>	<i>Eleocharis quinqueflora</i>	<i>E. pauciflora</i> , includes <i>E. suksdorfiana</i>	few-flower spikerush	PerG	Wide/ Wide	Pres	X	X	Unc	O'Kane & Neely 3081 (DINO)	1987	
Cyperaceae	<i>Scirpus acutus</i>	<i>Schoenoplectus lacustris</i> ssp. <i>acutus</i>	<i>Schoenoplectus acutus</i> var. <i>occidentalis</i> , <i>Schoenoplectus acutus</i> var. <i>acutus</i>	hardstem bulrush	PerG	Wide/ Wide	Pres	X	X	Unc	Welsh 348 (DINO)	1955	
Cyperaceae	<i>Scirpus maritimus</i>	<i>Bolboschoenus maritimus</i> ssp. <i>paludosus</i>	<i>Scirpus maritimus</i> var. <i>paludosus</i> , <i>Schoenoplectus maritimus</i>	alkali bulrush	PerG	Wide/ Wide	Pres	X	X	Unc	Holmgren et al. 449 (DINO)	1961	
Cyperaceae	<i>Scirpus pallidus</i>	<i>Scirpus pallidus</i>	<i>S. atrovirens</i> var. <i>pallidus</i>	pale bulrush	PerG	Sparse/ Wide	Pres	X	X	Com	Holmgren & Jensen 13977 (DINO)	1934	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Dinosaur National Monument, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range UT/CO	Park stat.	UT	CO	Pop. size	Source	Year doc.	Comments
	Utah	Colorado											
Cyperaceae	<i>Scirpus pungens</i> var. <i>longispicatus</i>	<i>Schoenoplectus</i> <i>pungens</i>	<i>Scirpus pungens</i> var. <i>polyphyllus</i> , <i>Schoenoplectus</i> <i>pungens</i> var. <i>longispicatus</i> , <i>Schoenoplectus</i> <i>pungens</i> var. <i>polyphyllus</i> , <i>Schoenoplectus</i> <i>pungens</i> var. <i>pungens</i>	three-square bulrush	PerG	Wide/ Wide	Pres	X	X	Com	O'Kane & Kuntz 3040 (DINO)	1912	
Cyperaceae	<i>Scirpus validus</i>	<i>Schoenoplectus</i> <i>lacustris</i> ssp. <i>validus</i>	<i>Schoenoplectus</i> <i>tabernaemontani</i> , <i>Schoenoplectus</i> <i>lacustris</i> ssp. <i>validus</i>	soft-stem bulrush	PerG	Wide/ Wide	Pres	X	X	Unc	O'Kane & Kuntz 3041 (DINO)	1987	
Dipsacaceae	<i>Dipsacus sylvestris</i>	<i>Dipsacus fullonum</i>	<i>D. fullonum</i> var. <i>sylvestris</i>	teasel	PerF	Intro/ Intro	Rep	?	?	Unc	Dewey & Andersen (2006)	2005	Native to Europe
Elaeagnaceae	<i>Elaeagnus</i> <i>angustifolia</i>	<i>Elaeagnus</i> <i>angustifolia</i>		Russian olive	Tree	Intro/ Intro	Rep	X		?	Naumann (2002)	NA	CO state noxious weed (List B). Native to Europe.
Elaeagnaceae	<i>Shepherdia</i> <i>argentea</i>	<i>Shepherdia</i> <i>argentea</i>	<i>Lepargyrea argentea</i> silver buffaloberry		Shrub	Wide/ Wide	Hist	X	X	?	Welsh 371 (BRY)	1931	
Ephedraceae	<i>Ephedra torreyana</i>	<i>Ephedra torreyana</i>		Torrey's ephedra	Shrub	Wide/ Wide	Pres	X		Unc	Wolf & Dever 5045 (DINO)	1948	
Ephedraceae	<i>Ephedra viridis</i> var. <i>viridis</i>	<i>Ephedra viridis</i>		green ephedra	Shrub	Wide/ Wide	Pres	X	X	Com	Bradley 5309 (DINO)	1912	
Ephedraceae	<i>Ephedra viridis</i> var. <i>viscida</i>	<i>Ephedra cutleri</i>		Cutler's ephedra	Shrub	RegEn/ RegEn	Hist	X		?	Wolf & Dever 5006 (DINO)	1948	
Equisetaceae	<i>Equisetum arvense</i>	<i>Equisetum arvense</i>		field horsetail	Fern	Wide/ Wide	Pres	X	X	Unc	Painter 409 (DINO)	1948	
Equisetaceae	<i>Equisetum hyemale</i> var. <i>affine</i>	<i>Hippochaete</i> <i>hyemalis</i> ssp. <i>affinis</i>	<i>E. praealtum</i>	tall scouring- rush	Fern	Wide/ Wide	Pres	X	X	Unc	Naumann 141 (DINO)	1948	
Equisetaceae	<i>Equisetum</i> <i>laevigatum</i>	<i>Hippochaete</i> <i>laevigata</i>	<i>E. kansanum</i>	smooth scouring-rush	Fern	Wide/ Wide	Pres	X	X	Unc	O'Kane 3155 (DINO)	1912	
Equisetaceae	<i>Equisetum x ferrissii</i>	<i>Hippochaete x</i> <i>ferrissii</i>	Hybrid of <i>E. hyemale</i> x <i>E. laevigatum</i>	Ferris' scouring-rush	Fern	Sparse/ Sparse	Hist	X	X	?	Wolf 5278 (DINO)	1948	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Dinosaur National Monument, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range UT/CO	Park stat.	UT	CO	Pop. size	Source	Year doc.	Comments
	Utah	Colorado											
Equisetaceae	<i>Equisetum x trachyodon</i>	<i>Hippochaete x mackaii</i>	<i>E. x mackaii</i> . Hybrid between <i>E. hyemale</i> x <i>E. variegatum</i>	hybrid scouring-rush	Fern	Sparse/ Periph	Hist	X	X	?	Holmgren & Jensen 13968 (DINO)	1961	First report for Colorado?
Ericaceae	<i>Arctostaphylos patula</i>	<i>Arctostaphylos patula</i> ssp. <i>platyphylla</i>		greenleaf manzanita	Shrub	Wide/ Wide	Pres	X	X	Unc	Neely 4239 (DINO)	1956	
Euphorbiaceae	<i>Chamaesyce fendleri</i>	<i>Chamaesyce fendleri</i>		Fendler's spurge	PerF	Wide/ Wide	Pres	X	X	Unc	Wolf & Dever 5002 (DINO)	1912	
Euphorbiaceae	<i>Chamaesyce glyptosperma</i>	<i>Chamaesyce glyptosperma</i>		ridge-seeded spurge	AnnF	Wide/ Wide	Pres	X	X	Unc	Tilley 2868 (DINO)	2002	
Euphorbiaceae	<i>Chamaesyce serpyllifolia</i>	<i>Chamaesyce serpyllifolia</i>		thyme-leaved spurge	AnnF	Wide/ Wide	Pres	X	X	Unc	Holmgren & Jensen 425 (DINO)	1961	
Euphorbiaceae	<i>Euphorbia brachycera</i>	<i>Tithymalus brachyceras</i>		shortthorn spurge	PerF	Wide/ Wide	Pres	X	X	Unc	Wolf & Dever 5284 (DINO)	1935	
Euphorbiaceae	<i>Euphorbia esula</i>	<i>Tithymalus esula</i>		leafy spurge	PerF	Intro/ Intro	Rep	X		NA	Naumann (2002)	NA	CO state noxious weed (List B), UT state noxious weed. Native to Europe
Fumariaceae	<i>Corydalis aurea</i> var. <i>occidentalis</i>	<i>Corydalis curvisiliqua</i> ssp. <i>occidentalis</i>		golden corydalis	PerF	Wide/ Wide	Pres		X	Unc	MacLeod 482 (COLO)	1966	
Gentianaceae	<i>Centaureum exaltatum</i>	<i>Centaureum exaltatum</i>		Great Basin centaury	PerF	Wide/ Periph	Rep	X		?	Naumann (2002)	NA	
Gentianaceae	<i>Gentiana affinis</i> var. <i>affinis</i>	<i>Pneumonanthe affinis</i>		Rocky Mountain gentian	PerF	Wide/ Wide	Rep	X	X	?	Holmgren (1962)	NA	
Geraniaceae	<i>Geranium viscosissimum</i> var. <i>incisum</i>	<i>Geranium viscosissimum</i> var. <i>nervosum</i>		sticky crane's-bill	PerF	Wide/ Wide	Pres	X	X	Unc	Wolf & Dever 5209 (DINO)	1948	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Dinosaur National Monument, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range UT/CO	Park stat.	UT	CO	Pop. size	Source	Year doc.	Comments
	Utah	Colorado											
Gramineae (Poaceae)	<i>Agropyron cristatum</i>	<i>Agropyron cristatum</i> ssp. <i>cristatum</i>	<i>A. cristatum</i> ssp. <i>pectinatum</i> , <i>A. pectinatum</i> , <i>A. sibiricum</i> , <i>A. desertorum</i> , <i>A. fragile</i> , <i>A. mongolicum</i>	crested wheatgrass	PerG	Intro/ Intro	Pres	X	X	Unc	Reidel 92 (DINO)	1912	Native to Eurasia
Gramineae (Poaceae)	<i>Agrostis exarata</i>	<i>Agrostis exarata</i>	spike bentgrass		PerG	Wide/ Wide	Hist	X	X	?	Holmgren et al. 455 (DINO)	1961	
Gramineae (Poaceae)	<i>Agrostis scabra</i>	<i>Agrostis scabra</i>	<i>A. hiemalis</i> , <i>A. geminata</i>	ticklegrass	PerG	Wide/ Wide	Rep			Rare	Northern Colorado Plateau Network (in ed.)	2002	
Gramineae (Poaceae)	<i>Agrostis stolonifera</i>	<i>Agrostis stolonifera</i>	<i>A. alba</i> , <i>A. gigantea</i>	redtop	PerG	Intro/ Intro	Pres	X	X	Unc	Holmgren & Jensen 13970 (DINO)	1955	Native to Eurasia and Africa
Gramineae (Poaceae)	<i>Agrostis variabilis</i>	<i>Agrostis variabilis</i>		mountain bentgrass	PerG	Wide/ Wide	Rep	X	X	Rare	Northern Colorado Plateau Network (in ed.)	2002	
Gramineae (Poaceae)	<i>Alopecurus aequalis</i>	<i>Alopecurus aequalis</i>	<i>A. aequalis</i> var. <i>aequalis</i>	shortawn foxtail	PerG	Wide/ Wide	Pres	X	X	Unc	Harrington 1952 (CSU)	1946	
Gramineae (Poaceae)	<i>Alopecurus pratensis</i>	<i>Alopecurus pratensis</i>		meadow foxtail	PerG	Intro/ Intro	Pres	X	X	Unc	Tilley s.n. (DINO)	2002	Native to Eurasia
Gramineae (Poaceae)	<i>Andropogon gerardii</i> var. <i>gerardii</i>	<i>Andropogon gerardii</i>		big bluestem	PerG	Wide/ Wide	Pres	X	X	Unc	Naumann 287 (DINO)	1988	
Gramineae (Poaceae)	<i>Aristida purpurea</i>	<i>Aristida purpurea</i> var. <i>longiseta</i>	<i>A. glauca</i> , <i>A. purpurea</i> var. <i>fendleriana</i> , <i>A. fendleriana</i>	purple three-awn	PerG	Wide/ Wide	Pres	X	X	Unc	Wolf & Dever 5032 (DINO)	1948	
Gramineae (Poaceae)	<i>Beckmannia syzigachne</i>	<i>Beckmannia syzigachne</i>		American sloughgrass	AnnG	Wide/ Wide	Pres	X	X	Unc	Holmgren & Jensen 13973 (DINO)	1955	
Gramineae (Poaceae)	<i>Bouteloua gracilis</i>	<i>Chondrosium gracile</i>		blue grama	PerG	Wide/ Wide	Rep	X	X	Unc	NCFN (in ed.)	2002	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Dinosaur National Monument, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range UT/CO	Park stat.	UT	CO	Pop. size	Source	Year doc.	Comments
	Utah	Colorado											
Gramineae (Poaceae)	<i>Bromus anomalus</i>	<i>Bromopsis porteri</i>	<i>Bromus frondosus</i> . Material ascribed to <i>B. anomalus</i> in regional floras is mostly <i>B. porteri</i> or <i>B. lanatipes</i> .	nodding brome	PerG	Wide/ Wide	Pres	X	X	Unc	Neely 4423 (DINO)	1987	
Gramineae (Poaceae)	<i>Bromus carinatus</i>	<i>Ceratochloa carinata</i>	<i>B. marginatus</i> , <i>B. polyanthus</i>	mountain brome	PerG	Wide/ Wide	Pres	X	X	Unc	Neely 4365 (DINO)	1987	
Gramineae (Poaceae)	<i>Bromus inermis</i>	<i>Bromopsis inermis</i>		smooth brome	PerG	Intro/ Intro	Pres	X	X	Unc	O'Kane & Kuntz 3042 (DINO)	1956	Native to Eurasia
Gramineae (Poaceae)	<i>Bromus japonicus</i>	<i>Bromus japonicus</i>	<i>B. arvensis</i> , includes <i>B. commutatus</i>	Japanese chess	AnnG	Intro/ Intro	Pres	X	X	Unc	Reidel 103 (DINO)	1991	Native to Eurasia
Gramineae (Poaceae)	<i>Bromus tectorum</i>	<i>Anisantha tectorum</i>		cheatgrass	AnnG	Intro/ Intro	Pres	X	X	Unc	Dever & Wolf 5267 (DINO)	1935	CO state noxious weed (List C). Native to Eurasia
Gramineae (Poaceae)	<i>Calamagrostis scopulorum</i>	<i>Calamagrostis scopulorum</i>		Jones' reedgrass	PerG	Wide/ Wide	Pres	X	X	Unc	Holmgren et al. 468 (DINO)	1961	Type locality is Springdale, Washington Co., UT (Jones Co., UT (Jones 6075 POM))
Gramineae (Poaceae)	<i>Calamagrostis stricta</i>	<i>Calamagrostis stricta</i>	<i>C. neglecta</i>	slimstem reedgrass	PerG	Wide/ Wide	Hist	X	X	?	Holmgren & Jensen 13965 (DINO)	1961	
Gramineae (Poaceae)	<i>Catabrosa aquatica</i>	<i>Catabrosa aquatica</i>		brookgrass	PerG	Wide/ Wide	Pres	X	X	Unc	Naumann 236 (DINO)	1988	
Gramineae (Poaceae)	<i>Dactylis glomerata</i>	<i>Dactylis glomerata</i>		orchard grass	PerG	Intro/ Intro	Pres	X	X	Unc	Naumann 337 (DINO)	1989	Native to Eurasia and Africa
Gramineae (Poaceae)	<i>Danthonia californica</i>	<i>Danthonia californica</i>		California oatgrass	PerG	Wide/ Sparse	Pres	X	X	Unc	Neese & Snyder 11894a (BRY)	1982	
Gramineae (Poaceae)	<i>Danthonia unispicata</i>	<i>Danthonia unispicata</i>		oneside oatgrass	PerG	Wide/ Periph	Pres	X	X	Unc	O'Kane 3086 (DINO)	1987	
Gramineae (Poaceae)	<i>Distichlis spicata</i>	<i>Distichlis stricta</i>	<i>D. spicata</i> var. <i>stricta</i>	desert saltgrass	PerG	Wide/ Wide	Pres	X	X	Unc	Wolf & Dever 5255 (DINO)	1946	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Dinosaur National Monument, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range UT/CO	Park stat.	UT	CO	Pop. size	Source	Year doc.	Comments
	Utah	Colorado											
Gramineae (Poaceae)	<i>Elymus canadensis</i>	<i>Elymus canadensis</i>	<i>E. canadensis</i> var. <i>canadensis</i>	Canada wildrye	PerG	Wide/ Wide	Pres	X	X	Unc	Holmgren et al. 463 (DINO)	1948	
Gramineae (Poaceae)	<i>Elymus cinereus</i>	<i>Leymus cinereus</i>		Great Basin wildrye	PerG	Wide/ Wide	Pres	X	X	Com	O'Kane & Kuntz 3039 (DINO)	1935	
Gramineae (Poaceae)	<i>Elymus elymoides</i>	<i>Elymus elymoides</i>	<i>E. elymoides</i> var. <i>elymoides</i> , <i>Sitanion hystrix</i>	squirreltail	PerG	Wide/ Wide	Pres	X	X	Com	Neely 4428 (DINO)	1935	
Gramineae (Poaceae)	<i>Elymus glaucus</i>	<i>Elymus glaucus</i>	<i>E. glaucus</i> var. <i>glaucus</i>	blue wildrye	PerG	Wide/ Wide	Pres	X	X	Unc	Harrington 8727 (CSU)	1957	
Gramineae (Poaceae)	<i>Elymus lanceolatus</i>	<i>Elymus lanceolatus</i>	<i>E. lanceolatus</i> var. <i>lanceolatus</i> , <i>Agropyron dasystachyum</i> var. <i>dasystachyum</i> , includes var. <i>riparium</i> , <i>A. albicans</i> var. <i>albicans</i> , <i>A. albicans</i> var. <i>griffithsii</i>	thickspike wheatgrass	PerG	Wide/ Wide	Pres	X	X	Unc	Wolf & Dever 5127 (DINO)	1948	
Gramineae (Poaceae)	<i>Elymus repens</i>	<i>Elytrigia repens</i>	<i>Agropyron repens</i>	quackgrass	PerG	Intro/ Intro	Pres	X		Unc	Reidel 100 (DINO)	1991	UT state noxious weed, CO state noxious weed (List B). Native to Eurasia
Gramineae (Poaceae)	<i>Elymus salinus</i>	<i>Leymus salina</i>	<i>E. salina</i> , <i>Leymus salinus</i> , <i>L. ambiguus</i> , includes ssp. <i>salmonis</i>	Salina wildrye	PerG	Wide/ Wide	Pres	X	X	Unc	O'Kane 2767 (DINO)	1987	Type locality is top of Salina Pass, Sevier Co., UT (Jones 5447 POM)
Gramineae (Poaceae)	<i>Elymus smithii</i>	<i>Pascopyrum smithii</i>	<i>Agropyron smithii</i> , includes vars. <i>smithii</i> & <i>palmeri</i>	western wheatgrass	PerG	Wide/ Wide	Pres	X	X	Unc	MacLeod 209 (DINO)	1948	
Gramineae (Poaceae)	<i>Elymus spicatus</i>	<i>Pseudoroegneria spicata</i>	<i>Agropyron spicatum</i> , includes ssp. <i>inermis</i> & <i>spicata</i>	bluebunch wheatgrass	PerG	Wide/ Wide	Pres	X	X	Com	O'Kane & Neely 2970 (DINO)	1955	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Dinosaur National Monument, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range UT/CO	Park stat.	UT	CO	Pop. size	Source	Year doc.	Comments
	Utah	Colorado											
Gramineae (Poaceae)	<i>Elymus trachycaulus</i>	<i>Elymus trachycaulus</i>	<i>E. trachycaulus</i> , var. <i>trachycaulus</i> , <i>E. alaskanus</i> ssp. <i>latiglumis</i> , <i>Agropyron caninum</i> , <i>A. subsecundum</i> , <i>A. trachycaulum</i> , <i>A.</i> <i>latiglume</i>	slender wheatgrass	PerG	Wide/ Wide	Pres	X	X	Unc	O'Kane 3144 (DINO)	1934	
Gramineae (Poaceae)	<i>Eragrostis pectinacea</i>	<i>Eragrostis pectinacea</i>	<i>E. diffusa</i>	tufted lovegrass	AnnG	Wide/ Wide	Hist		X	?	Holmgren et al. 434 (DINO)	1961	
Gramineae (Poaceae)	<i>Eremopyrum triticeum</i>	<i>Eremopyrum triticeum</i>	<i>Agropyron triticeum</i>	annual wheatgrass	AnnG	Intro/ Intro	Pres	X		?	Neese & Trent 1 1804 (BRY)	1982	Native to Asia
Gramineae (Poaceae)	<i>Erioneuron pilosum</i>	<i>Erioneuron pilosum</i>		hairy tridens	PerG	Wide/ Wide	Pres	X	X	Unc	Naumann 185 (DINO)	1988	
Gramineae (Poaceae)	<i>Festuca arundinacea</i>	<i>Festuca arundinacea</i>	<i>Lolium arundinaceum</i> , <i>Schedonorus phoenix</i> , <i>S.</i> <i>arundinaceus</i>	tall fescue	PerG	Intro/ Intro	Pres	X		Unc	Reidel 62 (DINO)	1991	Native to Europe
Gramineae (Poaceae)	<i>Festuca octoflora</i>	<i>Vulpia octoflora</i>	Includes vars. <i>glauca</i> , <i>hirtella</i> , & <i>octoflora</i>	six-weeks fescue	AnnG	Wide/ Wide	Pres	X	X	Unc	Neely & O'Kane 3919 (DINO)	1955	
Gramineae (Poaceae)	<i>Festuca ovina</i> var. <i>ingrata</i>	<i>Festuca idahoensis</i>		Idaho fescue	PerG	Wide/ Wide	Pres		X	Com	O'Kane & Roszczewski 3214 (DINO)	1945	
Gramineae (Poaceae)	<i>Festuca ovina</i> var. <i>saximontana</i>	<i>Festuca saximontana</i>	<i>F. ovina</i> var. <i>rydbergii</i>	Rocky Mountain fescue	PerG	Wide/ Wide	Pres		X	Unc	Neely 4167 (DINO)	1948	
Gramineae (Poaceae)	<i>Festuca pratensis</i>	<i>Festuca pratensis</i>	<i>Lolium pratense</i> , <i>Schedonorus pratensis</i>	meadow fescue	PerG	Intro/ Intro	Pres	X		Unc	Naumann 336 (DINO)	1989	Native to Eurasia
Gramineae (Poaceae)	<i>Glyceria striata</i>	<i>Glyceria striata</i>	Includes <i>G. elata</i>	fowl mannagrass	PerG	Wide/ Wide	Pres		X	Unc	Neely 4213 (DINO)	1967	
Gramineae (Poaceae)	<i>Hilaria jamesii</i>	<i>Hilaria jamesii</i>	<i>Pleuraphis jamesii</i>	galleta	PerG	Wide/ Wide	Pres	X	X	Com	Wolf & Dever 5098 (DINO)	1912	
Gramineae (Poaceae)	<i>Hordeum brachyantherum</i>	<i>Critesion brachyantherum</i>		meadow barley	PerG	Wide/ Wide	Pres		X	Unc	Neely 4378 (DINO)	1987	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Dinosaur National Monument, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range UT/CO	Park stat.	UT	CO	Pop. size	Source	Year doc.	Comments
	Utah	Colorado											
Gramineae (Poaceae)	<i>Hordeum jubatum</i>	<i>Critesion jubatum</i>		foxtail barley	PerG	Wide/ Wide	Pres	X	X	Unc	Wolf & Dever 5269 (DINO)	1948	
Gramineae (Poaceae)	<i>Koeleria macrantha</i>	<i>Koeleria macrantha</i>	<i>K. cristata</i> , <i>K. pyramidata</i> , <i>K. nitida</i>	Junegrass	PerG	Wide/ Wide	Pres		X	Com	Wolf & Dever 5181 (DINO)	1948	
Gramineae (Poaceae)	<i>Leucopoa kingii</i>	<i>Leucopoa kingii</i>	<i>Hesperochloa kingii</i>	spike fescue	PerG	Wide/ Wide	Pres		X	Unc	Neely 4087 (DINO)	1948	
Gramineae (Poaceae)	<i>Melica bulbosa</i>	<i>Bromelica bulbosa</i>		oniongrass	PerG	Wide/ Wide	Pres		X	Unc	Neely 4084 (DINO)	1946	
Gramineae (Poaceae)	<i>Muhlenbergia andina</i>	<i>Muhlenbergia andina</i>		foxtail muhly	PerG	Wide/ Wide	Pres	X	X	Unc	Reidel 120 (DINO)	1991	
Gramineae (Poaceae)	<i>Muhlenbergia asperifolia</i>	<i>Muhlenbergia asperifolia</i>		scratchgrass	PerG	Wide/ Wide	Pres	X	X	Unc	Holmgren & Jensen 13967 (DINO)	1961	
Gramineae (Poaceae)	<i>Muhlenbergia pungens</i>	<i>Muhlenbergia pungens</i>		sandhill muhly	PerG	Wide/ Wide	Pres		X	Unc	Weber & Salamun 12652 (COLO)	1965	
Gramineae (Poaceae)	<i>Muhlenbergia racemosa</i>	<i>Muhlenbergia racemosa</i>		green muhly	PerG	Wide/ Wide	Hist		X	?	Holmgren et al. 467 (DINO)	1961	
Gramineae (Poaceae)	<i>Muhlenbergia richardsonis</i>	<i>Muhlenbergia richardsonis</i>		mat muhly	PerG	Wide/ Wide	Hist		X	?	Harrington 1980 (CSU)	1946	
Gramineae (Poaceae)	<i>Muhlenbergia thurberi</i>	<i>Muhlenbergia thurberi</i>	Includes <i>M. curtifolia</i>	Thurber's muhly	PerG	Wide/ Wide	Pres	X	X	Unc	Holmgren et al. 441 (DINO)	1961	
Gramineae (Poaceae)	<i>Oryzopsis micrantha</i>	<i>Piptatherum micranthum</i>		littleseed ricegrass	PerG	Wide/ Wide	Pres	X	X	Unc	Holmgren & Jensen 13962 (DINO)	1959	
Gramineae (Poaceae)	<i>Panicum acuminatum</i>	<i>Dichanthelium acuminatum</i>	<i>P. occidentale</i> , <i>P. tennesseense</i> , <i>P. huachucae</i> , <i>D. acuminatum</i> ssp. <i>fasciculatum</i> , <i>D. lanuginosum</i> var. <i>fasciculatum</i>	bundle panicgrass	PerG	Wide/ Sparse	Pres		X	Unc	Holmgren et al. 473 (DINO)	1961	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Dinosaur National Monument, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range UT/CO	Park stat.	UT	CO	Pop. size	Source	Year doc.	Comments
	Utah	Colorado											
Gramineae (Poaceae)	<i>Panicum capillare</i>	<i>Panicum capillare</i> var. <i>occidentale</i>		witchgrass	AnnG	Wide/ Wide	Pres	X	X	Unc	Holmgren et al. 410 (DINO)	1961	
Gramineae (Poaceae)	<i>Phleum pratense</i>	<i>Phleum pratense</i>		timothy	PerG	Intro/ Intro	Pres	X	X	Unc	Harms 193 (DINO)	2005	Native to Eurasia
Gramineae (Poaceae)	<i>Phragmites australis</i>	<i>Phragmites australis</i>	<i>P. communis</i>	common reed	PerG	Wide/ Wide	Pres	X	X	Unc	Dever & Wolf 5081 (DINO)	1933	
Gramineae (Poaceae)	<i>Poa bulbosa</i>	<i>Poa bulbosa</i>		bulbous bluegrass	PerG	Intro/ Intro	Pres	X	X	Unc	O'Kane 2983 (DINO)	1987	Native to Eurasia and Africa
Gramineae (Poaceae)	<i>Poa compressa</i>	<i>Poa compressa</i>		Canada bluegrass	PerG	Intro/ Intro	Pres	X	X	Unc	Neely 4125 (DINO)	1987	Native to Eurasia
Gramineae (Poaceae)	<i>Poa fendleriana</i>	<i>Poa fendleriana</i>	<i>P. longiligula</i> , <i>P. fendleriana</i> ssp. <i>longiligula</i> , some authors include <i>P. cusickii</i> & <i>P. epilis</i>	muttongrass	PerG	Wide/ Wide	Pres	X	X	Com	O'Kane & Neely 2660 (DINO)	1933	
Gramineae (Poaceae)	<i>Poa glauca</i> var. <i>glauca</i>	<i>Poa nemoralis</i> ssp. <i>interior</i>	<i>P. interior</i>	interior bluegrass	PerG	Wide/ Wide	Hist	X	X	?	Harrington 1454 (CSU)	1945	
Gramineae (Poaceae)	<i>Poa nervosa</i> var. <i>wheeleri</i>	<i>Poa nervosa</i>	<i>P. wheeleri</i>	Wheeler bluegrass	PerG	Wide/ Wide	Pres	X	X	Unc	O'Kane & Roszcwski 3194 (DINO)	1987	Hybrids with <i>P. pratensis</i> have been documented (Naumann 143 DINO)
Gramineae (Poaceae)	<i>Poa pratensis</i>	<i>Poa pratensis</i>	<i>P. agassizensis</i>	Kentucky bluegrass	PerG	Intro/ Intro	Pres	X	X	Com	O'Kane 3000 (DINO)	1987	Native to Europe.
Gramineae (Poaceae)	<i>Poa secunda</i>	<i>Poa secunda</i>	Includes <i>P. gracillima</i> , <i>P. juncifolia</i> , <i>P. sandbergii</i> , <i>P. canbyi</i> , <i>P. scabrella</i> , <i>P. nevadensis</i> , <i>P. ampla</i> and all vars. of <i>P. secunda</i>	Sandberg's bluegrass	PerG	Wide/ Wide	Pres	X	X	Com	O'Kane & Neely 2670 (DINO)	1912	
Gramineae (Poaceae)	<i>Polygonum monspeliensis</i>	<i>Polygonum monspeliensis</i>		rabbitfoot-grass	AnnG	Intro/ Intro	Pres	X	X	Unc	Wolf & Dever 5254 (DINO)	1948	Native to Eurasia and Africa
Gramineae (Poaceae)	<i>Puccinellia nuttalliana</i>	<i>Puccinellia airoides</i>		Nuttall's alkaligrass	PerG	Wide/ Wide	Hist	X	X	?	Welsh 311 (BRY)	1955	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Dinosaur National Monument, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range UT/CO	Park stat.	UT	CO	Pop. size	Source	Year doc.	Comments
	Utah	Colorado											
Gramineae (Poaceae)	<i>Schizachyrium scoparium</i>	<i>Schizachyrium scoparium</i>	<i>Andropogon scoparius</i> , <i>S. scoparium</i> var. <i>neomexicanum</i>	little bluestem	PerG	Wide/ Wide	Pres	X		Unc	Harms s.n. (DINO)	2005	
Gramineae (Poaceae)	<i>Spartina pectinata</i>	<i>Spartina pectinata</i>		prairie cordgrass	PerG	Sparse/ Wide	Pres	X	X	Unc	Holmgren et al. 447 (DINO)	1961	
Gramineae (Poaceae)	<i>Sporobolus airoides</i> var. <i>airoides</i>	<i>Sporobolus airoides</i>		alkali sacaton	PerG	Wide/ Wide	Hist	X		Com	Dever & Wolf 5096 (DINO)	1912	
Gramineae (Poaceae)	<i>Sporobolus contractus</i>	<i>Sporobolus contractus</i>		spike dropseed	PerG	Wide/ Sparse	Pres	X	X	Unc	Holmgren & Jensen 13971 (DINO)	1948	
Gramineae (Poaceae)	<i>Sporobolus cryptandrus</i>	<i>Sporobolus cryptandrus</i>		sand dropseed	PerG	Wide/ Wide	Pres	X	X	Com	Holmgren et al. 459 (DINO)	1955	
Gramineae (Poaceae)	<i>Stipa arida</i>	<i>Achnatherum aridum</i>		Mormon needlegrass	PerG	Wide/ Periph	Rep	X		?	Holmgren (1962)	NA	DINO report could not be substantiated by Goodrich and Neese (1986). Type locality is near Milford, Beaver Co., UT (Jones 2106)
Gramineae (Poaceae)	<i>Stipa comata</i> var. <i>comata</i>	<i>Hesperostipa comata</i>	<i>H. comata</i> var. <i>comata</i>	needle-and-thread	PerG	Wide/ Wide	Pres	X	X	Com	O'Kane 2955 (DINO)	1935	
Gramineae (Poaceae)	<i>Stipa hymenoides</i>	<i>Achnatherum hymenoides</i>	<i>Oryzopsis hymenoides</i>	Indian ricegrass	PerG	Wide/ Wide	Pres	X	X	Com	Wolf & Dever 5003 (DINO)	1912	
Gramineae (Poaceae)	<i>Stipa lettermanii</i>	<i>Achnatherum lettermanii</i>		Letterman's needlegrass	PerG	Wide/ Wide	Pres		X	Unc	O'Kane 3102 (DINO)	1959	
Gramineae (Poaceae)	<i>Stipa nelsonii</i> var. <i>nelsonii</i>	<i>Achnatherum nelsonii</i>	<i>A. nelsonii</i> var. <i>nelsonii</i> , <i>S. columbiana</i> var. <i>nelsonii</i>	Nelson's needlegrass	PerG	Wide/ Wide	Pres	X	X	Unc	Neely 4350 (DINO)	1946	
Gramineae (Poaceae)	<i>Stipa viridula</i>	<i>Nassella viridula</i>		green needlegrass	PerG	Sparse/ Wide	Pres	X		Unc	Harrington 176 (CSU)	1945?	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Dinosaur National Monument, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range UT/CO	Park stat.	UT	CO	Pop. size	Source	Year doc.	Comments
	Utah	Colorado											
Gramineae (Poaceae)	<i>Trisetum spicatum</i>	<i>Trisetum spicatum</i>	Includes <i>ssp. alaskanum</i> & <i>congonii</i> , <i>T. montanum</i>	spike trisetum	PerG	Wide/ Wide	Pres	X	X	Unc	O'Kane & Roszcwski 3196 (DINO)	1987	
Hippuridaceae	<i>Hippuris vulgaris</i>	<i>Hippuris vulgaris</i>		common mare's-tail	PerF	Wide/ Wide	Hist	X		?	Weish 397 (BRY)	1955	
Hydrophyllaceae	<i>Nama densum</i> var. <i>parviflorum</i>	<i>Nama densum</i>		leafy fiddleleaf	AnnF	Wide/ Periph	Hist	X	X	?	Weber 5434 (COLO)	1935	
Hydrophyllaceae	<i>Phacelia crenulata</i> var. <i>corrugata</i>	<i>Phacelia crenulata</i>	Var. not recognized by Cronquist et al. (1984)	corrugate phacelia	AnnF	Wide/ Wide	Pres	X	X	Rare	Neely 4221 (DINO)	1912	
Hydrophyllaceae	<i>Phacelia demissa</i> var. <i>minor</i>			brittle phacelia	AnnF	LocEn/ NA	Pres	X		Unc	Atwood 6612 (BRY)	1912	Type locality is 1 mile E of Red Fleet Dam, Uintah Co., UT (Atwood 7247 BRY)
Hydrophyllaceae	<i>Phacelia hastata</i>	<i>Phacelia hastata</i>	Includes vars. <i>hastata</i> , <i>leucophylla</i> , & <i>alpina</i>	lanceleaf phacelia	PerF	Wide/ Wide	Pres		X	Com	O'Kane 3202 (DINO)	1987	
Hydrophyllaceae	<i>Phacelia ivesiana</i>	<i>Phacelia ivesiana</i>		ives' phacelia	AnnF	Wide/ Wide	Pres	X		Unc	Reidel 29 (DINO)	1933	
Hydrophyllaceae	<i>Phacelia sericea</i> var. <i>ciliosa</i>	<i>Phacelia sericea</i> ssp. <i>ciliosa</i>		silky phacelia	PerF	Wide/ Wide	Pres	X	X	Unc	Naumann 204 (DINO)	1948	
Iridaceae	<i>Iris missouriensis</i>	<i>Iris missouriensis</i>		Rocky Mountain iris	PerF	Wide/ Wide	Pres	X		Unc	Reidel 38 (DINO)	1991	
Iridaceae	<i>Sisyrinchium idahoense</i>	<i>Sisyrinchium idahoense</i> var. <i>occidentale</i>	<i>S. idahoense</i> var. <i>occidentale</i>	Idaho blue-eyed grass	PerF	Wide/ Wide	Pres	X		Unc	Reidel 64 (DINO)	1991	
Juncaceae	<i>Juncus arcticus</i>	<i>Juncus arcticus</i> ssp. <i>ater</i>	<i>J. arcticus</i> var. <i>balticus</i> , <i>J. balticus</i> var. <i>montanus</i> , includes var. <i>mexicanus</i>	Baltic rush	PerG	Wide/ Wide	Pres	X	X	Com	Dever & Wolf 5237 (DINO)	1948	
Juncaceae	<i>Juncus bryoides</i>	<i>Juncus bryoides</i>	<i>J. kelloggii</i>	minute rush	AnnG	Sparse/ Periph	Rep	X		?	Goodrich and Neese (1986)	NA	DINO report may be from just outside the park (Johnston 2065, COLO)

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Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range UT/CO	Park stat.	UT	CO	Pop. size	Source	Year doc.	Comments
	Utah	Colorado											
Juncaceae	<i>Juncus bufonius</i>	<i>Juncus bufonius</i>	Includes vars. <i>bufonius</i> , <i>occidentalis</i> , <i>halophilus</i> , & <i>ambiguus</i>	toad rush	AnnG	Wide/ Wide	Pres	X	X	Unc	Holmgren et al. 427 (DINO)	1946	
Juncaceae	<i>Juncus compressus</i>	<i>Juncus compressus</i>		compressed rush	PerG	Intro/ Intro	Pres	X	X	Unc	Harms 195 (DINO)	2005	Native to Europe
Juncaceae	<i>Juncus ensifolius</i> var. <i>brunnescens</i>	<i>Juncus ensifolius</i>	Included in <i>J. ensifolius</i> var. <i>montanus</i> by some authors, <i>J. saximontanus</i> forma <i>brunnescens</i>	Tracy's rush	PerG	Wide/ Wide	Pres	X	X	Unc	O'Kane 3109 (DINO)	1987	
Juncaceae	<i>Juncus ensifolius</i> var. <i>montanus</i>	<i>Juncus saximontanus</i>	Includes <i>J. tracyi</i> , <i>J. xiphoides</i>	mountain rush	PerG	Wide/ Wide	Pres	X	X	Unc	Naumann 276 (DINO)	1912	
Juncaceae	<i>Juncus longistylis</i>	<i>Juncus longistylis</i>		longstyle rush	PerG	Wide/ Wide	Pres	X	X	Unc	Naumann 324 (DINO)	1946	
Juncaceae	<i>Juncus tenuis</i>	<i>Juncus tenuis</i>	Includes vars. <i>dudleyi</i> , <i>congestus</i> , & <i>tenuis</i> . <i>J. dudleyi</i>	poverty rush	PerG	Wide/ Wide	Pres	X	X	Unc	Naumann 252 (DINO)	1961	
Juncaceae	<i>Juncus torreyi</i>	<i>Juncus torreyi</i>		Torrey's rush	PerG	Wide/ Wide	Hist	X	X	?	Holmgren & Jensen 13975 (DINO)	1955	
Juncaginaceae	<i>Triglochin maritima</i>	<i>Triglochin maritima</i>	<i>T. maritima</i> var. <i>elata</i> . Includes <i>T. concinnum</i>	seaside arrowgrass	PerG	Wide/ Wide	Hist	X	X	?	Holmgren & Jensen 13966 (DINO)	1935	
Labiatae (Lamiaceae)	<i>Lycopus americanus</i>	<i>Lycopus americanus</i>		American bugleweed	PerF	Wide/ Wide	Pres	X	X	Unc	Reidel 102 (DINO)	1991	
Labiatae (Lamiaceae)	<i>Mentha arvensis</i> var. <i>glabrata</i>	<i>Mentha arvensis</i>	<i>M. arvensis</i> var. <i>canadensis</i>	field mint	PerF	Wide/ Wide	Pres	X	X	Unc	Wolf 5273 (DINO)	1948	
Labiatae (Lamiaceae)	<i>Nepeta cataria</i>	<i>Nepeta cataria</i>		catnip	PerF	Intro/ Intro	Pres	X	X	Unc	Reidel 87 (DINO)	1991	Native to Europe
Labiatae (Lamiaceae)	<i>Prunella vulgaris</i> var. <i>lanceolata</i>	<i>Prunella vulgaris</i>		self-heal	PerF	Wide/ Wide	Pres	X	X	Unc	Naumann & Campbell 354 (DINO)	1989	
Labiatae (Lamiaceae)	<i>Scutellaria galericulata</i>	<i>Scutellaria galericulata</i> var. <i>epilobifolia</i>	<i>S. galericulata</i> var. <i>epilobifolia</i>	little skullcap	PerF	Wide/ Wide	Pres	X	X	Unc	Naumann 331 (DINO)	1989	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Dinosaur National Monument, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range UT/CO	Park stat.	UT	CO	Pop. size	Source	Year doc.	Comments
	Utah	Colorado											
Leguminosae (Fabaceae)	<i>Astragalus agrestis</i>	<i>Astragalus agrestis</i>	<i>A. dasyglottis</i>	field milkvetch	PerF	Wide/ Wide	Rep	X	X	?	Naumann (2002)	NA	Report from Holmgren (1962) is based on a collection from outside the monument.
Leguminosae (Fabaceae)	<i>Astragalus argophyllus</i> var. <i>martinii</i>	<i>Astragalus argophyllus</i> var. <i>martinii</i>		Martin's milkvetch	PerF	Wide/ Periph	Pres	X	X	Rare	Neely 4316 (DINO)	1912	
Leguminosae (Fabaceae)	<i>Astragalus asclepiadooides</i>	<i>Astragalus asclepiadooides</i>		milkweed milkvetch	PerF	RegEn/ RegEn	Hist	X		?	Bradley 5358 (DINO)	1949	Type locality is Cisco, Grand Co., UT (Jones s.n. POM)
Leguminosae (Fabaceae)	<i>Astragalus bisulcatus</i> var. <i>haydenianus</i>	<i>Astragalus haydenianus</i>		Hayden's milkvetch	PerF	Wide/ Wide	Pres	X	X	Unc	Welsh 320 (BRY)	1956	
Leguminosae (Fabaceae)	<i>Astragalus ceramicus</i> var. <i>ceramicus</i>	<i>Astragalus ceramicus</i> var. <i>ceramicus</i>		painted milkvetch	PerF	Wide/ Periph	Hist	X		?	Bradley 5328 (DINO)	1912	
Leguminosae (Fabaceae)	<i>Astragalus chamaeleuce</i>	<i>Astragalus chamaeleuce</i>	<i>A. chamaeleuce</i> var. <i>chamaeleuce</i>	cicada milkvetch	PerF	RegEn/ RegEn	Pres	X	X	Unc	Neely 4021 (DINO)	1912	
Leguminosae (Fabaceae)	<i>Astragalus chloodes</i>			grass milkvetch	PerF	LocEn/ NA	Pres	X		Rare	Weber 5312 (DINO)	1912	Type locality is 6 miles SE of Jensen, Uintah Co., UT (Ripley & Barneby 7797 CAS). USFWS: 3C
Leguminosae (Fabaceae)	<i>Astragalus convallarius</i> var. <i>convallarius</i>	<i>Astragalus convallarius</i>	<i>A. diversifolius</i> var. <i>campestris</i>	lesser rushy milkvetch	PerF	Wide/ Wide	Pres	X	X	Unc	Wolf & Dever 5115 (DINO)	1950	
Leguminosae (Fabaceae)	<i>Astragalus duchesnensis</i>	<i>Astragalus duchesnensis</i>		Duchesne milkvetch	PerF	RegEn/ RegEn	Pres	X	X	Rare	Bradley 5307 (DINO)	1933	Type locality is 13 miles below Theodore, Duchesne Co., UT (Jones s.n. POM). CO BLM: Sensitive

Appendix A. Confirmed, historical, and reported vascular plant taxa of Dinosaur National Monument, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range UT/CO	Park stat.	UT	CO	Pop. size	Source	Year doc.	Comments
	Utah	Colorado											
Leguminosae (Fabaceae)	<i>Astragalus flavus</i> var. <i>flavus</i>	<i>Astragalus flavus</i>	<i>A. flavus</i> var. <i>candicans</i>	yellow milkvetch	PerF	Wide/ Wide	Hist	X		?	Weber 5446 (DINO)	1912	Type locality of var. <i>candicans</i> is near Richfield, Sevier Co., UT (Ward 246 GH)
Leguminosae (Fabaceae)	<i>Astragalus geyeri</i>	<i>Astragalus geyeri</i>	<i>A. geyeri</i> var. <i>geyeri</i>	Geyer's milkvetch	AnnF	Wide/ Periph	Hist	X		?	Bradley 5336 (DINO)	1949	
Leguminosae (Fabaceae)	<i>Astragalus hamiltonii</i>	<i>Astragalus hamiltonii</i>	<i>A. lonchocarpus</i> var. <i>hamiltonii</i>	Hamilton's milkvetch	PerF	LocEn/ LocEn	Pres	X	X	Rare	O'Kane 2768 (DINO)	1987	Type locality is 5 miles S of Vernal, Uintah Co., UT (Hamilton & Beath s.n. RM). UT BLM: Sensitive, USFWS: former C2 candidate
Leguminosae (Fabaceae)	<i>Astragalus kentrophyta</i> var. <i>elatus</i>	<i>Astragalus kentrophyta</i> var. <i>elatus</i>		tall kentrophyta	PerF	Wide/ Wide	Hist		X	?	Weber & Salamun 12646 (COLO)	1965	
Leguminosae (Fabaceae)	<i>Astragalus laxmannii</i> var. <i>robustior</i>	<i>Astragalus laxmannii</i>	<i>A. adsurgens</i> var. <i>robustior</i>	standing milkvetch	PerF	Wide/ Wide	Pres	X	X	Unc	Tilley 2781 (DINO)	2002	
Leguminosae (Fabaceae)	<i>Astragalus miser</i> var. <i>oblongifolius</i>	<i>Astragalus miser</i> var. <i>oblongifolius</i>		Rydberg's weedy milkvetch	PerF	Wide/ Wide	Pres		X	Unc	Naumann 213 (DINO)	1987	
Leguminosae (Fabaceae)	<i>Astragalus mollissimus</i> var. <i>thompsoniae</i>	<i>Astragalus mollissimus</i> var. <i>thompsoniae</i>		woolly milkvetch	PerF	Wide/ Wide	Pres	X	X	Unc	Naumann 317 (DINO)	1933	Type locality is Kanab, Kane Co., UT (Thompson s.n. GH)
Leguminosae (Fabaceae)	<i>Astragalus purshii</i> var. <i>purshii</i>	<i>Astragalus purshii</i>	<i>A. inflexus</i>	Pursh's milkvetch	PerF	Wide/ Wide	Pres	X	X	Unc	Weber 5346 (DINO)	1950	
Leguminosae (Fabaceae)	<i>Astragalus racemosus</i> var. <i>releasei</i>			Trelease's alkali milkvetch	PerF	RegEn/ NA	Rep	X		Rare	NCFPN (in ed.)	2002	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Dinosaur National Monument, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range UT/CO	Park stat.	UT	CO	Pop. size	Source	Year doc.	Comments
	Utah	Colorado											
Leguminosae (Fabaceae)	<i>Astragalus saurinus</i>	<i>Astragalus saurinus</i>		Dinosaur milkvetch	Perf	LocEn/ LocEn	Pres	X	X	Rare	O'Kane 2653 (DINO)	1912	Type locality is 6 miles N of Jensen, Dinosaur NM, Uintah Co., UT (Holmgren & Tillett 9527 NY). USFWS: 3C
Leguminosae (Fabaceae)	<i>Astragalus spatulatus</i>	<i>Astragalus spatulatus</i>		spoonleaf milkvetch	Perf	Wide/ Wide	Pres	X	X	Com	Wolf & Dever 5106 (DINO)	1948	
Leguminosae (Fabaceae)	<i>Astragalus tenellus</i>	<i>Astragalus tenellus</i>		pulse milkvetch	Perf	Wide/ Wide	Pres	X		Unc	MacLeod 379 (COLO)	1965	
Leguminosae (Fabaceae)	<i>Glycyrrhiza lepidota</i>	<i>Glycyrrhiza lepidota</i>	<i>G. lepidota</i> var. <i>lepidota</i>	Nuttall's licorice	Perf	Wide/ Wide	Pres	X	X	Unc	Wolf & Dever 5070 (DINO)	1946	
Leguminosae (Fabaceae)	<i>Hedysarum boreale</i> var. <i>boreale</i>	<i>Hedysarum boreale</i>	Some authors include var. <i>pabulare</i>	northern sweetvetch	Perf	Wide/ Wide	Pres	X	X	Unc	Neely 4039 (DINO)	1987	
Leguminosae (Fabaceae)	<i>Hedysarum boreale</i> var. <i>gremiale</i>	<i>Hedysarum boreale</i>		Rollins' sweetvetch	Perf	LocEn/ NA	Hist	X		?	Brotherson 787 (BRY)	1965	Type locality is 14 miles N of Vernal, Uintah Co., UT (Rollins 1733 RM)
Leguminosae (Fabaceae)	<i>Lupinus argenteus</i> var. <i>argentatus</i>	<i>Lupinus argenteus</i> var. <i>argentatus</i>	<i>L. argenteus</i> ssp. <i>spathulatus</i>	silvery lupine	Perf	Wide/ Sparse	Pres		X	Unc	Neely & Roszczevski 4451 (DINO)	1983	
Leguminosae (Fabaceae)	<i>Lupinus argenteus</i> var. <i>argenteus</i>	<i>Lupinus argenteus</i> var. <i>argenteus</i>		silvery lupine	Perf	Wide/ Wide	Pres	X	X	Com	O'Kane 2774 (DINO)	1933	
Leguminosae (Fabaceae)	<i>Lupinus argenteus</i> var. <i>rubricaulis</i>	<i>Lupinus argenteus</i> var. <i>rubricaulis</i>		subalpine lupine	Perf	Wide/ Sparse	Pres		X	Unc	Painter 469 (DINO)	1988	
Leguminosae (Fabaceae)	<i>Lupinus caudatus</i> var. <i>utahensis</i>	<i>Lupinus caudatus</i> var. <i>utahensis</i>	<i>L. caudatus</i> ssp. <i>caudatus</i> , <i>L. argenteus</i> var. <i>utahensis</i>	Utah lupine	Perf	Wide/ Wide	Pres	X	X	Unc	Weber 5307 (DINO)	1948	Type locality is Wasatch Mtns. or Antelope Island, Salt Lake Co., UT (Watson s.n. GH)
Leguminosae (Fabaceae)	<i>Lupinus leucophyllus</i>	<i>Lupinus leucophyllus</i>		white-leaved lupine	Perf	Wide/ Periph	Pres		X	Unc	O'Kane & Neely 3083 (DINO)	1987	
Leguminosae (Fabaceae)	<i>Lupinus pusillus</i> var. <i>intermontanus</i>	<i>Lupinus pusillus</i> var. <i>intermontanus</i>		Great Basin lupine	AnnF	Wide/ Periph	Pres	X	X	Unc	Bradley 5300 (DINO)	1949	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Dinosaur National Monument, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range UT/CO	Park stat.	UT	CO	Pop. size	Source	Year doc.	Comments
	Utah	Colorado											
Leguminosae (Fabaceae)	<i>Lupinus pusillus</i> var. <i>Lupinus pusillus</i>	<i>Lupinus pusillus</i> var. <i>Lupinus pusillus</i>		dwarf lupine	AnnF	Wide/ Wide	Hist	X		?	Weber 5428 (DINO)	1912	
Leguminosae (Fabaceae)	<i>Medicago lupulina</i>	<i>Medicago lupulina</i>		black medick	AnnF	Intro/ Intro	Pres	X	X	Unc	Neely 4381 (DINO)	1987	Native to Europe
Leguminosae (Fabaceae)	<i>Medicago sativa</i>	<i>Medicago sativa</i>	<i>M. sativa</i> var. <i>sativa</i>	alfalfa	PerF	Intro/ Intro	Rep	X	X	?	Holmgren (1962)	NA	Native to Europe
Leguminosae (Fabaceae)	<i>Melilotus alba</i>	<i>Melilotus albus</i>	Included in <i>M. officinalis</i> by some authors	white sweet- clover	AnnF	Intro/ Intro	Pres	X	X	Unc	Wolf & Dever 5012 (DINO)	1948	Native to Europe
Leguminosae (Fabaceae)	<i>Melilotus officinalis</i>	<i>Melilotus officinalis</i>		yellow sweet- clover	PerF	Intro/ Intro	Pres	X	X	Unc	Dever & Wolf 5089 (DINO)	1948	Native to Europe
Leguminosae (Fabaceae)	<i>Oxytropis besseyi</i> var. <i>obnapiformis</i>	<i>Oxytropis besseyi</i> var. <i>obnapiformis</i>	<i>O. obnapiformis</i> , <i>O. nana</i> var. <i>obnapiformis</i>	Maybell locoweed	PerF	RegEn/ RegEn	Pres	X	X	Rare	Neely 4273 (DINO)	1987	Type locality is 8-9 miles W of Maybell, Moffat Co., CO (Porter 3864 RM)
Leguminosae (Fabaceae)	<i>Pedimelum megalanthum</i>	<i>Pedimelum megalanthum</i>	<i>Psoralea megalantha</i> , <i>Pedimelum megalanthum</i> var. <i>megalanthum</i>	large- flowered breadroot	PerF	RegEn/ RegEn	Hist	X		?	Dever & Wolf 5086 (DINO)	1912	
Leguminosae (Fabaceae)	<i>Psoralidium lanceolatum</i> var. <i>lanceolatum</i>	<i>Psoralidium lanceolatum</i>	<i>Psoralea lanceolata</i> . Vars. not recognized in Barneby (1989).	lemon scurf- pea	PerF	Wide/ Wide	Pres	X	X	Unc	Naumann 348 (DINO)	1946	
Leguminosae (Fabaceae)	<i>Thermopsis rhombifolia</i>	<i>Thermopsis rhombifolia</i>	<i>T. rhombifolia</i> var. <i>rhombifolia</i>	prairie golden pea	PerF	Periph/ Periph	Pres	X	X	Unc	Neely 4238 (DINO)	1933	
Leguminosae (Fabaceae)	<i>Trifolium andinum</i>	<i>Trifolium andinum</i>	<i>T. andinum</i> var. <i>andinum</i>	Andean clover	PerF	Sparse/ Periph	Pres	X	X	Rare	O'Kane 2656 (DINO)	1987	CO BLM: Sensitive
Leguminosae (Fabaceae)	<i>Trifolium gymnocarpon</i>	<i>Trifolium gymnocarpon</i>	<i>T. gymnocarpon</i> var. <i>gymnocarpon</i>	dwarf clover	PerF	Wide/ Wide	Pres	X	X	Unc	Neely & O'Kane 3925 (DINO)	1955	
Leguminosae (Fabaceae)	<i>Trifolium repens</i>	<i>Trifolium repens</i>		white clover	PerF	Intro/ Intro	Pres	X	X	Unc	Neely 4382 (DINO)	1987	Native to Europe
Leguminosae (Fabaceae)	<i>Vicia americana</i> var. <i>minor</i>	<i>Vicia americana</i> var. <i>minor</i>		plains vetch	PerF	Periph/ Wide	Pres	X	X	Unc	Painter 498 (DINO)	1988	
Lemnaceae	<i>Lemna minor</i>	<i>Lemna turionifera</i>		lesser duckweed	PerF	Wide/ Wide	Hist	X	X	?	Weber 13051 (COLO)	1967	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Dinosaur National Monument, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range UT/CO	Park stat.	UT	CO	Pop. size	Source	Year doc.	Comments
	Utah	Colorado											
Liliaceae (Alliaceae)	<i>Allium acuminatum</i>	<i>Allium acuminatum</i>		taper-tip onion	PerF	Wide/ Wide	Pres	X	X	Unc	Neely 4329 (DINO)	1955	
Liliaceae (Alliaceae)	<i>Allium brandegei</i>	<i>Allium brandegei</i>	<i>A. brandegeei</i>	Brandegee's onion	PerF	Wide/ Wide	Pres	X	X	Unc	O'Kane 2731 (DINO)	1946	
Liliaceae (Alliaceae)	<i>Allium geyeri</i> var. <i>geyeri</i>	<i>Allium geyeri</i>		Geyer's onion	PerF	Wide/ Wide	Pres	X	X	Unc	Tilley 2777 (DINO)	2002	
Liliaceae (Alliaceae)	<i>Allium nevadense</i>	<i>Allium nevadense</i>	Some authors include <i>A. atrorubens</i> var. <i>cristatum</i>	Nevada onion	PerF	Wide/ Periph	Pres	X	X	Rare	Naumann 154 (DINO)	1935	
Liliaceae (Alliaceae)	<i>Allium textile</i>	<i>Allium textile</i>		textile onion	PerF	Wide/ Wide	Pres	X	X	Unc	Weber 5382 (DINO)	1912	
Liliaceae (Alliaceae, Themidaceae)	<i>Androstephium breviflorum</i>	<i>Androstephium breviflorum</i>	<i>Brodiaea paysonii</i>	pink funnel-lily	PerF	Wide/ Wide	Pres	X	X	Unc	Neely 3948 (DINO)	1933	Type locality is near Kanab, Kane Co., UT (Thompson s.n.)
Liliaceae (Asparagaceae)	<i>Asparagus officinalis</i>	<i>Asparagus officinalis</i>		asparagus	PerF	Intro/ Intro	Pres	X	X	Unc	Naumann 113 (DINO)	1988	Native to Eurasia.
Liliaceae (Calochortaceae)	<i>Calochortus nuttallii</i>	<i>Calochortus nuttallii</i>		sego-lily	PerF	Wide/ Wide	Pres	X	X	Unc	Wolf & Dever 5150 (DINO)	1912	State flower of Utah
Liliaceae	<i>Erythronium grandiflorum</i>	<i>Erythronium grandiflorum</i>	<i>E. grandiflorum</i> var. <i>grandiflorum</i>	glacier-lily	PerF	Wide/ Wide	Pres	X	X	Unc	O'Kane & Roszczevski 3191 (DINO)	1986	
Liliaceae	<i>Fritillaria atropurpurea</i>	<i>Fritillaria atropurpurea</i>		leopard-lily	PerF	Wide/ Wide	Pres	X	X	Unc	O'Kane & Neely 2673 (DINO)	1987	
Liliaceae	<i>Fritillaria pudica</i>	<i>Fritillaria pudica</i>		yellow-bell	PerF	Wide/ Periph	Pres	X	X	Rare	Naumann 421 (DINO)	1948	
Liliaceae (Convallariaceae, Ruscaceae)	<i>Smilacina stellata</i>	<i>Maianthemum stellatum</i>		starry false Solomon's-seal	PerF	Wide/ Wide	Pres	X	X	Unc	Wolf & Dever 5241 (DINO)	1912	
Liliaceae (Melanthiaceae)	<i>Zigadenus paniculatus</i>	<i>Toxicoscordion paniculatum</i>		foothills death camas	PerF	Wide/ Wide	Pres	X	X	Com	O'Kane 2716 (DINO)	1948	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Dinosaur National Monument, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range UT/CO	Park stat.	UT	CO	Pop. size	Source	Year doc.	Comments
	Utah	Colorado											
Liliaceae (Melanthiaceae)	<i>Zigadenus vaginatus</i>	<i>Anticlea vaginatus</i>	Included in <i>Z. elegans</i> by some authors	alcove death camas	PerF	LocEn/ LocEn	Pres	X	X	Rare	Holmgren et al. 470 (DINO)	1961	Type locality is Natural Bridges NM, San Juan Co., UT (Rydberg & Garrett 9407 NY). USFWS: 3C
Liliaceae (Melanthiaceae)	<i>Zigadenus venenosus</i>	<i>Toxicoscordion venenosum</i>	<i>Z. venenosus</i> var. <i>venenosus</i>	meadow death camas	PerF	Wide/ Wide	Pres	X	X	Unc	MacLeod 12a (DINO)	1960	
Linaceae	<i>Linum perenne</i> ssp. <i>lewisii</i>	<i>Adenolinum lewisii</i>	<i>L. lewisii</i> var. <i>lewisii</i> , <i>Adenolinum lewisii</i>	blue flax	PerF	Wide/ Wide	Pres	X	X	Unc	Wolf & Dever 5100 (DINO)	1948	
Loasaceae	<i>Mentzelia albicaulis</i>	<i>Acrolasia albicaulis</i>	<i>Acrolasia albicaulis</i> , <i>A. gracilis</i> , <i>M. obscura</i>	white-stem blazingstar	AnnF	Wide/ Wide	Pres	X	X	Unc	Painter 464 (DINO)	1912	
Loasaceae	<i>Mentzelia multicaulis</i> var. <i>uintahensis</i>	<i>Nuttallia multicaulis</i>	Uinta basin stickleaf		PerF	RegEn/ RegEn	Pres	X	X	Unc	Holmgren et al. 469 (DINO)	1948	Type locality is Watson- Rainbow Road, E of Evacuation Creek bridge, Uintah Co., UT (Holmgren & Holmgren 14465 NY)
Loasaceae	<i>Mentzelia thompsonii</i>	<i>Acrolasia humilis</i>	<i>Acrolasia humilis</i> , <i>Nuttallia humilis</i> , <i>M. humilis</i>	Thompson's stickleaf	AnnF	RegEn/ RegEn	Hist	X		?	Weber 5324 (DINO)	1950	Type locality is 7 miles E of Montrose, Montrose Co., CO (Weber 7470)
Malvaceae	<i>Iliamna rivularis</i>	<i>Iliamna rivularis</i>	Includes vars. <i>diversa</i> & <i>rivularis</i>	wild hollyhock	PerF	Wide/ Wide	Pres	X	X	Unc	Kelley 88- 88 (DINO)	1987	
Malvaceae	<i>Sphaeralcea coccinea</i>	<i>Sphaeralcea coccinea</i> ssp. <i>dissecta</i>	Includes ssp. <i>coccinea</i> , <i>elata</i> , & <i>dissecta</i>	scarlet globe- mallow	PerF	Wide/ Wide	Pres	X	X	Unc	Neely 4418 (DINO)	1912	
Malvaceae	<i>Sphaeralcea parvifolia</i>	<i>Sphaeralcea parvifolia</i>	small-leaf globemallow		PerF	Wide/ Wide	Pres	X	X	Unc	Neese & Trent 11800 (BRY)	1935	
Nyctaginaceae	<i>Abronia fragrans</i>	<i>Abronia elliptica</i>	<i>A. elliptica</i> , <i>A. fragrans</i> var. <i>elliptica</i> , <i>A. nana</i> var. <i>harrisi</i>	fragrant sand- verbena	PerF	Wide/ Wide	Pres	X	X	Unc	Wolf & Dever 5040 (DINO)	1912	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Dinosaur National Monument, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range UT/CO	Park stat.	UT	CO	Pop. size	Source	Year doc.	Comments
	Utah	Colorado											
Nyctaginaceae	<i>Mirabilis linearis</i> var. <i>linearis</i>	<i>Oxybaphus linearis</i>	<i>Oxybaphus linearis</i> , <i>O. decumbens</i> . Some authors include <i>M. glabra</i>	narrow-leaf four-o'clock	PerF	Wide/ Wide	Pres	X	X	Unc	Dever & Wolf 5283 (DINO)	1945	
Nyctaginaceae	<i>Tripterocalyx micranthus</i>	<i>Tripterocalyx micranthus</i>	<i>Abronia micrantha</i> , <i>T. pedunculatus</i>	small-flower sandpuffs	AnnF	Wide/ Wide	Pres	X	X	Unc	Naumann 316 (DINO)	1935	
Oleaceae	<i>Fraxinus anomala</i>	<i>Fraxinus anomala</i>		singleleaf ash	Shrub	Wide/ Wide	Pres	X	X	Com	Wolf & Dever 5065 (DINO)	1912	Type locality is Labyrinth Canyon, San Juan Co., UT (Newberry s.n. NY)
Onagraceae	<i>Calylophus lavandulifolius</i>	<i>Calylophus lavandulifolius</i>	<i>C. hartwegii</i> ssp. <i>lavandulifolius</i>	lavender-leaf sundrops	PerF	Wide/ Wide	Pres	X	X	Unc	Naumann 183 (DINO)	1988	
Onagraceae	<i>Camissonia minor</i>	<i>Camissonia minor</i>		lesser camissonia	AnnF	Wide/ Periph	Hist	X		?	Graham 7741 (CM)	1933	
Onagraceae	<i>Camissonia parvula</i>	<i>Camissonia parvula</i>	<i>Oenothera contorta</i> var. <i>flexuosa</i>	tiny camissonia	AnnF	Wide/ Wide	Hist	X		?	Weber 5435 (DINO)	1933	
Onagraceae	<i>Camissonia scapoidea</i> var. <i>scapoidea</i>	<i>Camissonia scapoidea</i>	<i>Oenothera scapoidea</i>	Paiute suncup	AnnF	Wide/ Wide	Pres	X		Unc	Weber 5371 (DINO)	1912	
Onagraceae	<i>Camissonia walkeri</i>	<i>Camissonia walkeri</i>		Walker's camissonia	AnnF	Wide/ Periph	Hist	X		?	Brotherson 807 (BRY)	1965	Type locality is Paradox Valley, Montrose Co., CO
Onagraceae	<i>Epilobium brachycarpum</i>	<i>Epilobium brachycarpum</i>	<i>E. paniculatum</i> var. <i>paniculatum</i>	autumn willow-herb	AnnF	Wide/ Wide	Pres	X	X	Unc	Tilley 2924a (DINO)	1983	
Onagraceae	<i>Epilobium ciliatum</i>	<i>Epilobium ciliatum</i>	<i>E. ciliatum</i> var. <i>ciliatum</i> , <i>E. watsonii</i> , <i>E. adenocaulon</i>	northern willow-herb	PerF	Wide/ Wide	Pres	X		Unc	Tilley 2928 (DINO)	2002	
Onagraceae	<i>Epilobium halleanum</i>	<i>Epilobium halleanum</i>		Hall's willow-herb	PerF	Wide/ Wide	Rep		X	?	Holmgren (1962)	NA	
Onagraceae	<i>Epilobium palustre</i>	<i>Epilobium palustre</i> var. <i>grammado-phyllum</i>	<i>E. palustre</i> var. <i>palustre</i> , <i>E. palustre</i> var. <i>grammado-phyllum</i>	marsh willow-herb	PerF	Periph/ Periph	Rep		X	?	Holmgren (1962)	NA	
Onagraceae	<i>Gayophytum decipiens</i>	<i>Gayophytum decipiens</i>		deceptive groundsmoke	AnnF	Wide/ Wide	Pres	X	X	Unc	Naumann 223 (DINO)	1988	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Dinosaur National Monument, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range UT/CO	Park stat.	UT	CO	Pop. size	Source	Year doc.	Comments
	Utah	Colorado											
Onagraceae	<i>Gayophytum ramosissimum</i>	<i>Gayophytum ramosissimum</i>		branching groundsmoke	AnnF	Wide/ Wide	Hist	X	X	?	Wolf & Dever 5216 (DINO)	1948	
Onagraceae	<i>Oenothera albicaulis</i>	<i>Oenothera albicaulis</i>		white-stem evening-primrose	AnnF	Wide/ Wide	Hist	X	X	?	Beetle & Porter 5517 (RM)	1948	DINO reports may be annual forms of <i>O. romat</i> var. <i>trichocalyx</i> .
Onagraceae	<i>Oenothera caespitosa</i> var. <i>caespitosa</i>	<i>Oenothera caespitosa</i> ssp. <i>caespitosa</i>		tufted evening-primrose	PerF	Wide/ Wide	Hist	X	X	?	Weish 231 (BRY)	1955	
Onagraceae	<i>Oenothera caespitosa</i> var. <i>marginata</i>	<i>Oenothera caespitosa</i> ssp. <i>marginata</i>		long-tube evening-primrose	PerF	Wide/ Wide	Pres		X	Unc	Painter 438 (DINO)	1988	
Onagraceae	<i>Oenothera caespitosa</i> var. <i>navajoensis</i>	<i>Oenothera caespitosa</i> ssp. <i>navajoensis</i>		Paria evening-primrose	PerF	RegEn/ RegEn	Pres	X	X	Unc	O'Kane 2704 (DINO)	1950	Type locality is Paria River, Kane Co., UT (Cronquist 10202 MO)
Onagraceae	<i>Oenothera coronopifolia</i>	<i>Oenothera coronopifolia</i>		hairy-throat evening-primrose	PerF	Wide/ Wide	Pres		X	Unc	Neely 4209 (DINO)	1987	
Onagraceae	<i>Oenothera elata</i>	<i>Oenothera elata</i> ssp. <i>hirsutissima</i>		western evening-primrose	PerF	Wide/ Wide	Pres	X		Unc	Naumann & Jennings 394 (DINO)	1955	
Onagraceae	<i>Oenothera flava</i> var. <i>acutissima</i>	<i>Oenothera acutissima</i>		large yellow evening-primrose	PerF	LocEn/ LocEn	Pres		X	Rare	Naumann 157 (DINO)	1988	Type locality is Greendale Campground, Flaming Gorge NRA, Daggett Co., UT (Neese & Peterson 5428 MO). USFWS: 3C, CO BLM: Sensitive
Onagraceae	<i>Oenothera pallida</i> var. <i>trichocalyx</i>	<i>Oenothera pallida</i> ssp. <i>trichocalyx</i>		pale evening-primrose	PerF	RegEn/ RegEn	Pres	X	X	Unc	Wolf & Dever 5024 (DINO)	1912	
Onagraceae	<i>Oenothera villosa</i> var. <i>strigosa</i>	<i>Oenothera villosa</i> ssp. <i>strigosa</i>	<i>O. strigosa</i> , <i>O. biennis</i>	biennial evening-primrose	PerF	Wide/ Wide	Pres		X	Unc	Tilley 2935 (DINO)	1983	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Dinosaur National Monument, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range UT/CO	Park stat.	UT	CO	Pop. size	Source	Year doc.	Comments
	Utah	Colorado											
Orchidaceae	<i>Corallorhiza striata</i>	<i>Corallorhiza striata</i>	<i>C. striata</i> var. <i>striata</i>	striped coral-root	Perf	Wide/ Wide	Hist	X		?	Welsh 421 (BRY)	1955	
Orchidaceae	<i>Epipactis gigantea</i>	<i>Epipactis gigantea</i>	<i>Amesia gigantea</i>	giant helleborine	Perf	Wide/ Sparse	Pres	X	X	Rare	Naumann 278 (DINO)	1912	USFS Region 2: Sensitive
Orchidaceae	<i>Habenaria unalascensis</i>	<i>Piperia unalascensis</i>		Alaska rein orchid	Perf	Wide/ Wide	Pres		X	Unc	Neely 4454 (DINO)	1987	
Orchidaceae	<i>Habenaria zothecina</i>	<i>Limnorchis zothecina</i>	<i>Platanthera zothecina</i>	alcove bog-orchid	Perf	RegEn/ RegEn	Pres		X	Rare	Rodeck 4442 (DINO)	1948	Type locality is ca 1 mile N of Moab, Grand Co., UT (Welsh & Higgins 23269 BRY). UT BLM: Sensitive, USFWS: former C2 candidate
Orchidaceae	<i>Spiranthes romanzoffiana</i> var. <i>diluvialis</i>	<i>Spiranthes diluvialis</i>		Ute ladies'-tresses	Perf	Sparse/ Sparse	Pres	X	X	Unc	Naumann & Jennings 393 (DINO)	1989	USFWS: Threatened
Orobanchaceae	<i>Orobanche corymbosa</i>	<i>Orobanche corymbosa</i>		flat-topped broomrape	Perf	Wide/ Periph	Pres	X	X	Unc	Bradley 5339 (DINO)	1949	First report for Colorado?
Orobanchaceae	<i>Orobanche fasciculata</i>	<i>Aphyllon fasciculatum</i>		clustered broomrape	Perf	Wide/ Wide	Pres		X	Unc	Friedlander & Wathen 64 (DINO)	1983	
Orobanchaceae	<i>Orobanche ludoviciana</i> var. <i>cooperi</i>	<i>Orobanche ludoviciana</i>	Includes <i>O. multiflora</i> , <i>O. cooperi</i> , <i>O. ludoviciana</i> var. <i>ludoviciana</i>	Cooper's broomrape	Perf	Wide/ Wide	Hist	X		?	Graham 7556 (CM)	1933	
Pinaceae	<i>Pinus edulis</i>	<i>Pinus edulis</i>		two-needle pinyon	Tree	Wide/ Wide	Pres	X	X	Com	Neely 4113 (DINO)	1912	
Pinaceae	<i>Pinus ponderosa</i> var. <i>scopulorum</i>	<i>Pinus ponderosa</i> var. <i>scopulorum</i>		ponderosa pine	Tree	Wide/ Wide	Pres	X	X	Com	Neely 4260 (DINO)	1955	
Pinaceae	<i>Pseudotsuga menziesii</i> var. <i>glauca</i>	<i>Pseudotsuga menziesii</i>		Douglas-fir	Tree	Wide/ Wide	Pres	X	X	Com	O'Kane 2748 (DINO)	1935	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Dinosaur National Monument, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range UT/CO	Park stat.	UT	CO	Pop. size	Source	Year doc.	Comments
	Utah	Colorado											
Plantaginaceae	<i>Plantago major</i>	<i>Plantago major</i>	Includes var. <i>pachyphylla</i>	common plantain	Perf	Intro/ Intro	Pres	X	X	Unc	Holmgren et al. 402 (DINO)	1961	Mostly native to Europe. Type locality native phase var. <i>pachyphylla</i> is Salt Lake City, Salt Lake Co., UT (Jones 1030 POM)
Plantaginaceae	<i>Plantago patagonica</i>	<i>Plantago patagonica</i>	<i>P. purshii</i> , includes vars. <i>patagonica</i> , <i>gnaphaloides</i> , <i>spinulosa</i> , & <i>breviscapa</i>	woolly plantain	AnnF	Wide/ Wide	Pres	X	X	Unc	Bradley 5330 (DINO)	1912	
Polemoniaceae	<i>Collomia linearis</i>	<i>Collomia linearis</i>		small collomia	AnnF	Wide/ Wide	Pres	X	X	Unc	O'Kane 2722 (DINO)	1946	
Polemoniaceae	<i>Gilia inconspicua</i>	<i>Gilia sinuata</i>	Includes vars. <i>inconspicua</i> & <i>sinuata</i> , <i>G. ophthalmoides</i> , <i>G. sinuata</i> , <i>G. clokeyi</i> , <i>G. transmontana</i>	shy gilia	AnnF	Wide/ Periph	Pres	X	X	Unc	O'Kane & Neely 2680 (DINO)	1912	
Polemoniaceae	<i>Gilia pinnatifida</i>	<i>Gilia pinnatifida</i>	<i>Aliciella pinnatifida</i>	sticky gilia	Perf	Wide/ Wide	Pres	X	X	Unc	Neely 3966 (DINO)	1948	
Polemoniaceae	<i>Gymnosteris parvula</i>	<i>Gymnosteris parvula</i>		gymnosteris	AnnF	Sparse/ Wide	Hist	X		?	Welsh 497 (BRY)	1956	
Polemoniaceae	<i>Ipomopsis aggregata</i> var. <i>aggregata</i>	<i>Ipomopsis aggregata</i> ssp. <i>aggregata</i>	<i>Gilia aggregata</i> var. <i>aggregata</i>	scarlet gilia	Perf	Wide/ Wide	Pres	X	X	Unc	Wolf & Dever 5119 (DINO)	1948	
Polemoniaceae	<i>Ipomopsis congesta</i> var. <i>congesta</i>	<i>Ipomopsis congesta</i> var. <i>congesta</i>	<i>Gilia congesta</i> var. <i>congesta</i>	ball-head gilia	Perf	Wide/ Sparse	Pres	X	X	Com	Neely 4009 (DINO)	1912	
Polemoniaceae	<i>Ipomopsis polycladon</i>	<i>Ipomopsis polycladon</i>	<i>Gilia polycladon</i>	spreading gilia	AnnF	Wide/ Wide	Pres	X		Rare	Atwood 15129 (BRY)	1949	
Polemoniaceae	<i>Ipomopsis pumila</i>	<i>Ipomopsis pumila</i>	<i>Gilia pumila</i>	dwarf gilia	AnnF	Wide/ Wide	Pres	X	X	Unc	Dever & Wolf 5234 (DINO)	1946	
Polemoniaceae	<i>Leptodactylon caespitosum</i>	<i>Leptodactylon caespitosum</i>	<i>Linanthus caespitosus</i>	matted prickly-phlox	Perf	Sparse/ Sparse	Pres	X	X	Unc	O'Kane 3103 (DINO)	1987	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Dinosaur National Monument, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range UT/CO	Park stat.	UT	CO	Pop. size	Source	Year doc.	Comments
	Utah	Colorado											
Polemoniaceae	<i>Leptodactylon pungens</i>	<i>Leptodactylon pungens</i>	<i>Leptodactylon pungens</i> var. <i>pungens</i> , <i>Linanthus pungens</i>	prickly-phlox	Shrub	Wide/ Wide	Pres	X	X	Unc	O'Kane 2959 (DINO)	1912	
Polemoniaceae	<i>Leptodactylon watsonii</i>	<i>Leptodactylon watsonii</i>	<i>Linanthus watsonii</i>	Watson's prickly-phlox	Perf	Wide/ Wide	Pres	X	X	Unc	Neely 4395 (DINO)	1948	Type locality is Cottonwood Canyon, Salt Lake Co., UT (Watson s.n. GH)
Polemoniaceae	<i>Microsteris gracilis</i> var. <i>humilior</i>	<i>Microsteris gracilis</i>	<i>Phlox gracilis</i> ssp. <i>humilis</i>	slender phlox	AnnF	Wide/ Wide	Pres	X	X	Unc	Neely 3951 (DINO)	1956	
Polemoniaceae	<i>Navarretia breweri</i>	<i>Navarretia breweri</i>	yellow navarretia	AnnF	Wide/ Wide		Hist	X	X	?	Weish 501 (BRY)	1946	
Polemoniaceae	<i>Phlox austromontana</i> var. <i>austromontana</i>	<i>Phlox austromontana</i>	Var. not recognized in Cronquist et al. (1984)	desert phlox	PerF	Wide/ Wide	Pres	X	X	Unc	Friedlander & Wathen 4 (DINO)	1984	
Polemoniaceae	<i>Phlox hoodii</i> var. <i>canescens</i>	<i>Phlox hoodii</i>	Includes ssp. <i>glabrata</i> , <i>hoodii</i> , & <i>viscidula</i>	carpet phlox	PerF	Wide/ Wide	Pres	X	X	Com	Wolf & Dever 5163 (DINO)	1912	Type locality of var. <i>canescens</i> is S of Great Salt Lake, Tooele Co., UT (Beckwith 4 GH)
Polemoniaceae	<i>Phlox longifolia</i>	<i>Phlox longifolia</i>	Includes vars. <i>longifolia</i> & <i>stansburyi</i>	long-leaf phlox	PerF	Wide/ Wide	Pres	X	X	Unc	O'Kane 2715 (DINO)	1912	Cited as <i>P. speciosa</i> by Graham (1937). Includes type of <i>P. grahmanii</i> , a specimen infested by rust.
Polemoniaceae	<i>Phlox multiflora</i>	<i>Phlox multiflora</i>	Includes ssp. <i>depressa</i> , <i>multiflora</i> , & <i>patula</i>	Rocky Mountain phlox	PerF	Periph/ Wide	Hist		X	?	Harrington 2010 (CSU)	1946	
Polygonaceae	<i>Eriogonum batemanii</i> var. <i>batemanii</i>	<i>Eriogonum batemanii</i>	<i>E. batemanii</i>	Bateman's wild buckwheat	PerF	RegEn/ RegEn	Pres	X		Unc	Bradley 5304 (DINO)	1949	Type locality is Price, Carbon Co., UT (Jones s.n. POM)

Appendix A. Confirmed, historical, and reported vascular plant taxa of Dinosaur National Monument, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range UT/CO	Park stat.	UT	CO	Pop. size	Source	Year doc.	Comments
	Utah	Colorado											
Polygonaceae	<i>Eriogonum brevicaule</i> var. <i>viridulum</i>	<i>Eriogonum brevicaule</i> var. <i>viridulum</i>	<i>E. viridulum</i> , <i>E. duchesneense</i>	Duchesne wild buckwheat	PerF	LocEn/ LocEn	Pres	X		Rare	Friedlander & Wathen 28 (DINO)	1967	Type locality is 8 miles E of Duchesne, Duchesne Co., UT (Reveal 675 UTC). USFWS: 3C
Polygonaceae	<i>Eriogonum cernuum</i> var. <i>cernuum</i>	<i>Eriogonum cernuum</i>	Vars. not recognized in <i>Flora of North America</i> (2005)	nodding wild buckwheat	AnnF	Wide/ Wide	Pres	X	X	Unc	Dever & Wolf 5084 (DINO)	1948	
Polygonaceae	<i>Eriogonum corymbosum</i> var. <i>corymbosum</i>	<i>Eriogonum corymbosum</i> var. <i>corymbosum</i>	Includes var. <i>velutinum</i> & <i>E. lancifolium</i>	crisp-leaf wild buckwheat	Shrub	Wide/ Wide	Pres	X	X	Unc	Bradley 5371 (DINO)	1948	
Polygonaceae	<i>Eriogonum flexum</i>	<i>Stenogonum flexum</i>		bent wild buckwheat	AnnF	RegEn/ RegEn	Hist	X		?	Holmgren & Reveal 1853 (BRY)	1965	
Polygonaceae	<i>Eriogonum gordonii</i>	<i>Eriogonum gordonii</i>		Gordon's wild buckwheat	AnnF	Wide/ Wide	Pres	X		Unc	Wolf & Dever 5258 (DINO)	1948	
Polygonaceae	<i>Eriogonum heracleoides</i>	<i>Eriogonum heracleoides</i>	<i>E. heracleoides</i> var. <i>heracleoides</i>	whorled wild buckwheat	PerF	Wide/ Wide	Pres	X	X	Unc	O'Kane 3088 (DINO)	1956	
Polygonaceae	<i>Eriogonum hookeri</i>	<i>Eriogonum hookeri</i>		Hooker's wild buckwheat	AnnF	Wide/ Wide	Hist	X		?	Brotherson 954 (BRY)	1965	Type locality is American Fork Canyon, Utah Co., Utah (Watson 1033 US)
Polygonaceae	<i>Eriogonum inflatum</i> var. <i>fusiforme</i>		<i>E. fusiforme</i>	Grand Valley desert trumpet	AnnF	RegEn/ NA	Pres	X		Unc	Welsh 411 (BRY)	1912	
Polygonaceae	<i>Eriogonum jamesii</i> var. <i>flavescens</i>	<i>Eriogonum jamesii</i>	<i>E. arcuatum</i> var. <i>arcuatum</i>	Baker's wild buckwheat	PerF	Wide/ Wide	Hist	X		?	MacLeod 44a (DINO)	1960	Type locality is Aquarius Plateau, Wayne Co., UT (Ward 722 GH)

Appendix A. Confirmed, historical, and reported vascular plant taxa of Dinosaur National Monument, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range UT/CO	Park stat.	UT	CO	Pop. size	Source	Year doc.	Comments
	Utah	Colorado											
Polygonaceae	<i>Eriogonum lonchophyllum</i> var. <i>saurinum</i>	<i>Eriogonum saurinum</i>	Vars. not recognized in <i>Flora of North America</i> (2005)	Dinosaur wild buckwheat	Shrub	LocEn/ LocEn	Pres	X	X	Rare	O'Kane 3036 (DINO)	1948	Type locality is Island Park Rd NE of Vernal, Dinosaur NM, Uintah Co., UT (Holmgren & Reveal 3019 UTC). USFWS: 3C
Polygonaceae	<i>Eriogonum microthecum</i> var. <i>laxiflorum</i>	<i>Eriogonum microthecum</i> var. <i>laxiflorum</i>		slender wild buckwheat	Shrub	Wide/ Wide	Pres	X	X	Unc	Wolf & Dever 5107 (DINO)	1948	
Polygonaceae	<i>Eriogonum microthecum</i> var. <i>simpsonii</i>	<i>Eriogonum microthecum</i> var. <i>simpsonii</i>	<i>E. microthecum</i> var. <i>foliosum</i> , includes <i>E. phoeniceum</i>	slender wild buckwheat	PerF	Wide/ Wide	Pres	X	X	Unc	Naumann 303 (DINO)	1983	
Polygonaceae	<i>Eriogonum ovalifolium</i>	<i>Eriogonum ovalifolium</i> var. <i>ovalifolium</i>	<i>E. ovalifolium</i> var. <i>purpureum</i> , vars. not recognized in Welsh et al. (2003)	cushion wild buckwheat	PerF	Wide/ Wide	Pres	X	X	Com	Wolf & Dever 5011 (DINO)	1912	
Polygonaceae	<i>Eriogonum salsuginosum</i>	<i>Stenogonum salsuginosum</i>		smooth wild buckwheat	AnnF	Wide/ Wide	Hist	X		?	Weber 5330 (DINO)	1933	
Polygonaceae	<i>Eriogonum shockleyi</i>	<i>Eriogonum shockleyi</i> var. <i>longilobum</i>	Includes var. <i>shockleyi</i>	Shockley's wild buckwheat	PerF	Wide/ Wide	Hist	X	X	?	MacLeod 24b (DINO)	1961	Type locality of var. <i>longilobum</i> is near Price, Carbon Co., UT (Jones 5590j POM)
Polygonaceae	<i>Eriogonum tumulosum</i>	<i>Eriogonum tumulosum</i>		Woodside wild buckwheat	PerF	RegEn/ RegEn	Pres	X	X	Rare	Neely 4019 (DINO)	1961	Type locality is Red Plateau SW of Woodside, Emery Co., UT (Ripley & Barneby 8678 CAS). USFWS: 3C, CO BLM: Sensitive
Polygonaceae	<i>Eriogonum umbellatum</i> var. <i>aureum</i>	<i>Eriogonum umbellatum</i> var. <i>aureum</i>	Included in var. <i>umbellatum</i> by some authors	golden sulphur wild buckwheat	PerF	RegEn/ RegEn	Pres	X	X	Unc	Neely 4253 (DINO)	1987	
Polygonaceae	<i>Eriogonum umbellatum</i> var. <i>umbellatum</i>	<i>Eriogonum umbellatum</i> var. <i>umbellatum</i>	Some authors include var. <i>aureum</i>	sulfur wild buckwheat	PerF	Wide/ Wide	Pres	X	X	Com	Wolf & Dever 5103 (DINO)	1948	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Dinosaur National Monument, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range UT/CO	Park stat.	UT	CO	Pop. size	Source	Year doc.	Comments
	Utah	Colorado											
Polygonaceae	<i>Polygonum amphibium</i>	<i>Persicaria amphibia</i>	<i>Polygonum amphibium</i> var. <i>emersum</i> , <i>Polygonum</i> <i>coccineum</i> , <i>Persicaria</i> <i>coccinea</i>	water smartweed	PerF	Wide/ Wide	Hist	X	X	?	Wolf 5288 (DINO)	1948	
Polygonaceae	<i>Polygonum aviculare</i>	<i>Polygonum arenastrum</i>	<i>P. aviculare</i> ssp. <i>aviculare</i>	yard knotweed	AnnF	Intro/ Intro	Pres	X	X	Unc	O'Kane 3112 (DINO)	1948	Native to Eurasia.
Polygonaceae	<i>Polygonum douglasii</i> var. <i>douglasii</i>	<i>Polygonum douglasii</i>		Douglas' knotweed	AnnF	Wide/ Wide	Pres	X	X	Unc	Friedlander & Wathen 121 (DINO)	1984	
Polygonaceae	<i>Polygonum douglasii</i> var. <i>johnstonii</i>		<i>P. sawatchense</i> var. <i>sawatchense</i> . Var. not recognized by Weber and Wittmann (2001).	Sawatch knotweed	AnnF	Wide/ Wide	Pres	X	X	Unc	Naumann 222 (DINO)	1988	
Polygonaceae	<i>Polygonum kelloggii</i>	<i>Polygonum polygaloides</i> ssp. <i>kelloggii</i>	<i>P. kelloggii</i> var. <i>kelloggii</i>	Kellogg's knotweed	AnnF	Wide/ Wide	Rep	X	X	?	Naumann (2002)	NA	
Polygonaceae	<i>Polygonum lapathifolium</i>	<i>Persicaria lapathifolia</i>		willow-weed	AnnF	Intro/ Intro	Pres	X	X	Unc	Holmgren et al. 403 (DINO)	1961	Native to Eurasia
Polygonaceae	<i>Rumex crispus</i>	<i>Rumex crispus</i>		curly dock	PerF	Intro/ Intro	Pres	X	X	Unc	Neely 4219 (DINO)	1955	Native to Eurasia
Polygonaceae	<i>Rumex hymenosepalus</i>	<i>Rumex hymenosepalus</i>		canaigre dock	PerF	Wide/ Wide	Hist	X	X	?	Weber 5328 (DINO)	1933	
Polygonaceae	<i>Rumex maritimus</i> var. <i>fueginus</i>	<i>Rumex maritimus</i> var. <i>fueginus</i>	<i>R. fueginus</i>	golden dock	AnnF	Wide/ Wide	Hist	X	X	?	Holmgren et al. 418 (DINO)	1948	
Polygonaceae	<i>Rumex salicifolius</i> ssp. <i>triangulivalvis</i>	<i>Rumex triangulivalvis</i>	<i>R. mexicanus</i> , <i>R. salicifolius</i> var. <i>mexicanus</i> , <i>R. utahensis</i> , <i>R.</i> <i>triangulivalvis</i> var. <i>mexicanus</i> , <i>Rumex</i> <i>triangulivalvis</i> var. <i>montigenitus</i>	willow dock	PerF	Wide/ Wide	Hist	X	X	?	Holmgren et al. 428 (DINO)	1961	
Polypodiaceae (Adiantaceae)	<i>Adiantum capillus-veneris</i>	<i>Adiantum capillus-veneris</i>		southern maidenhair fern	Fern	Wide/ Sparse	Pres	X	X	Rare	Naumann 281 (DINO)	1988	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Dinosaur National Monument, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range UT/CO	Park stat.	UT	CO	Pop. size	Source	Year doc.	Comments
	Utah	Colorado											
Polyodiaceae (Aspleniaceae)	<i>Asplenium septentrionale</i>	<i>Asplenium septentrionale</i>		forked spleenwort	Fern	Sparse/ Sparse	Pres	X	X	Rare	Neely 4455 (DINO)	1987	
Polyodiaceae (Adiantaceae, Sinopteridaceae)	<i>Cheilanthes feei</i>	<i>Cheilanthes feei</i>		slender lip-fern	Fern	Wide/ Wide	Pres	X	X	Unc	O'Kane 3119 (DINO)	1987	
Polyodiaceae (Aspleniaceae)	<i>Cystopteris fragilis</i>	<i>Cystopteris fragilis</i>	Includes <i>C. utahensis</i> , <i>C. reevesiana</i> , & <i>C. tenuis</i>	brittle bladder fern	Fern	Wide/ Wide	Pres	X	X	Unc	O'Kane 2737 (DINO)	1983	Type locality of <i>C. utahensis</i> is Negro Bill Canyon, Grand Co., UT (Windham & Windham 90-282)
Polyodiaceae (Adiantaceae, Sinopteridaceae)	<i>Pellaea breweri</i>	<i>Pellaea breweri</i>		Brewer's cliff-brake	Fern	Wide/ Periph	Pres	X	X	Rare	Wolf & Dever 5206 (DINO)	1948	
Polyodiaceae (Adiantaceae, Sinopteridaceae)	<i>Pellaea glabella</i> var. <i>occidentalis</i>	<i>Pellaea glabella</i> ssp. <i>simplex</i>	<i>P. occidentalis</i>	western cliffbrake	Fern	Periph/ Periph	Pres	X	X	Unc	O'Kane 2685 (DINO)	1948	
Polyodiaceae (Aspleniaceae, Woodsiaceae)	<i>Woodsia oregana</i>	<i>Woodsia oregana</i> ssp. <i>cathartiana</i>	Includes ssp. <i>oregana</i> & <i>scopulina</i>	Oregon woodsia	Fern	Periph/ Wide	Pres	X	X	Unc	Rodeck 4424 (DINO)	1948	
Portulacaceae	<i>Claytonia lanceolata</i>	<i>Claytonia lanceolata</i>	<i>C. lanceolata</i> var. <i>lanceolata</i> . Some authors include <i>C. rosea</i>	lanceleaf springbeauty	PerF	Wide/ Wide	Pres	X	X	Unc	O'Kane 2736 (DINO)	1987	
Portulacaceae	<i>Lewisia rediviva</i>	<i>Lewisia rediviva</i>	Includes vars. <i>minor</i> & <i>rediviva</i>	Oregon bitter-root	PerF	Wide/ Periph	Pres	X	X	Rare	Neely 4340 (DINO)	1987	
Portulacaceae	<i>Montia perfoliata</i> var. <i>perfoliata</i>	<i>Claytonia rubra</i>	<i>C. perfoliata</i> ssp. <i>intermontana</i> & ssp. <i>perfoliata</i>	miner's lettuce	AnnF	Wide/ Periph	Pres	X	X	Unc	Naumann 414 (DINO)	1995	
Portulacaceae	<i>Portulaca oleracea</i>	<i>Portulaca oleracea</i>		common purslane	AnnF	Intro/ Intro	Hist	X	X	?	Holmgren et al. 424 (DINO)	1961	Native to E North America
Portulacaceae	<i>Talinum parviflorum</i>	<i>Talinum parviflorum</i>	<i>Phemeranthus parviflorus</i> , <i>P. confertiflorus</i>	small-flowered fame-flower	PerF	Wide/ Wide	Pres	X	X	Unc	Tilley s.n. (DINO)	2002	
Potamogetonaceae	<i>Potamogeton alpinus</i>	<i>Potamogeton alpinus</i> var. <i>tenuifolius</i>		northern pondweed	PerF	Wide/ Wide	Hist	X	X	?	Tanner 13979 (DINO)	1961	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Dinosaur National Monument, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range UT/CO	Park stat.	UT	CO	Pop. size	Source	Year doc.	Comments
	Utah	Colorado											
Potamogetonaceae	<i>Potamogeton nodosus</i>	<i>Potamogeton nodosus</i>		longleaf pondweed	PerF	Wide/ Wide	Hist	X	X	?	Holmgren et al. 444 (DINO)	1961	
Potamogetonaceae	<i>Potamogeton pectinatus</i>	<i>Potamogeton pectinatus</i>	<i>Stuckenia pectinata</i> , <i>Coleogeton pectinatus</i>	fennel-leaf pondweed	PerF	Wide/ Wide	Hist	X	X	?	Holmgren et al. 448 (DINO)	1961	
Potamogetonaceae	<i>Potamogeton pusillus</i>	<i>Potamogeton pusillus</i>	<i>P. pusillus</i> var. <i>pusillus</i>	dwarf pondweed	PerF	Wide/ Wide	Rep	X	X	?	Naumann (2002) and Weber et al. (1982)	NA	
Primulaceae	<i>Androsace filiformis</i>	<i>Androsace filiformis</i>		slender-stem rock-jasmine	AnnF	Wide/ Wide	Pres	X	X	Unc	Tilley s.n. (DINO)	2002	
Primulaceae	<i>Androsace occidentalis</i>	<i>Androsace occidentalis</i>		western rock-jasmine	AnnF	Wide/ Wide	Pres	X	X	Unc	O'Kane 3010 (DINO)	1948	
Primulaceae	<i>Androsace septentrionalis</i>	<i>Androsace septentrionalis</i>	Includes ssp. <i>puberulenta</i> , <i>subumbellata</i> , & var. <i>subulifera</i>	pygmy-flower rock-jasmine	AnnF	Wide/ Wide	Pres	X	X	Unc	Neely 4004 (DINO)	1948	
Primulaceae	<i>Dodecatheon pulchellum</i> var. <i>pulchellum</i>	<i>Dodecatheon pulchellum</i>	<i>D. pauciflorum</i> . Includes "subvars." from UT Flora: <i>coriaceum</i> , <i>atwoodii</i> , & <i>huberi</i>	dark-throat shooting-star	PerF	Wide/ Wide	Pres	X	X	Unc	Rodeck 4441 (DINO)	1933	O'Kane #3171 (DINO) is atypically robust and may be subvar. <i>huberi</i> (var. <i>zionense</i>).
Primulaceae (Myrsinaceae)	<i>Glaux maritima</i>	<i>Glaux maritima</i>		sea-milkwort	PerF	Wide/ Wide	Hist	X	X	?	Holmgren & Jensen 13969 (DINO)	1961	
Pyrolaceae (Ericaceae)	<i>Pyrola secunda</i>	<i>Orthilia secunda</i>		sidebells pyrola	PerF	Wide/ Wide	Hist	X	X	?	Wolf & Dever 5184 (DINO)	1948	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Dinosaur National Monument, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range UT/CO	Park stat.	UT	CO	Pop. size	Source	Year doc.	Comments
	Utah	Colorado											
Ranunculaceae (Helleboraceae)	<i>Aquilegia grahamii</i>			Graham's columbine	Perf	LocEn/ NA	Pres	X		Unc	Reidel 42 (DINO)	1991	Type locality is Hole in the Wall Canyon, Uinta Mtns., 10 miles N of Vernal, Uintah Co., UT (Huber & Plunkett 91 BRY). USFS Region 4: Sensitive
Ranunculaceae (Helleboraceae)	<i>Aquilegia micrantha</i>	<i>Aquilegia micrantha</i>		alcove columbine	Perf	RegEn/ RegEn	Pres	X	X	Unc	Rodeck 4428 (DINO)	1948	Type locality is Bluff, San Juan Co., UT (Wetherill s.n. CAS)
Ranunculaceae	<i>Clematis ligusticifolia</i>	<i>Clematis ligusticifolia</i>		white virgin's-bower	Perf	Wide/ Wide	Pres	X	X	Unc	Wolf & Dever 5072 (DINO)	1948	
Ranunculaceae (Helleboraceae)	<i>Delphinium nuttallianum</i>	<i>Delphinium nuttallianum</i>	<i>D. nelsonii</i>	Nuttall's larkspur	Perf	Wide/ Wide	Pres	X	X	Unc	Weber 5387 (DINO)	1933	
Ranunculaceae	<i>Ranunculus aquatilis</i> var. <i>diffusus</i>	<i>Batrachium circinatum</i>	<i>R. circinatus</i> , <i>R. longirostris</i> , <i>R. trichophyllus</i> var. <i>eradicatus</i> , <i>R. trichophyllus</i> var. <i>trichophyllus</i> , <i>Batrachium longirostre</i> , <i>B. circinatum</i> ssp. <i>subrigidum</i> , <i>B. trichophyllum</i>	thread water-buttercup	Perf	Wide/ Wide	Rep	X		?	Naumann (2002)	NA	
Ranunculaceae	<i>Ranunculus cymbalaria</i>	<i>Halerpestes cymbalaria</i> ssp. <i>saximontana</i>	<i>R. cymbalaria</i> var. <i>cymbalaria</i>	marsh buttercup	Perf	Wide/ Wide	Pres	X	X	Unc	Wolf 5272 (DINO)	1933	
Ranunculaceae	<i>Ranunculus glaberrimus</i> var. <i>ellipticus</i>	<i>Ranunculus glaberrimus</i> var. <i>ellipticus</i>	Includes <i>R. oreogenes</i>	sagebrush buttercup	Perf	Wide/ Wide	Pres		X	Unc	O'Kane 2741 (DINO)	1987	
Ranunculaceae	<i>Ranunculus gmelinii</i>	<i>Ranunculus gmelinii</i> var. <i>hookeri</i>		lesser yellow water buttercup	Perf	Sparse/ Wide	Rep	X	X	NA	Holmgren (1962)	NA	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Dinosaur National Monument, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range UT/CO	Park stat.	UT	CO	Pop. size	Source	Year doc.	Comments
	Utah	Colorado											
Ranunculaceae	<i>Ranunculus jovis</i>	<i>Ranunculus jovis</i>		Jupiter buttercup	PerF	RegEn/ RegEn	Pres	X		Unc	Naumann 417 (DINO)	1996	
Ranunculaceae	<i>Ranunculus macounii</i>	<i>Ranunculus macounii</i>		Macoun's buttercup	PerF	Wide/ Wide	Rep	X	X	?	Holmgren (1962)	NA	
Ranunculaceae	<i>Ranunculus sceleratus</i> var. <i>multifidus</i>	<i>Hecatonia scelerata</i>		blister buttercup	AnnF	Wide/ Wide	Pres	X	X	Unc	Neely 4379 (DINO)	1987	
Ranunculaceae	<i>Ranunculus testiculatus</i>	<i>Ceratocephala orthoceras</i>	<i>C. testiculata</i>	bur buttercup	AnnF	Intro/ Intro	Pres	X		Unc	Reidel 169 (DINO)	1991	Native to Eurasia
Rhamnaceae	<i>Ceanothus velutinus</i>	<i>Ceanothus velutinus</i>	<i>C. velutinus</i> var. <i>velutinus</i>	deer-brush	Shrub	Wide/ Wide	Pres	X	X	Unc	Wolf & Dever 5222 (DINO)	1948	
Rosaceae	<i>Amelanchier alnifolia</i>	<i>Amelanchier alnifolia</i>	Saskatoon serviceberry	Shrub	Shrub	Wide/ Wide	Rep	X	X	Unc	Graham (1937) and Northern Colorado Plateau Network (in ed.).	1935	All specimens at DINO herbarium are <i>A. utahensis</i>
Rosaceae	<i>Amelanchier utahensis</i>	<i>Amelanchier utahensis</i>	Utah serviceberry	Shrub	Shrub	Wide/ Wide	Pres	X	X	Com	Wolf & Dever 5062 (DINO)	1912	
Rosaceae	<i>Cercocarpus intricatus</i>	<i>Cercocarpus intricatus</i>	dwarf mountain mahogany	Shrub	Shrub	Wide/ Wide	Pres	X	X	Unc	O'Kane & Neely 2671 (DINO)	1948	Type locality is American Fork Canyon, Utah Co., UT (Watson 314 US)
Rosaceae	<i>Cercocarpus ledifolius</i> var. <i>intermontanus</i>	<i>Cercocarpus ledifolius</i>	curl-leaf mountain mahogany	Shrub	Shrub	Wide/ Wide	Pres	X	X	Com	Wolf & Dever 5157 (DINO)	1948	Variety not determined on DINO plants. Type locality is ca 10 km E of Oak City, Millard Co., UT (Holmgren & Holmgren 11298 NY)
Rosaceae	<i>Cercocarpus montanus</i>	<i>Cercocarpus montanus</i>	alder-leaf mountain mahogany	Shrub	Shrub	Wide/ Wide	Pres	X	X	Com	O'Kane 2726 (DINO)	1912	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Dinosaur National Monument, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range UT/CO	Park stat.	UT	CO	Pop. size	Source	Year doc.	Comments
	Utah	Colorado											
Rosaceae	<i>Crataegus douglasii</i> var. <i>rivularis</i>	<i>Crataegus rivularis</i>		river hawthorn	Shrub	Wide/ Wide	Rep	X		?	Naumann (2002)	NA	
Rosaceae	<i>Holodiscus dumosus</i>	<i>Holodiscus discolor</i>	<i>H. microphyllus</i>	bush oceanspray	Shrub	Wide/ Wide	Pres	X	X	Unc	Holmgren & Jensen 13957 (DINO)	1948	
Rosaceae	<i>Ivesia gordonii</i>	<i>Ivesia gordonii</i>		Gordon's ivesia	PerF	Wide/ Wide	Pres	X	X	Unc	O'Kane 3100 (DINO)	1956	
Rosaceae	<i>Petrophyton caespitosum</i>	<i>Petrophyton caespitosum</i>	<i>Spiraea caespitosa</i>	rock spiraea	PerF	Wide/ Wide	Pres	X	X	Unc	Rodeck 4440 (DINO)	1948	
Rosaceae	<i>Physocarpus alternans</i>	<i>Physocarpus alternans</i>		dwarf ninebark	Shrub	Wide/ Wide	Pres		X	Unc	Neely 4107 (DINO)	1987	
Rosaceae	<i>Potentilla anserina</i>	<i>Argentina anserina</i>		silverweed	PerF	Wide/ Wide	Pres	X	X	Unc	Wolf & Dever 5230 (DINO)	1948	
Rosaceae	<i>Potentilla arguta</i> var. <i>convallaria</i>	<i>Drymocalis arguta</i>		tall cinquefoil	PerF	Wide/ Wide	Hist		X	?	Wolf & Dever 5214 (DINO)	1948	
Rosaceae	<i>Potentilla biennis</i>	<i>Potentilla biennis</i>		biennial cinquefoil	AnnF	Wide/ Wide	Pres		X	Unc	O'Kane 3110 (DINO)	1945	
Rosaceae	<i>Potentilla concinna</i> var. <i>modesta</i>	<i>Potentilla concinna</i>	<i>P. concinna</i> . Combined with <i>P. rubricaulis</i> in Holmgren et al. (1997)	modest cinquefoil	PerF	RegEn/ RegEn	Pres		X	Unc	Neely 4320 (DINO)	1986	Type locality is Mt, Barrette near Marysville, Piute Co., UT (Rydberg & Carlton 7261 NY)
Rosaceae	<i>Potentilla gracilis</i> var. <i>brunnescens</i>	<i>Potentilla gracilis</i> var. <i>brunnescens</i>		glandular cinquefoil	PerF	Wide/ Sparse	Hist		X	?	Welsh 425a (BRY)	1955	
Rosaceae	<i>Potentilla gracilis</i> var. <i>elmeri</i>	<i>Potentilla gracilis</i> var. <i>elmeri</i>	<i>P. pectinifolia</i>	comb-leaf cinquefoil	PerF	Wide/ Wide	Rep		X	?	Holmgren (1962)	NA	
Rosaceae	<i>Potentilla gracilis</i> var. <i>fastigiata</i>	<i>Potentilla gracilis</i> var. <i>glabrata</i>	<i>P. gracilis</i> var. <i>nuttallii</i>	glabrate cinquefoil	PerF	Wide/ Sparse	Pres		X	Unc	Neely 4367 (DINO)	1987	
Rosaceae	<i>Potentilla gracilis</i> var. <i>pulcherrima</i>	<i>Potentilla pulcherrima</i>		beautiful cinquefoil	PerF	Wide/ Wide	Hist		X	?	Welsh 474 (BRY)	1956	
Rosaceae	<i>Potentilla ovina</i> var. <i>ovina</i>	<i>Potentilla ovina</i> var. <i>ovina</i>		sheep cinquefoil	PerF	Wide/ Wide	Pres		X	Unc	MacLeod 70b (DINO)	1946	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Dinosaur National Monument, organized by family and scientific name with taxonomic and biogeographic notes, cont.

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	Utah	Colorado											
Rosaceae	<i>Prunus virginiana</i> var. <i>melanocarpa</i>	<i>Padus virginiana</i> ssp. <i>melanocarpa</i>		western chokecherry	Shrub	Wide/ Wide	Pres	X	X	Unc	O'Kane & Reidel 2804 (DINO)	1935	
Rosaceae	<i>Purshia tridentata</i>	<i>Purshia tridentata</i>		antelope bitterbrush	Shrub	Wide/ Wide	Pres	X	X	Com	Wolf & Dever 5132 (DINO)	1948	
Rosaceae	<i>Rosa nutkana</i> var. <i>hispida</i>	<i>Rosa nutkana</i>		Nootka rose	Shrub	Wide/ Wide	Pres	X	X	Unc	Wolf & Dever 5219 (DINO)	1948	
Rosaceae	<i>Rosa odorata</i>	<i>Rosa odorata</i>		tea rose	Shrub	Intro/ Intro	Pres	X	X	Unc	Neely 4333 (DINO)	1987	Native to Eurasia
Rosaceae	<i>Rosa woodsii</i>	<i>Rosa woodsii</i>	<i>R. woodsii</i> var. <i>ultramontana</i> , includes <i>R. manca</i>	Woods' rose	Shrub	Wide/ Wide	Pres	X	X	Com	O'Kane 3025 (DINO)	1935	
Rosaceae	<i>Rubus idaeus</i> var. <i>strigosus</i>	<i>Rubus idaeus</i> ssp. <i>melanolasius</i>	<i>R. idaeus</i> var. <i>aculeatissimus</i>	common red raspberry	Shrub	Wide/ Wide	Pres	X	X	Unc	Neely 4357 (DINO)	1987	
Rubiaceae	<i>Galium aparine</i> var. <i>echinospermum</i>	<i>Galium spurium</i>		cleavers	AnnF	Wide/ Wide	Pres	X	X	Unc	Friedlander & Wathen 117 (DINO)	1983	
Rubiaceae	<i>Galium bifolium</i>	<i>Galium bifolium</i>		twin-leaf bedstraw	AnnF	Wide/ Wide	Pres	X	X	Unc	Wolf & Dever 5217 (DINO)	1948	Type locality is Wasatch Mtns., Salt Lake Co., UT (Watson 480 US)
Rubiaceae	<i>Galium multiflorum</i> var. <i>coloradoense</i>	<i>Galium coloradoense</i>		Colorado bedstraw	PerF	RegEn/ RegEn	Pres	X	X	Unc	Neely 4225 (DINO)	1912	
Rubiaceae	<i>Galium multiflorum</i> var. <i>multiflorum</i>	<i>Galium multiflorum</i>		shrubby bedstraw	PerF	Wide/ Periph	Pres	X	X	Unc	Naumann 188 (DINO)	1988	
Rubiaceae	<i>Galium triflorum</i>	<i>Galium triflorum</i>		sweet-scented bedstraw	PerF	Wide/ Wide	Pres	X	X	Unc	Naumann 179 (DINO)	1988	
Salicaceae	<i>Populus angustifolia</i>	<i>Populus angustifolia</i>		narrow-leaved cottonwood	Tree	Wide/ Wide	Pres	X	X	Unc	Rodeck 4432 (DINO)	1933	
Salicaceae	<i>Populus fremontii</i> var. <i>fremontii</i>	<i>Populus fremontii</i>	<i>P. deltoides</i> var. <i>fremontii</i>	Fremont cottonwood	Tree	Wide/ Wide	Pres	X	X	Com	O'Kane 2752 (DINO)	1948	
Salicaceae	<i>Populus fremontii</i> var. <i>wislizeni</i>	<i>Populus deltoides</i> ssp. <i>wislizenii</i>		Rio Grande cottonwood	Tree	Periph/ Wide	Pres	X	X	Unc	Fowler & May 1453 (RM)	1945	
Salicaceae	<i>Populus tremuloides</i>	<i>Populus tremuloides</i>		quaking aspen	Tree	Wide/ Wide	Pres	X	X	Com	Wolf & Dever 5186 (DINO)	1948	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Dinosaur National Monument, organized by family and scientific name with taxonomic and biogeographic notes, cont.

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	Utah	Colorado											
Salicaceae	<i>Populus x intercurrents</i>	<i>Populus x acuminata</i>	<i>P. acuminata</i> . Hybrid of <i>P. fremontii</i> x <i>P. angustifolia</i>	lance-leaf cottonwood	Tree	Wide/ Wide	Pres	X	X	Com	Rodeck 4433 (DINO)	1948	Type locality is Jesse Ewing Canyon, Daggett Co., UT (Goodrich 24441 BRY)
Salicaceae	<i>Salix amygdaloides</i>	<i>Salix amygdaloides</i>		peach-leaf willow	Tree	Wide/ Wide	Pres	X	X	Unc	Neely 4203 (DINO)	1987	
Salicaceae	<i>Salix eriocephala</i> var. <i>watsonii</i>	<i>Salix lutea</i>	<i>S. rigida</i> var. <i>watsonii</i>	yellow willow	Shrub	Wide/ Wide	Pres	X	X	Unc	Naumann 167 (DINO)	1933	
Salicaceae	<i>Salix exigua</i> var. <i>stenophylla</i>	<i>Salix exigua</i>	<i>S. exigua</i> var. <i>exigua</i>	coyote willow	Shrub	Wide/ Wide	Pres	X	X	Com	Weber 5306 (DINO)	1933	
Salicaceae	<i>Salix lucida</i> ssp. <i>caudata</i>	<i>Salix lucida</i> ssp. <i>caudata</i>	<i>S. lasiandra</i> var. <i>caudata</i>	whiplash willow	Shrub	Wide/ Wide	Pres	X	X	Unc	O'Kane 2826 (DINO)	1955	
Salicaceae	<i>Salix monticola</i>	<i>Salix monticola</i>		mountain willow	Shrub	Wide/ Wide	Rep	X	X	Unc	Graham (1937) & NCPN (in ed.)	1933	
Salicaceae	<i>Salix scouleriana</i>	<i>Salix scouleriana</i>		Scouler's willow	Shrub	Wide/ Wide	Pres	X	X	Unc	Wolf & Dever 5187 (DINO)	1948	
Santalaceae	<i>Comandra umbellata</i> var. <i>pallida</i>	<i>Comandra umbellata</i>	<i>C. pallida</i>	bastard toadflax	PerF	Wide/ Wide	Pres	X	X	Unc	Wolf & Dever 5026 (DINO)	1933	
Saxifragaceae (Hydrangeaceae)	<i>Fendlerella utahensis</i>	<i>Fendlerella utahensis</i>		Utah fendlerella	Shrub	Wide/ Periph	Pres	X	X	Unc	Weber 5338 (DINO)	1950	
Saxifragaceae	<i>Heuchera parvifolia</i>	<i>Heuchera parvifolia</i>	Includes vars. <i>major</i> , <i>parvifolia</i> , & <i>utahensis</i>	littleleaf alumroot	PerF	Wide/ Wide	Pres	X	X	Unc	Wolf & Dever 5136 (DINO)	1948	Type locality of var. <i>utahensis</i> is City Creek Canyon, Salt Lake Co., UT (Jones 1458 NY)
Saxifragaceae	<i>Lithophragma glabrum</i> var. <i>ramulosum</i>	<i>Lithophragma glabrum</i>	<i>L. bulbifera</i> , <i>L. glabra</i>	fringecup woodlandstar	PerF	Wide/ Wide	Pres	X	X	Unc	O'Kane & Riedel 2799 (DINO)	1987	
Saxifragaceae	<i>Lithophragma parviflorum</i>	<i>Lithophragma parviflorum</i>	<i>L. parviflora</i>	smallflower woodlandstar	PerF	Wide/ Sparse	Pres	X	X	Unc	Neely 3949 (DINO)	1987	
Saxifragaceae	<i>Lithophragma tenellum</i>	<i>Lithophragma tenellum</i>	<i>L. tenella</i>	slender woodlandstar	PerF	Wide/ Wide	Pres	X	X	Unc	O'Kane 2986 (DINO)	1987	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Dinosaur National Monument, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range UT/CO	Park stat.	UT	CO	Pop. size	Source	Year doc.	Comments
	Utah	Colorado											
Saxifragaceae (Parnassiaceae)	<i>Parnassia palustris</i> var. <i>montanensis</i>	<i>Parnassia palustris</i>	Includes var. <i>tenuis</i>	marsh grass- of-Parnassus	PerF	Wide/ Wide	Pres	X	X	Unc	Naumann 256 (DINO)	1988	
Saxifragaceae (Hydrangeaceae)	<i>Philadelphus</i> <i>microphyllus</i>	<i>Philadelphus</i> <i>microphyllus</i>	<i>P. microphyllus</i> var. <i>occidentalis</i> , <i>P. occidentalis</i> var. <i>occidentalis</i>	littleleaf mock-orange	Shrub	Wide/ Wide	Pres	X	X	Unc	Dever & Wolf 5281 (DINO)	1948	
Saxifragaceae (Grossulariaceae)	<i>Ribes aureum</i>	<i>Ribes aureum</i>	<i>R. aureum</i> var. <i>aureum</i>	golden currant	Shrub	Wide/ Wide	Pres	X	X	Unc	Naumann 114 (DINO)	1933	
Saxifragaceae (Grossulariaceae)	<i>Ribes cereum</i> var. <i>inebrians</i>	<i>Ribes cereum</i>	<i>R. cereum</i> var. <i>pedicellare</i>	wax currant	Shrub	Wide/ Wide	Pres	X	X	Com	Wolf & Dever 5176 (DINO)	1948	
Scrophulariaceae	<i>Castilleja chromosa</i>	<i>Castilleja chromosa</i>	<i>C. angustifolia</i> var. <i>dubia</i> , <i>C. applegatei</i> ssp. <i>martinii</i>	desert paintbrush	PerF	Wide/ Wide	Pres	X	X	Com	O'Kane 2725 (DINO)	1912	Type locality is Leroy, Uinta Co., WY (Nelson, A. 4577 RM).
Scrophulariaceae	<i>Castilleja exilis</i>	<i>Castilleja minor</i>	<i>C. minor</i> ssp. <i>minor</i>	annual paintbrush	AnnF	Wide/ Wide	Pres	X	X	Unc	Bradley 5359 (DINO)	1949	
Scrophulariaceae	<i>Castilleja linariifolia</i>	<i>Castilleja linariifolia</i>	<i>C. linariaefolia</i>	Wyoming paintbrush	PerF	Wide/ Wide	Pres	X	X	Unc	Wolf & Dever 5177 (DINO)	1948	
Scrophulariaceae	<i>Castilleja scabrida</i> var. <i>scabrida</i>	<i>Castilleja scabrida</i>	<i>C. scabrida</i>	Eastwood's paintbrush	PerF	RegEn/ RegEn	Pres	X	X	Unc	O'Kane & Neely 2664 (DINO)	1955	
Scrophulariaceae	<i>Collinsia parviflora</i>	<i>Collinsia parviflora</i>	blue-eyed Mary	AnnF	Wide/ Wide	Wide/ Wide	Pres	X	X	Unc	Neely 4100 (DINO)	1956	
Scrophulariaceae	<i>Cordylanthus</i> <i>ramosus</i>	<i>Cordylanthus</i> <i>ramosus</i>	bushy bird's- beak	AnnF	Wide/ Wide	Wide/ Wide	Pres	X	X	Unc	Friedlander & Wathen 120 (DINO)	1983	
Scrophulariaceae	<i>Limosella aquatica</i>	<i>Limosella aquatica</i>	mudwort	PerF	Wide/ Wide	Wide/ Wide	Pres	X	X	Unc	Holmgren et al. 435 (DINO)	1961	
Scrophulariaceae	<i>Linaria dalmatica</i>	<i>Linaria genistifolia</i> ssp. <i>dalmatica</i>	<i>L. genistifolia</i> ssp. <i>dalmatica</i>	Dalmatian toadflax	PerF	Intro/ Intro	Rep	X		?	Naumann (2002)	NA	CO state noxious weed (List B). Native to Europe
Scrophulariaceae	<i>Linaria vulgaris</i>	<i>Linaria vulgaris</i>	butter-and- eggs	PerF	Intro/ Intro	Intro/ Intro	Pres	X		Unc	Ballard DINO V-5 (DINO)	2003	CO state noxious weed (List B). Native to Eurasia

Appendix A. Confirmed, historical, and reported vascular plant taxa of Dinosaur National Monument, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range UT/CO	Park stat.	UT	CO	Pop. size	Source	Year doc.	Comments
	Utah	Colorado											
Scrophulariaceae	<i>Mimulus floribundus</i>	<i>Mimulus floribundus</i>		seep monkeyflower	AnnF	Wide/ Wide	Rep	X	X	?	Weber et al. (1982)	NA	
Scrophulariaceae	<i>Mimulus guttatus</i>	<i>Mimulus guttatus</i>		yellow monkeyflower	PerF	Wide/ Wide	Pres	X	X	Unc	O'Kane 3108 (DINO)	1987	
Scrophulariaceae	<i>Mimulus rubellus</i>	<i>Mimulus rubellus</i>		reddish monkeyflower	AnnF	Wide/ Wide	Pres	X		Unc	Reidel 15 (DINO)	1991	
Scrophulariaceae	<i>Mimulus suksdorfii</i>	<i>Mimulus suksdorfii</i>		Suksdorf's monkeyflower	AnnF	Wide/ Wide	Hist	X		?	Welsh 496 (BRY)	1956	
Scrophulariaceae	<i>Orthocarpus luteus</i>	<i>Orthocarpus luteus</i>		yellow owl-clover	AnnF	Wide/ Wide	Pres	X		Unc	Tilley s.n. (DINO)	2002	
Scrophulariaceae	<i>Penstemon angustifolius</i> var. <i>vernalensis</i>	<i>Penstemon angustifolius</i> var. <i>vernalensis</i>		Vernal penstemon	PerF	LocEn/ LocEn	Hist	X		?	Weber 5366 (DINO)	1912	Type locality is 3 miles N of Maeser, Uintah Co., UT (Holmgren, & Holmgren, & Barneby 8748 NY). USFWS: 3C
Scrophulariaceae	<i>Penstemon caespitosus</i> var. <i>caespitosus</i>	<i>Penstemon caespitosus</i>		mat penstemon	PerF	RegEn/ RegEn	Pres		X	Unc	Neely 4237 (DINO)	1987	
Scrophulariaceae	<i>Penstemon fremontii</i>	<i>Penstemon fremontii</i> var. <i>fremontii</i>		Fremont's penstemon	PerF	RegEn/ RegEn	Pres	X	X	Unc	O'Kane 2762 (DINO)	1912	
Scrophulariaceae	<i>Penstemon humilis</i> var. <i>humilis</i>	<i>Penstemon humilis</i>		low penstemon	PerF	Wide/ Periph	Pres		X	Unc	Wolf & Dever 5101 (DINO)	1948	
Scrophulariaceae	<i>Penstemon pachyphyllus</i> var. <i>mucronatus</i>	<i>Penstemon pachyphyllus</i> var. <i>mucronatus</i>	<i>P. mucronatus</i>	thick-leaf penstemon	PerF	RegEn/ RegEn	Pres	X	X	Unc	O'Kane & Neely 2668 (DINO)	1933	Type locality is 6.5 km S of Manila, Daggett Co., UT (Holmgren, & Barneby 8747 NY)
Scrophulariaceae	<i>Penstemon procerus</i> var. <i>procerus</i>	<i>Penstemon confertus</i> ssp. <i>procerus</i>		small-flower penstemon	PerF	Wide/ Wide	Hist		X	?	MacLeod 13a (DINO)	1960	
Scrophulariaceae	<i>Penstemon radicosus</i>	<i>Penstemon radicosus</i>		mat-root penstemon	PerF	Periph/ Periph	Pres		X	Unc	Neely 4310a (DINO)	1987	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Dinosaur National Monument, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range UT/CO	Park stat.	UT	CO	Pop. size	Source	Year doc.	Comments
	Utah	Colorado											
Scrophulariaceae	<i>Penstemon scariosus</i> var. <i>cyanomontanus</i>	<i>Penstemon scariosus</i> var. <i>cyanomontanus</i>		Blue Mountain penstemon	Perf	LocEn/ LocEn	Pres	X	X	Unc	Neely 3982 (DINO)	1956	Type locality is Blue Mountain, Uintah Co., UT (Neese et al. 11808 BRY)
Scrophulariaceae	<i>Penstemon strictus</i>	<i>Penstemon strictus</i>		Rocky Mountain penstemon	Perf	Wide/ Wide	Pres	X	X	Unc	Neely 4351 (DINO)	1987	
Scrophulariaceae	<i>Penstemon watsonii</i>	<i>Penstemon watsonii</i>		Watson's penstemon	Perf	Wide/ Wide	Pres	X	X	Unc	Wolf & Dever 5189 (DINO)	1948	
Scrophulariaceae	<i>Scrophularia lanceolata</i>	<i>Scrophularia lanceolata</i>		lance-leaf figwort	Perf	Wide/ Wide	Hist	X	X	?	Welsh 424 (BRY)	1946	
Scrophulariaceae	<i>Verbascum thapsus</i>	<i>Verbascum thapsus</i>		woolly mullein	Perf	Intro/ Intro	Rep	X		Unc	Dewey & Andersen (2006)	2005	CO state noxious weed (List C). Native to Eurasia.
Scrophulariaceae	<i>Veronica americana</i>	<i>Veronica americana</i>		American brooklime	Perf	Wide/ Wide	Pres	X	X	Unc	Holmgren et al. 429 (DINO)	1961	
Scrophulariaceae	<i>Veronica anagallis-aquatica</i>	<i>Veronica anagallis-aquatica</i>		water speedwell	Perf	Intro/ Intro	Pres	X	X	Unc	Neely 4375 (DINO)	1987	Native to Europe
Scrophulariaceae	<i>Veronica peregrina</i> var. <i>xalapensis</i>	<i>Veronica peregrina</i> var. <i>xalapensis</i>		purslane speedwell	AnnF	Wide/ Wide	Hist	X		?	Welsh 498 (BRY)	1956	
Selaginellaceae	<i>Selaginella densa</i>	<i>Selaginella densa</i>	Includes vars. <i>standleyi</i> , <i>densa</i> , & <i>scopulorum</i> , <i>S. scopulorum</i>	dense spike-moss	Fern	Wide/ Wide	Pres	X	X	Unc	O'Kane 2948 (DINO)	1987	
Selaginellaceae	<i>Selaginella mutica</i>	<i>Selaginella mutica</i>	<i>S. mutica</i> var. <i>mutica</i>	blunt-leaf spike-moss	Fern	Wide/ Wide	Pres	X	X	Unc	Holmgren & Jensen 13956 (DINO)	1955	
Solanaceae	<i>Hyoscyamus niger</i>	<i>Hyoscyamus niger</i>		black henbane	AnnF	Intro/ Intro	Rep	X		?	Naumann (2002)	NA	Native to Europe
Solanaceae	<i>Nicotiana attenuata</i>	<i>Nicotiana attenuata</i>		coyote tobacco	AnnF	Wide/ Wide	Pres	X	X	Unc	Tilley s.n. (DINO)	2002	
Solanaceae	<i>Solanum triflorum</i>	<i>Solanum triflorum</i>		cut-leaf nightshade	AnnF	Wide/ Wide	Pres	X	X	Unc	Tilley s.n. (DINO)	2002	Native to C North America, may be adventive in UT.

Appendix A. Confirmed, historical, and reported vascular plant taxa of Dinosaur National Monument, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range UT/CO	Park stat.	UT	CO	Pop. size	Source	Year doc.	Comments
	Utah	Colorado											
Tamaricaceae	<i>Tamarix chinensis</i>	<i>Tamarix ramosissima</i>	<i>T. pentandra</i>	five-stamen tamarisk	Shrub	Intro/ Intro	Pres	X	X	Com	Dever & Wolf 5090 (DINO)	1948	CO state noxious weed List B). Native to Eurasia
Typhaceae	<i>Typha latifolia</i>	<i>Typha latifolia</i>		broad-leaved cattail	PerG	Wide/ Wide	Pres	X		Com	Wolf & Dever 5054 (DINO)	1948	
Ulmaceae (Celtidaceae)	<i>Celtis reticulata</i>	<i>Celtis reticulata</i>	<i>C. laevigata</i> var. <i>reticulata</i> , <i>C.</i> <i>douglasii</i>	netleaf hackberry	Tree	Wide/ Wide	Pres	X	X	Com	Naumann 267 (DINO)	1933	
Ulmaceae	<i>Ulmus pumila</i>	<i>Ulmus pumila</i>		Siberian elm	Tree	Intro/ Intro	Rep	X		?	Naumann (2002)	NA	Native to Asia
Umbelliferae (Apiaceae)	<i>Berula erecta</i> var. <i>incisa</i>	<i>Berula erecta</i>		cutleaf water- parsnip	PerF	Wide/ Wide	Pres	X	X	Unc	Holmgren & Jensen 13978 (DINO)	1949	
Umbelliferae (Apiaceae)	<i>Cymopterus acaulis</i> var. <i>acaulis</i>	<i>Cymopterus acaulis</i>	<i>C. glomeratus</i>	plains spring- parsley	PerF	Periph/ Periph	Pres		X	Unc	Neely 3924 (DINO)	1912	
Umbelliferae (Apiaceae)	<i>Cymopterus acaulis</i> var. <i>fendleri</i>	<i>Cymopterus fendleri</i>	<i>C. glomeratus</i>	Fendler's cymopterus	PerF	Wide/ Wide	Hist	X		?	Weber 5341 (DINO)	1950	
Umbelliferae (Apiaceae)	<i>Cymopterus</i> <i>bulbosus</i>	<i>Cymopterus</i> <i>bulbosus</i>		onion spring- parsley	PerF	Wide/ Wide	Hist	X		?	Weber 5384 (DINO)	1912	
Umbelliferae (Apiaceae)	<i>Cymopterus</i> <i>constancei</i>	<i>Cymopterus</i> <i>constancei</i>		Constance's spring-parsley	PerF	Periph/ Wide	Pres		X	Unc	O'Kane 2801 (DINO)	1987	
Umbelliferae (Apiaceae)	<i>Cymopterus</i> <i>duchesnensis</i>	<i>Cymopterus</i> <i>duchesnensis</i>		Duchesne spring-parsley	PerF	RegEn/ RegEn	Pres	X		Rare	Weish 180 (BRY)	1912	Type locality is Myton, Duchesne Co., UT (Jones s.n. POM). CO BLM: Sensitive, USFWS: 3C
Umbelliferae (Apiaceae)	<i>Cymopterus</i> <i>purpureus</i> var. <i>purpureus</i>	<i>Cymopterus</i> <i>purpureus</i>	<i>C. purpureus</i>	Colorado Plateau spring-parsley	PerF	RegEn/ RegEn	Pres	X	X	Unc	Naumann 259 (DINO)	1933	
Umbelliferae (Apiaceae)	<i>Cymopterus</i> <i>terebinthinus</i> var. <i>albiflorus</i>	<i>Cymopterus</i> <i>terebinthinus</i> var. <i>calcareus</i>	<i>Pteryxia terebinthina</i> var. <i>albiflora</i>	aromatic spring-parsley	PerF	Wide/ Periph	Pres	X	X	Unc	O'Kane 3015 (DINO)	1912	
Umbelliferae (Apiaceae)	<i>Cymopterus</i> <i>terebinthinus</i> var. <i>petraeus</i>	<i>Aletes petraeus</i>	<i>C. petraeus</i> , <i>Pteryxia</i> <i>petraea</i>	rock spring- parsley	PerF	Wide/ Periph	Pres	X	X	Unc	Neely 4255 (DINO)	1987	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Dinosaur National Monument, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range UT/CO	Park stat.	UT	CO	Pop. size	Source	Year doc.	Comments
	Utah	Colorado											
Umbelliferae (Apiaceae)	<i>Ligusticum porteri</i>	<i>Ligusticum porteri</i>		southern ligusticum	PerF	Wide/ Wide	Rep	X	X	?	Holmgren (1962)	NA	
Umbelliferae (Apiaceae)	<i>Lomatium dissectum</i> var. <i>eatonii</i>	<i>Lomatium dissectum</i>	<i>L. dissectum</i> var. <i>multifidum</i>	giant lomatium	PerF	Wide/ Wide	Pres	X	X	Unc	Wolf & Dever 5208 (DINO)	1948	
Umbelliferae (Apiaceae)	<i>Lomatium grayi</i> var. <i>grayi</i>	<i>Lomatium grayi</i>		milfoil lomatium	PerF	Wide/ Wide	Pres	X	X	Unc	Neely 3979 (DINO)	1955	
Umbelliferae (Apiaceae)	<i>Lomatium juniperinum</i>	<i>Lomatium juniperinum</i>		juniper lomatium	PerF	RegEn/ RegEn	Pres	X	X	Unc	O'Kane 2781 (DINO)	1987	Type locality is Coalville, Summit Co., UT (Jones s.n. POM)
Umbelliferae (Apiaceae)	<i>Lomatium macrocarpum</i>	<i>Lomatium macrocarpum</i>		big-seed lomatium	PerF	Wide/ Wide	Rep	X		?	Goodrich and Neese (1986)	NA	
Umbelliferae (Apiaceae)	<i>Lomatium triternatum</i> ssp. <i>platycarpum</i>	<i>Lomatium triternatum</i> var. <i>platycarpum</i>	<i>L. simplex</i>	flat-seed lomatium	PerF	Wide/ Wide	Pres	X	X	Unc	Wolf & Dever 5212 (DINO)	1948	Type locality is Great Salt Lake (Stansbury s.n. NY)
Umbelliferae (Apiaceae)	<i>Orogenia linearifolia</i>	<i>Orogenia linearifolia</i>		Indian-potato	PerF	Wide/ Wide	Pres	X		Rare	Naumann 420 (DINO)	1996	Type locality is N of Parley's Park, Summit Co., UT (Watson 440 US)
Umbelliferae (Apiaceae)	<i>Osmorhiza chilensis</i>	<i>Osmorhiza chilensis</i>	<i>O. berteroi</i>	Chilean sweet-cicely	PerF	Wide/ Wide	Pres	X	X	Rare	Neely 4475 (DINO)	1987	
Umbelliferae (Apiaceae)	<i>Osmorhiza depauperata</i>	<i>Osmorhiza depauperata</i>		blunt sweet-cicely	PerF	Wide/ Wide	Pres	X	X	Unc	O'Kane 3190 (DINO)	1987	
Urticaceae	<i>Urtica dioica</i> var. <i>occidentalis</i>	<i>Urtica gracilis</i> ssp. <i>holosericea</i>	<i>U. dioica</i> ssp. <i>holosericea</i>	stinging nettle	PerF	Wide/ Periph	Pres	X		Unc	Naumann 343 (DINO)	1989	
Verbenaceae	<i>Verbena bracteata</i>	<i>Verbena bracteata</i>		prostrate vervain	PerF	Wide/ Wide	Hist	X	X	?	Holmgren et al. 407 (DINO)	1934	
Violaceae	<i>Viola adunca</i>	<i>Viola adunca</i>		hook-spur violet	PerF	Wide/ Wide	Pres	X	X	Unc	Wolf & Dever 5190 (DINO)	1948	
Violaceae	<i>Viola nephrophylla</i>	<i>Viola sororia</i>	<i>V. sororia</i> var. <i>affinis</i>	northern bog violet	PerF	Wide/ Wide	Pres	X	X	Unc	Reidel 31 (DINO)	1933	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Dinosaur National Monument, organized by family and scientific name with taxonomic and biogeographic notes, cont.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range UT/CO	Park stat.	UT	CO	Pop. size	Source	Year doc.	Comments
	Utah	Colorado											
Violaceae	<i>Viola nuttallii</i> var. <i>major</i>	<i>Viola praemorsa</i> ssp. <i>major</i>	<i>V. nuttallii</i> var. <i>praemorsa</i> , <i>V.</i> <i>praemorsa</i> ssp. <i>lingulifolia</i> , <i>V.</i> <i>praemorsa</i> var. <i>altior</i>	upland yellow violet	PerF	Wide/ Wide	Hist	X	X	?	MacLeod 56b (DINO)	1948	
Violaceae	<i>Viola nuttallii</i> var. <i>vallicola</i>	<i>Viola vallicola</i>		valley violet	PerF	Wide/ Wide	Pres		X	?	Naumann 180 (DINO)	1988	
Violaceae	<i>Viola purpurea</i> var. <i>venosa</i>	<i>Viola purpurea</i> ssp. <i>venosa</i>		goose-foot violet	PerF	Wide/ Wide	Hist		X	?	Harrington 2040 (GSU)	1946	
Viscaceae	<i>Arceuthobium</i> <i>divaricatum</i>	<i>Arceuthobium</i> <i>divaricatum</i>		pinyon dwarf- mistletoe	PerF	Wide/ Wide	Hist	X		?	Weish 243 (BRY)	1955	Typically parasitic on <i>Pinus edulis</i> and <i>P. monophylla</i>
Zannichelliaceae	<i>Zannichellia</i> <i>palustris</i>	<i>Zannichellia</i> <i>palustris</i>		horned pondweed	PerF	Wide/ Wide	Hist	X		?	Weish 395 (BRY)	1955	

Appendix B. Potential (unconfirmed) taxa of Dinosaur National Monument.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range (UT/CO)	Comments
	Utah	Colorado					
Aceraceae	<i>Acer grandidentatum</i>	<i>Acer grandidentatum</i>		bigtooth maple	Tree	Wide/ Periph	
Agavaceae	<i>Yucca harrimaniae</i> var. <i>sterilis</i>		Var. not recognized by some authors	creeping yucca	Shrub	LocEn/ NA	Type locality is ca 5 miles S of Jensen, Uintah Co., UT (Welsh 18461 BRY).
Aizoaceae	<i>Sesuvium verrucosum</i>	<i>Sesuvium verrucosum</i>		sea purslane	PerF	Wide/ Periph	
Alismataceae	<i>Alisma gramineum</i>	<i>Alisma gramineum</i>		narrow-leaf water-plantain	PerF	Wide/ Wide	
Alismataceae	<i>Echinodorus berteroi</i>		<i>E. rostratus</i>	echinodorus	AnnF	Periph / NA	
Amaranthaceae	<i>Amaranthus albus</i>	<i>Amaranthus albus</i>		tumble pigweed	AnnF	Intro/Intro	Native to tropical America
Amaranthaceae	<i>Amaranthus retroflexus</i>	<i>Amaranthus retroflexus</i>		redroot pigweed	AnnF	Intro/Intro	Native to Central America
Apocynaceae	<i>Apocynum sibiricum</i>	<i>Apocynum sibiricum</i>	<i>A. cannabinum</i> var. <i>hypericifolium</i>	clasping-leaved dogbane	PerF	Sparse/ Wide	
Asclepiadaceae	<i>Asclepias labriformis</i>			Circle Cliffs milkweed	PerF	RegEn/ NA	
Boraginaceae	<i>Asperugo procumbens</i>	<i>Asperugo procumbens</i>		catchweed	AnnF	Intro/Intro	Native to Eurasia
Boraginaceae	<i>Cryptantha affinis</i>			ally cryptanth	AnnF	Wide/NA	
Boraginaceae	<i>Cryptantha barnebyi</i>			Barneby's cryptanth	PerF	LocEn/ NA	USFWS: Category 3C.
Boraginaceae	<i>Cryptantha caespitosa</i>	<i>Oreocarya caespitosa</i>		tufted cryptanth	PerF	RegEn RegEn	
Boraginaceae	<i>Cryptantha circumscissa</i>	<i>Cryptantha circumscissa</i>		cushion cryptanth	AnnF	Wide/ Periph	

Appendix B. Potential (unconfirmed) taxa of Dinosaur National Monument, cont.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range (UT/CO)	Comments
	Utah	Colorado					
Boraginaceae	<i>Cryptantha grahamii</i>			Graham's cryptanth	PerF	LocEn/ NA	Type locality is mouth of Sand Wash, Uintah Co., UT (Graham 7924 GH). USFWS: 3C
Boraginaceae	<i>Cryptantha paradoxa</i>	<i>Oreocarya paradoxa</i>		Paradox cryptanth	PerF	RegEn/ RegEn	USFWS: Category 3C
Boraginaceae	<i>Cryptantha scoparia</i>	<i>Cryptantha scoparia</i>		desert cryptanth	AnnF	Periph/ Periph	
Boraginaceae	<i>Cryptantha sericea</i>	<i>Oreocarya sericea</i>		silky cryptanth	PerF	RegEn/ RegEn	
Boraginaceae	<i>Heliotropium curassavicum</i> var. <i>obovatum</i>			salt heliotrope	PerF	Wide/NA	
Boraginaceae	<i>Heliotropium curassavicum</i> var. <i>oculatum</i>	<i>Heliotropium curassavicum</i> var. <i>oculatum</i>		pretty heliotrope	PerF	Periph/ Wide	
Boraginaceae	<i>Lappula squarrosa</i>	<i>Lappula squarrosa</i>	<i>L. squarrosa</i> var. <i>L. echinata</i>	European stickseed	AnnF	Intro/Intro	Native to Eurasia.
Boraginaceae	<i>Mertensia ciliata</i>	<i>Mertensia ciliata</i>		streamside bluebell	PerF	Wide/ Wide	
Boraginaceae	<i>Symphytum officinale</i>	<i>Symphytum officinale</i>		comfrey	PerF	Intro/Intro	Cultivated. Native to Europe
Boraginaceae (Ehretiaceae)	<i>Tiquilia nuttallii</i>	<i>Tiquilia nuttallii</i>	<i>Coldenia nuttallii</i>	Nuttall's tiquilia	AnnF	Wide/ Periph	
Cactaceae	<i>Coryphantha vivipara</i> var. <i>vivipara</i>	<i>Coryphantha vivipara</i>	<i>Escobaria vivipara</i> var. <i>vivipara</i>	pincushion cactus	PerF	Periph/ Wide	Vars. not recognized in <i>Flora of North America 2003</i>
Cactaceae	<i>Sclerocactus whipplei</i> var. <i>roseus</i>	<i>Sclerocactus whipplei</i> var. <i>intermedius</i>	<i>S. parviflorus</i>	small-flower fishhook cactus	PerF	Wide/ Wide	
Callitrichaceae	<i>Callitriche hermaphroditica</i>	<i>Callitriche hermaphroditica</i>		secret water-starwort	PerF	Sparse/ Wide	

Appendix B. Potential (unconfirmed) taxa of Dinosaur National Monument, cont.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range (UT/CO)	Comments
	Utah	Colorado					
Callitrichaceae	<i>Callitriche palustris</i>	<i>Callitriche palustris</i>	C. verna	vernal water-starwort	PerF	Wide/ Wide	Cited as C. verna in Weber et al. (1982).
Capparaceae (Cleomaceae)	<i>Polanisia dodecandra</i> var. <i>trachysperma</i>	<i>Polanisia dodecandra</i>	<i>P. trachysperma</i>	clammy-weed	AnnF	Wide/ Wide	
Caprifoliaceae	<i>Lonicera involucrata</i>	<i>Distegia involucrata</i>		black twinberry	Shrub	Wide/ Wide	
Caryophyllaceae (Alsinaeeae)	<i>Cerastium nutans</i>			nodding chickweed	AnnF	Sparse/ NA	
Caryophyllaceae	<i>Gypsophila paniculata</i>	<i>Gypsophila paniculata</i>		tall baby's-breath	PerF	Intro/Intro	Native to Eurasia
Caryophyllaceae	<i>Lynhis drummondii</i>	<i>Gastrolychnis drummondii</i>	<i>Silene drummondii</i> ssp. <i>drummondii</i> & ssp. <i>striata</i> , includes vars. <i>striata</i> , <i>kruckebergii</i> , & <i>drummondii</i>	Drummond's catchfly	PerF	Wide/ Wide	
Caryophyllaceae (Alsinaeeae)	<i>Paronychia sessiliflora</i>	<i>Paronychia sessiliflora</i>		creeping nailwort	PerF	Wide/ Wide	
Caryophyllaceae (Alsinaeeae)	<i>Sagina saginoides</i>	<i>Sagina saginoides</i>		alpine pearlwort	PerF	Wide/ Wide	
Caryophyllaceae	<i>Silene menziesii</i>	<i>Anotites menziesii</i>	<i>S. menziesii</i> var. <i>menziesii</i> , <i>A. menziesii</i> var. <i>menziesii</i>	Menzies' campion	PerF	Wide/ Wide	
Caryophyllaceae (Alsinaeeae)	<i>Stellaria longifolia</i>	<i>Stellaria longifolia</i>		long-leaved starwort	PerF	Sparse/ Wide	
Chenopodiaceae	<i>Atriplex dioica</i>	<i>Atriplex patula</i>	<i>A. patula</i> var. <i>subspicata</i> , <i>A. subspicata</i>	thickleaf orach	AnnF	Wide/ Wide	
Chenopodiaceae	<i>Atriplex heterosperma</i>	<i>Atriplex heterosperma</i>	<i>A. micrantha</i>	two-seed orach	AnnF	Intro/Intro	Native to Eurasia
Chenopodiaceae	<i>Atriplex hortensis</i>	<i>Atriplex hortensis</i>		garden orach	AnnF	Intro/Intro	Native to Eurasia
Chenopodiaceae	<i>Atriplex powellii</i> var. <i>powellii</i>	<i>Atriplex powellii</i>		Powell's orach	AnnF	Wide/ Wide	
Chenopodiaceae	<i>Atriplex prostrata</i>		<i>A. patula</i> var. <i>triangularis</i>	thinleaf orach	AnnF	Wide/NA	

Appendix B. Potential (unconfirmed) taxa of Dinosaur National Monument, cont.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range (UT/CO)	Comments
	Utah	Colorado					
Chenopodiaceae	<i>Atriplex rosea</i>	<i>Atriplex rosea</i>		tumbling orach	AnnF	Intro/Intro	Native to Eurasia
Chenopodiaceae	<i>Bassia prostrata</i>		<i>Kochia prostrata</i>	prostrate kochia, forage kochia	PerF	Intro/NA	Native to Eurasia
Chenopodiaceae	<i>Chenopodium desiccatum</i>	<i>Chenopodium desiccatum</i>	<i>C. pratericola</i>	desert goosefoot	AnnF	Sparse/Wide	
Chenopodiaceae	<i>Chenopodium rubrum</i> var. <i>rubrum</i>	<i>Chenopodium rubrum</i>		red goosefoot	AnnF	Wide/Wide	
Chenopodiaceae	<i>Cycloloma atriplicifolia</i>	<i>Cycloloma atriplicifolium</i>		winged pigweed	AnnF	Wide/Wide	
Chenopodiaceae	<i>Salicornia europaea</i>	<i>Salicornia europaea</i> ssp. <i>rubra</i>	<i>S. rubra</i>	red saltwort	AnnF	Wide/Sparse	
Chenopodiaceae	<i>Salsola paulsenii</i>	<i>Salsola paulsenii</i>		barbwire Russian thistle	AnnF	Intro/Intro	Native to Eurasia
Chenopodiaceae	<i>Suaeda calceoliformis</i>	<i>Suaeda calceoliformis</i>	<i>S. depressa</i>	broom seepweed	AnnF	Wide/Wide	
Chenopodiaceae	<i>Zuckia brandegei</i> var. <i>arizonica</i>	<i>Atriplex brandegei</i>	<i>Z. brandegeei</i> var. <i>arizonica</i>	Arizona siltbush	Shrub	RegEn/RegEn	
Compositae (Asteraceae)	<i>Agoseris glauca</i> var. <i>dasycephala</i>	<i>Agoseris glauca</i> var. <i>dasycephala</i>		short agoseris	PerF	Wide/Periph	
Compositae (Asteraceae)	<i>Agoseris heterophylla</i>	<i>Agoseris heterophylla</i>	<i>A. heterophylla</i> var. <i>heterophylla</i>	annual agoseris	AnnF	Periph/Periph	
Compositae (Asteraceae)	<i>Ambrosia psilostachya</i> var. <i>coronopifolia</i>	<i>Ambrosia psilostachya</i> var. <i>coronopifolia</i>	<i>A. coronopifolia</i>	western ragweed	PerF	Wide/Wide	
Compositae (Asteraceae)	<i>Antennaria alpina</i> var. <i>media</i>	<i>Antennaria media</i>		alpine pussytoes	PerF	Wide/Wide	
Compositae (Asteraceae)	<i>Antennaria luzuloides</i>	<i>Antennaria luzuloides</i>	<i>A. luzuloides</i> sp. <i>luzuloides</i>	rush pussytoes	PerF	Wide/Periph	
Compositae (Asteraceae)	<i>Antennaria marginata</i>	<i>Antennaria marginata</i>	Includes previous records of <i>A. neglecta</i> from UT	sandstone pussytoes	PerF	Wide/Wide	
Compositae (Asteraceae)	<i>Antennaria umbrinella</i>	<i>Antennaria umbrinella</i>		mountain pussytoes	PerF	Wide/Wide	
Compositae (Asteraceae)	<i>Arnica chamissonis</i> var. <i>foliosa</i>	<i>Arnica chamissonis</i> ssp. <i>foliosa</i>	<i>A. chamissonis</i> var. <i>andina</i>	Chamisso's arnica	PerF	Wide/Wide	

Appendix B. Potential (unconfirmed) taxa of Dinosaur National Monument, cont.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range (UT/CO)	Comments
	Utah	Colorado					
Compositae (Asteraceae)	<i>Arnica mollis</i>	<i>Arnica mollis</i>	Includes <i>A. ovata</i>	hairy arnica	PerF	Wide/ Wide	
Compositae (Asteraceae)	<i>Artemisia carruthii</i>	<i>Artemisia carruthii</i>		Carruth's wormwood	PerF	Wide/ Wide	
Compositae (Asteraceae)	<i>Artemisia nova</i> var. <i>duchesnicola</i>			Duchesne sagebrush	Shrub	LocEn/ NA	Type locality is 10 miles W of Vernal, Uintah Co., UT (Goodrich 23215 BRY)
Compositae (Asteraceae)	<i>Artemisia pygmaea</i>	<i>Seriphidium pygmaeum</i>		pygmy sagebrush	Shrub	Wide/ Periph	
Compositae (Asteraceae)	<i>Aster foliaceus</i> var. <i>parryi</i>	<i>Symphotrichum foliaceum</i> var. <i>parryi</i>		Parry's aster	PerF	Wide/ Wide	
Compositae (Asteraceae)	<i>Aster frondosus</i>	<i>Brachyactis frondosa</i>	<i>Symphotrichum frondosum</i>	leafy aster	AnnF	Wide/ Wide	
Compositae (Asteraceae)	<i>Aster pauciflorus</i>	<i>Almutaster pauciflorus</i>		alkali aster	PerF	Wide/ Wide	
Compositae (Asteraceae)	<i>Bahia dissecta</i>	<i>Bahia dissecta</i>	<i>Amauriopsis dissecta</i>	cutleaf	PerF	Wide/ Wide	
Compositae (Asteraceae)	<i>Bidens cernua</i>	<i>Bidens cernua</i>		nodding bur-marigold	PerF	Wide/ Wide	
Compositae (Asteraceae)	<i>Chamaechaenactis scaposa</i>	<i>Chamaechaenactis scaposa</i>	<i>C. scaposa</i> var. <i>parva</i>	Eastwood-plant	PerF	Wide/ Wide	
Compositae (Asteraceae)	<i>Chrysanthemum leucanthemum</i>	<i>Leucanthemum vulgare</i>		ox-eye daisy	PerF	Intro/Intro	Native to Eurasia. CO state noxious weed (List B)
Compositae (Asteraceae)	<i>Chrysothamnus greenei</i>	<i>Chrysothamnus greenei</i>		Greene's rabbitbrush	Shrub	Wide/ Periph	
Compositae (Asteraceae)	<i>Chrysothamnus nauseosus</i> var. <i>gnaphalodes</i>	<i>Chrysothamnus nauseosus</i> var. <i>hololeucus</i>	<i>Ericameria nauseosa</i> var. <i>hololeuca</i>	graystem rabbitbrush	Shrub	Wide/ Periph	
Compositae (Asteraceae)	<i>Chrysothamnus nauseosus</i> var. <i>speciosus</i>	<i>Chrysothamnus nauseosus</i> var. <i>speciosus</i>	<i>C. nauseosus</i> var. <i>albicaulis</i> , <i>Ericameria nauseosa</i> var. <i>speciosa</i>	whitestem rabbitbrush	Shrub	Wide/ Wide	

Appendix B. Potential (unconfirmed) taxa of Dinosaur National Monument, cont.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range (UT/CO)	Comments
	Utah	Colorado					
Compositae (Asteraceae)	<i>Chrysothamnus nauseosus</i> var. <i>turbinatus</i>	<i>Chrysothamnus nauseosus</i> var. <i>turbinatus</i>	<i>Ericameria nauseosa</i> var. <i>turbinata</i>	dune rabbitbrush	Shrub	RegEn/ RegEn	
Compositae (Asteraceae)	<i>Chrysothamnus parryi</i> var. <i>affinis</i>	<i>Chrysothamnus parryi</i> var. <i>affinis</i>	<i>Ericameria parryi</i> var. <i>affinis</i>	Parry's rabbitbrush	Shrub	Wide/ Wide	
Compositae (Asteraceae)	<i>Cirsium barnebyi</i>	<i>Cirsium barnebyi</i>		Barneby's thistle	PerF	RegEn/ RegEn	
Compositae (Asteraceae)	<i>Cirsium pulcherrimum</i>	<i>Cirsium pulcherrimum</i>		Wyoming thistle	PerF	RegEn/ RegEn	
Compositae (Asteraceae)	<i>Cirsium undulatum</i> var. <i>tracyi</i>	<i>Cirsium tracyi</i>		Tracy's thistle	PerF	RegEn/ RegEn	
Compositae (Asteraceae)	<i>Crepis runcinata</i> var. <i>hispidulosa</i>	<i>Psilochenia runcinata</i> ssp. <i>hispidulosa</i>		hispidulous hawkbeard	PerF	Wide/ Wide	
Compositae (Asteraceae)	<i>Erigeron compactus</i> var. <i>consimilis</i>	<i>Erigeron compactus</i>	<i>E. consimilis</i>	San Rafael daisy	PerF	RegEn/ RegEn	
Compositae (Asteraceae)	<i>Erigeron flagellaris</i>	<i>Erigeron flagellaris</i>		trailing daisy	PerF	Wide/ Wide	
Compositae (Asteraceae)	<i>Erigeron formosissimus</i>	<i>Erigeron formosissimus</i>		beautiful daisy	PerF	Wide/ Wide	
Compositae (Asteraceae)	<i>Erigeron lonchophyllus</i>	<i>Trimorpha lonchophylla</i>		longleaf daisy	PerF	Wide/ Wide	
Compositae (Asteraceae)	<i>Erigeron peregrinus</i> var. <i>callianthemus</i>	<i>Erigeron peregrinus</i> ssp. <i>callianthemus</i>	<i>E. peregrinus</i> var. <i>scaposus</i>	wandering fleabane	PerF	Wide/ Wide	
Compositae (Asteraceae)	<i>Erigeron speciosus</i> var. <i>macranthus</i>	<i>Erigeron speciosus</i>		aspen daisy	PerF	Wide/ Wide	
Compositae (Asteraceae)	<i>Erigeron ursinus</i> var. <i>ursinus</i>	<i>Erigeron ursinus</i>		bear daisy	PerF	Wide/ Wide	
Compositae (Asteraceae)	<i>Gaillardia spathulata</i>	<i>Gaillardia spathulata</i>		basin blanketflower	PerF	RegEn/ RegEn	
Compositae (Asteraceae)	<i>Glyptopleura marginata</i>			crustweed	AnnF	Wide/NA	
Compositae (Asteraceae)	<i>Gnaphalium macounii</i>	<i>Pseudognaphalium viscosum</i>	<i>G. viscosum</i> , <i>Pseudognaphalium macounii</i>	sticky cudweed	AnnF	Sparse/ Wide	

Appendix B. Potential (unconfirmed) taxa of Dinosaur National Monument, cont.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range (UT/CO)	Comments
	Utah	Colorado					
Compositae (Asteraceae)	<i>Haplopappus armerioides</i> var. <i>gramineus</i>		<i>Stenotus armerioides</i> var. <i>gramineus</i>	grass goldenweed	Perf	LocEn/ NA	
Compositae (Asteraceae)	<i>Haplopappus clementis</i>	<i>Pyrocoma clementis</i>	<i>P. clementis</i> var. <i>clementis</i>	Clement's goldenweed	Perf	Wide/ Wide	
Compositae (Asteraceae)	<i>Helianthella quinquenervis</i>	<i>Helianthella quinquenervis</i>		fivenerve sunflower	Perf	Wide/ Wide	
Compositae (Asteraceae)	<i>Iva xanthifolia</i>	<i>Cyclachaena xanthifolia</i>		marsh-elder	AnnF	Wide/ Wide	
Compositae (Asteraceae)	<i>Kuhnia eupatorioides</i> var. <i>chlorolepis</i>	<i>Brickellia rosmarinifolia</i> ssp. <i>chlorolepis</i>	<i>K. eupatorioides</i> var. <i>corymbulosa</i> , <i>B. eupatorioides</i> var. <i>corymbulosa</i>	false bonaset	Perf	Periph/ Wide	
Compositae (Asteraceae)	<i>Madia glomerata</i>	<i>Madia glomerata</i>		mountain tarweed	AnnF	Wide/ Wide	
Compositae (Asteraceae)	<i>Oxytenia acerosa</i>	<i>Oxytenia acerosa</i>	<i>Iva acerosa</i>	copperweed	Shrub	Wide/ Periph	
Compositae (Asteraceae)	<i>Parthenium ligulatum</i>	<i>Bolophyta ligulata</i>	<i>P. alpinum</i> var. <i>ligulatum</i>	low feverfew	Perf	RegEn/ RegEn	CO BLM: Sensitive
Compositae (Asteraceae)	<i>Platyschukhria integrifolia</i> var. <i>desertorum</i>		<i>Bahia nudicaulis</i> var. <i>desertorum</i>	desert bahia	Perf	RegEn/ NA	
Compositae (Asteraceae)	<i>Prenanthes exigua</i>	<i>Prenanthes exigua</i>	<i>Lygodesmia exigua</i>	prenanthes	AnnF	Wide/ Periph	
Compositae (Asteraceae)	<i>Senecio vulgaris</i>	<i>Senecio vulgaris</i>		common groundsel	AnnF	Intro/Intro	Native to Europe
Compositae (Asteraceae)	<i>Sonchus asper</i>	<i>Sonchus asper</i>		spiny-leaf sow-thistle	AnnF	Intro/Intro	Native to Europe
Compositae (Asteraceae)	<i>Tanacetum vulgare</i>	<i>Tanacetum vulgare</i>		common tansy	Perf	Intro/Intro	Native to Europe
Compositae (Asteraceae)	<i>Tetradymia glabrata</i>			littleleaf horsebrush	Shrub	Wide/NA	
Compositae (Asteraceae)	<i>Viguiera multiflora</i> var. <i>nevadensis</i>	<i>Helionis multiflora</i> var. <i>nevadensis</i>		showy goldeneye	Perf	Wide/ Periph	
Convolvulaceae	<i>Calystegia sepium</i> var. <i>angulata</i>	<i>Calystegia sepium</i> var. <i>angulata</i>	<i>Convolvulus sepium</i>	hedge bindweed	Perf	Sparse/ Wide	

Appendix B. Potential (unconfirmed) taxa of Dinosaur National Monument, cont.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range (UT/CO)	Comments
	Utah	Colorado					
Convolvulaceae (Cuscutaceae)	<i>Cuscuta approximata</i> var. <i>urceolata</i>	<i>Cuscuta epithymum</i> ssp. <i>approximata</i>		slender dodder	PerF	Intro/Intro	Native to Mediterranean
Convolvulaceae (Cuscutaceae)	<i>Cuscuta cephalanthi</i>			slenderflower dodder	AnnF	Periph/ NA	
Convolvulaceae (Cuscutaceae)	<i>Cuscuta denticulata</i>	<i>Cuscuta denticulata</i>	<i>Grammica denticulata</i>	smalltooth dodder	AnnF	Wide/ Periph	
Convolvulaceae (Cuscutaceae)	<i>Cuscuta indecora</i>	<i>Grammica indecora</i>	<i>C. indecora</i> var. <i>neuropetala</i>	large-seed dodder	AnnF	Wide/ Wide	
Convolvulaceae (Cuscutaceae)	<i>Cuscuta pentagona</i>			field dodder	AnnF	Wide/NA	
Cruciferae (Brassicaceae)	<i>Arabis holboellii</i> var. <i>pendulocarpa</i>		<i>A. pendulocarpa</i> var. <i>pendulocarpa</i> , <i>A. exilis</i> , <i>Boechea exilis</i>	deflexed rockcress	PerF	Periph/ NA	
Cruciferae (Brassicaceae)	<i>Arabis holboellii</i> var. <i>pinetorum</i>	<i>Boechea holboellii</i> var. <i>pinetorum</i>	Name may be misapplied, according to Holmgren et al. (2005)	Holboell's rockcress	PerF	Wide/ Wide	
Cruciferae (Brassicaceae)	<i>Arabis perennans</i> var. <i>thorneae</i>		<i>Boechea selbyi</i> var. <i>thorneae</i>	Thorne's perennial rockcress	PerF	LocEn/ NA	
Cruciferae (Brassicaceae)	<i>Arabis sparsiflora</i> var. <i>sparsiflora</i>		<i>Boechea sparsiflora</i> var. <i>sparsiflora</i>	elegant rockcress	PerF	Wide/NA	
Cruciferae (Brassicaceae)	<i>Barbarea orthoceras</i>	<i>Barbarea orthoceras</i>		northern wintercress	PerF	Wide/ Wide	
Cruciferae (Brassicaceae)	<i>Boechea glareosa</i>	<i>Boechea glareosa</i>		Dorn's rockcress	PerF	LocEn/ LocEn	New species, cited for UT and CO in Holmgren et al. (2005)
Cruciferae (Brassicaceae)	<i>Cardamine cordifolia</i> var. <i>cordifolia</i>	<i>Cardamine cordifolia</i>		heartleaf bittercress	PerF	Wide/ Wide	
Cruciferae (Brassicaceae)	<i>Descurainia pinnata</i> var. <i>filipes</i>	<i>Descurainia incisa</i> var. <i>filipes</i>		western tansy-mustard	AnnF	Wide/ Wide	
Cruciferae (Brassicaceae)	<i>Descurainia pinnata</i> var. <i>nelsonii</i>	<i>Descurainia pinnata</i> ssp. <i>nelsonii</i>		western tansy-mustard	AnnF	Wide/ Periph	
Cruciferae (Brassicaceae)	<i>Descurainia pinnata</i> var. <i>paysonii</i>		<i>D. incisa</i> var. <i>paysonii</i>	Payson's tansymustard	AnnF	Periph/ NA	

Appendix B. Potential (unconfirmed) taxa of Dinosaur National Monument, cont.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range (UT/CO)	Comments
	Utah	Colorado					
Cruciferae (Brassicaceae)	<i>Draba cuneifolia</i> var. <i>cuneifolia</i>	<i>Draba cuneifolia</i>		wedgeleaf draba	AnnF	Wide/ Wide	
Cruciferae (Brassicaceae)	<i>Hesperis matronalis</i>	<i>Hesperis matronalis</i>		Dame's rocket	PerF	Intro/Intro	Native to Europe
Cruciferae (Brassicaceae)	<i>Isatis tinctoria</i>	<i>Isatis tinctoria</i>		Dyer's woad	PerF	Intro/Intro	UT state noxious weed. Native to Europe
Cruciferae (Brassicaceae)	<i>Lepidium alyssoides</i> var. <i>eastwoodiae</i>	<i>Lepidium alyssoides</i> var. <i>eastwoodiae</i>	<i>L. montanum</i> var. <i>spathulatum</i> , <i>L. eastwoodiae</i>	Eastwood's tall pepperwort	PerF	RegEn/ RegEn	
Cruciferae (Brassicaceae)	<i>Lepidium campestre</i>	<i>Neolepia campestris</i>		field pepperwort	AnnF	Intro/Intro	Native to Asia
Cruciferae (Brassicaceae)	<i>Lepidium ramosissimum</i> var. <i>ramosissimum</i>	<i>Lepidium ramosissimum</i>		branched pepperwort	PerF	Wide/ Wide	
Cruciferae (Brassicaceae)	<i>Lepidium virginicum</i> var. <i>pubescens</i>	<i>Lepidium virginicum</i>		poor-man's pepperwort	AnnF	Wide/ Sparse	
Cruciferae (Brassicaceae)	<i>Physaria acutifolia</i> var. <i>repanda</i>		<i>P. repanda</i> ; included in <i>P. grahamii</i> in Holmgren et al. (2005)	Indian Canyon twinpod	PerF	LocEn/NA	
Cruciferae (Brassicaceae)	<i>Physaria utahensis</i>		<i>Lesquerella utahensis</i>	Utah bladderpod	PerF	RegEn/ NA	
Cruciferae (Brassicaceae)	<i>Rorippa curvipes</i> var. <i>alpina</i>	<i>Rorippa alpina</i>		alpine yellowcress	PerF	Wide/ Wide	
Cruciferae (Brassicaceae)	<i>Rorippa curvipes</i> var. <i>curvipes</i>	<i>Rorippa curvipes</i>		blunt-leaf yellowcress	PerF	Wide/ Wide	
Cruciferae (Brassicaceae)	<i>Rorippa tenerima</i>	<i>Rorippa tenerima</i>		low yellowcress	AnnF	Wide/ Periph	
Cruciferae (Brassicaceae)	<i>Stanleya viridiflora</i>	<i>Stanleya viridiflora</i>		green prince's-plume	PerF	Wide/ Periph	
Cruciferae (Brassicaceae)	<i>Thelypodopsis sagittata</i> var. <i>sagittata</i>	<i>Thelypodium sagittatum</i>	<i>Thelypodium sagittatum</i> var. <i>sagittatum</i>	arrowhead thelypody	PerF	Wide/ Periph	
Cyperaceae	<i>Carex bebbii</i>	<i>Carex bebbii</i>		Bebb's sedge	PerG	Periph/ Wide	
Cyperaceae	<i>Carex bella</i>	<i>Carex bella</i>		beautiful sedge	PerG	Wide/ Wide	

Appendix B. Potential (unconfirmed) taxa of Dinosaur National Monument, cont.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range (UT/CO)	Comments
	Utah	Colorado					
Cyperaceae	<i>Carex disperma</i>	<i>Carex disperma</i>		soft-leaved sedge	PerG	Wide/ Wide	
Cyperaceae	<i>Carex douglasii</i>	<i>Carex douglasii</i>		Douglas' sedge	PerG	Wide/ Wide	
Cyperaceae	<i>Carex ebenea</i>	<i>Carex ebenea</i>		ebony sedge	PerG	Wide/ Wide	
Cyperaceae	<i>Carex obtusata</i>	<i>Carex obtusata</i>		blunt sedge	PerG	Wide/ Wide	
Cyperaceae	<i>Carex petasata</i>	<i>Carex petasata</i>		Liddon sedge	PerG	Wide/ Wide	
Cyperaceae	<i>Carex phaeocephala</i>	<i>Carex phaeocephala</i>		dunhead sedge	PerG	Wide/ Wide	
Cyperaceae	<i>Carex praticola</i>	<i>Carex praticola</i>		meadow sedge	PerG	Wide/ Wide	
Cyperaceae	<i>Carex raynoldsii</i>	<i>Carex raynoldsii</i>		Raynolds' sedge	PerG	Wide/ Wide	
Cyperaceae	<i>Eleocharis acicularis</i>	<i>Eleocharis acicularis</i>		slender spikerush	PerG	Wide/ Wide	
Cyperaceae	<i>Eleocharis parvula</i> var. <i>anachaeta</i>	<i>Eleocharis parvula</i> var. <i>anachaeta</i>	<i>E. coloradensis</i>	dwarf spikerush	PerG	Wide/ Sparse	
Cyperaceae	<i>Scirpus fluviatilis</i>	<i>Bolboschoenus fluviatilis</i>	<i>Schoenoplectus fluviatilis</i>	river bulrush	PerG	Sparse/ Periph	
Cyperaceae	<i>Scirpus microcarpus</i>	<i>Scirpus microcarpus</i>		panicked bulrush	PerG	Wide/ Wide	
Cyperaceae	<i>Scirpus supinus</i> var. <i>saximontanus</i>	<i>Schoenoplectus saximontanus</i>	<i>Scirpus supinus</i>	sharpscale bulrush	AnnG	Sparse/ Sparse	
Elaeagnaceae	<i>Shepherdia canadensis</i>	<i>Shepherdia canadensis</i>	<i>Lepargyrea canadensis</i>	Canada buffaloberry	Shrub	Wide/ Wide	
Elatinaceae	<i>Elatine triandra</i>	<i>Elatine triandra</i>	<i>E. brachysperma</i> , <i>E. rubella</i>	red-stem waterwort	AnnF	Sparse/ Sparse	
Ephedraceae	<i>Ephedra nevadensis</i>	<i>Ephedra nevadensis</i>		Nevada ephedra	Shrub	Wide/NA	
Ericaceae	<i>Chimaphila umbellata</i> var. <i>occidentalis</i>	<i>Chimaphila umbellata</i> ssp. <i>occidentalis</i>		pipsissewa	PerF	Wide/ Wide	

Appendix B. Potential (unconfirmed) taxa of Dinosaur National Monument, cont.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range (UT/CO)	Comments
	Utah	Colorado					
Euphorbiaceae	<i>Euphorbia myrsinites</i>	<i>Tithymalus myrsinites</i>		blue spurge	Perf	Intro/Intro	Native to Europe. CO state noxious weed (List A)
Fagaceae	<i>Quercus gambelii</i> var. <i>gambelii</i>	<i>Quercus gambelii</i>		Gambel's oak	Tree	Wide/ Wide	
Gentianaceae	<i>Gentiana amarella</i>	<i>Gentiana acuta</i>	<i>Gentiana amarella</i> , <i>Gentiana amarella</i> ssp. <i>acuta</i> , <i>Gentiana amarella</i> var. <i>amarella</i>	northern gentian	Perf	Wide/ Wide	
Gentianaceae	<i>Gentiana heterosepala</i>	<i>Gentiana heterosepala</i>	<i>G. amarella</i> var. <i>heterosepala</i>	Engelmann's gentian	Perf	Wide/ Wide	
Gentianaceae	<i>Swertia perennis</i>	<i>Swertia perennis</i>		felwort	Perf	Wide/ Wide	
Gentianaceae	<i>Swertia radiata</i>	<i>Frasera speciosa</i>		elkweed	Perf	Wide/ Wide	
Geraniaceae	<i>Erodium cicutarium</i>	<i>Erodium cicutarium</i>		stork's-bill	AnnF	Intro/Intro	Native to Europe. CO state noxious weed (List B)
Geraniaceae	<i>Geranium richardsonii</i>	<i>Geranium richardsonii</i>		Richardson's crane's-bill	Perf	Wide/ Wide	
Gramineae (Poaceae)	<i>Aegilops cylindrica</i>	<i>Cylindropyrum cylindricum</i>		jointed goatgrass	AnnG	Intro/Intro	Native to Eurasia. CO state noxious weed (List C)
Gramineae (Poaceae)	<i>Agrostis humilis</i>	<i>Podagrostis humilis</i>		alpine bengrass	PerG	Wide/ Wide	
Gramineae (Poaceae)	<i>Agrostis thurberiana</i>	<i>Podagrostis thurberiana</i>	Included in <i>A. humilis</i> by some authors	Thurber bentgrass	PerG	Periph/ Wide	
Gramineae (Poaceae)	<i>Alopecurus alpinus</i>	<i>Alopecurus alpinus</i>	<i>A. borealis</i> , <i>A. magellanicus</i>	alpine foxtail	PerG	Periph/ Wide	
Gramineae (Poaceae)	<i>Arrhenatherum elatius</i>	<i>Arrhenatherum elatius</i>		tall oatgrass	PerG	Intro/Intro	Native to Eurasia
Gramineae (Poaceae)	<i>Blepharoneuron tricholepis</i>	<i>Blepharoneuron tricholepis</i>		pine dropseed	PerG	Wide/ Wide	

Appendix B. Potential (unconfirmed) taxa of Dinosaur National Monument, cont.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range (UT/CO)	Comments
	Utah	Colorado					
Gramineae (Poaceae)	<i>Bromus briziformis</i>	<i>Bromus briziformis</i>	<i>B. brizaeiformis</i>	rattlesnake chess	AnnG	Intro/Intro	Native to Eurasia
Gramineae (Poaceae)	<i>Cinna latifolia</i>	<i>Cinna latifolia</i>		drooping woodreed	PerG	Wide/ Wide	
Gramineae (Poaceae)	<i>Danthonia intermedia</i>	<i>Danthonia intermedia</i>		timber oatgrass	PerG	Wide/ Wide	
Gramineae (Poaceae)	<i>Deschampsia cespitosa</i>	<i>Deschampsia cespitosa</i>		tufted hairgrass	PerG	Wide/ Wide	
Gramineae (Poaceae)	<i>Echinochloa crus-galli</i>	<i>Echinochloa crus-galli</i>	Welsh et al. 2003 include <i>E. microstachya</i> (<i>E. muricata</i> var. <i>microstachya</i>)	barnyard-grass	AnnG	Intro/Intro	Native to Eurasia.
Gramineae (Poaceae)	<i>Elymus hispidus</i>	<i>Thinopyrum intermedium</i>	<i>E. hispidus</i> var. <i>hispidus</i> , <i>Agropyron intermedium</i> , <i>Elytrigia intermedia</i>	intermediate wheatgrass	PerG	Intro/Intro	Native to Eurasia
Gramineae (Poaceae)	<i>Elymus junceus</i>	<i>Psathyrostachys juncea</i>		Russian wildrye	PerG	Intro/Intro	Native to Russia
Gramineae (Poaceae)	<i>Elymus simplex</i>	<i>Elymus simplex</i>	<i>E. simplex</i> var. <i>simplex</i> , <i>Leymus simplex</i>	alkali wildrye	PerG	RegEn/ NA	
Gramineae (Poaceae)	<i>Eragrostis cilianensis</i>	<i>Eragrostis cilianensis</i>		stinkgrass	AnnG	Intro/Intro	Native to Eurasia
Gramineae (Poaceae)	<i>Eragrostis mexicana</i>	<i>Eragrostis mexicana</i>	<i>E. orcuttiana</i>	Mexican lovegrass	AnnG	Intro/Intro	Native to North America
Gramineae (Poaceae)	<i>Festuca thurberi</i>	<i>Festuca thurberi</i>		Thurber's fescue	PerG	Wide/ Wide	
Gramineae (Poaceae)	<i>Leptochloa fascicularis</i>	<i>Diplachne fascicularis</i>	<i>L. fusca</i> var. <i>fascicularis</i>	bearded sprangletop	AnnG	Wide/ Wide	
Gramineae (Poaceae)	<i>Muhlenbergia filiformis</i>	<i>Muhlenbergia filiformis</i>		pullup muhly	AnnG	Wide/ Wide	
Gramineae (Poaceae)	<i>Munroa squarrosa</i>	<i>Monroa squarrosa</i>		false buffalograss	AnnG	Wide/ Wide	
Gramineae (Poaceae)	<i>Oryzopsis asperifolia</i>	<i>Oryzopsis asperifolia</i>		roughleaf ricegrass	PerG	Periph/ Wide	
Gramineae (Poaceae)	<i>Phalaris arundinacea</i>	<i>Phalaroides arundinacea</i>		reed canary grass	PerG	Wide/ Wide	

Appendix B. Potential (unconfirmed) taxa of Dinosaur National Monument, cont.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range (UT/CO)	Comments
	Utah	Colorado					
Gramineae (Poaceae)	<i>Phleum alpinum</i>	<i>Phleum commutatum</i>		alpine timothy	PerG	Wide/ Wide	
Gramineae (Poaceae)	<i>Poa annua</i>	<i>Poa annua</i>		annual bluegrass	AnnG	Intro/Intro	Native to Eurasia and W North America
Gramineae (Poaceae)	<i>Poa palustris</i>	<i>Poa palustris</i>		fowl bluegrass	PerG	Wide/ Wide	
Gramineae (Poaceae)	<i>Poa reflexa</i>	<i>Poa reflexa</i>		nodding bluegrass	PerG	Wide/ Wide	
Gramineae (Poaceae)	<i>Setaria glauca</i>	<i>Setaria glauca</i>	<i>S. pumila</i> ssp. <i>pumila</i>	yellow bristlegrass	AnnG	Intro/Intro	Native to Eurasia
Gramineae (Poaceae)	<i>Setaria viridis</i>	<i>Setaria viridis</i>		green bristlegrass	AnnG	Intro/Intro	Native to Eurasia
Gramineae (Poaceae)	<i>Sorghum bicolor</i>			grain sorghum	PerG	Intro/NA	Native to Eurasia
Gramineae (Poaceae)	<i>Spartina gracilis</i>	<i>Spartina gracilis</i>		alkali cordgrass	PerG	Wide/ Wide	
Gramineae (Poaceae)	<i>Sphenopholis obtusata</i>	<i>Sphenopholis obtusata</i>	<i>S. obtusata</i> var. <i>obtusata</i>	prairie wedgegrass	PerG	Wide/ Wide	
Gramineae (Poaceae)	<i>Sporobolus asper</i>	<i>Sporobolus asper</i>	<i>S. compositus</i>	tall dropseed	PerG	Sparse/ Wide	
Gramineae (Poaceae)	<i>Stipa arnowiae</i>		Included in <i>S. x bloomeri</i> by some authors. Hybrid of <i>S. hymenoides</i> x <i>S. comata</i>	Arnow's ricegrass	PerG	RegEn/ NA	
Guttiferae (Hypericaceae, Clusiaceae)	<i>Hypericum formosum</i>	<i>Hypericum formosum</i>		western St. John's-wort	PerF	Wide/ Wide	
Haloragaceae	<i>Myriophyllum sibiricum</i>	<i>Myriophyllum sibiricum</i>		Siberian water-milfoil	PerF	Wide/ Wide	
Haloragaceae	<i>Myriophyllum spicatum</i>	<i>Myriophyllum spicatum</i>	<i>M. exalbescens</i> , <i>M. spicatum</i> var. <i>exalbescens</i>	European milfoil	PerF	Intro/Intro	CO state noxious weed (List B). Native to Europe.
Hydrocharitaceae	<i>Elodea bifoliata</i>	<i>Elodea bifoliata</i>	<i>Elodea longivaginata</i>	two-leaf waterweed	PerF	Periph/ Sparse	

Appendix B. Potential (unconfirmed) taxa of Dinosaur National Monument, cont.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range (UT/CO)	Comments
	Utah	Colorado					
Hydrocharitaceae	<i>Elodea canadensis</i>	<i>Elodea canadensis</i>		Canadian waterweed	PerF	Sparse/ Sparse	
Hydrophyllaceae	<i>Hesperochiron pumilus</i>	<i>Hesperochiron pumilus</i>		dwarf hesperochiron	PerF	Wide/ Periph	
Hydrophyllaceae	<i>Nemophila breviflora</i>	<i>Nemophila breviflora</i>		Great Basin nemophila	AnnF	Wide/ Wide	
Hydrophyllaceae	<i>Phacelia incana</i>	<i>Phacelia incana</i>		hoary scorpion-weed	AnnF	Wide/ Periph	
Iridaceae	<i>Sisyrinchium demissum</i>	<i>Sisyrinchium demissum</i>		blue-eyed grass	PerF	Wide/ Wide	
Juncaceae	<i>Juncus drummondii</i>	<i>Juncus drummondii</i>	Includes vars. <i>drummondii</i> & <i>subtriflorus</i>	Drummond's rush	PerG	Wide/ Wide	
Juncaceae	<i>Juncus mertensianus</i>	<i>Juncus mertensianus</i>		Mertens' rush	PerG	Wide/ Wide	
Juncaceae	<i>Juncus nevadensis</i>	<i>Juncus nevadensis</i>	Includes vars. <i>badius</i> & <i>nevadensis</i>	Nevada rush	PerG	Wide/ Wide	
Juncaceae	<i>Juncus nodosus</i>	<i>Juncus nodosus</i>		knotted rush	PerG	Wide/ Wide	
Juncaceae	<i>Juncus parryi</i>	<i>Juncus parryi</i>		Parry's rush	PerG	Wide/ Wide	
Juncaceae	<i>Luzula parviflora</i>	<i>Luzula parviflora</i>		small-flowered woodrush	PerG	Wide/ Wide	
Juncaceae	<i>Luzula spicata</i>	<i>Luzula spicata</i>		spike woodrush	PerG	Wide/ Wide	
Juncaginaceae	<i>Triglochin palustris</i>	<i>Triglochin palustris</i>		marsh arrowgrass	PerG	Wide/ Wide	
Labiatae (Lamiaceae)	<i>Dracocephalum parviflorum</i>	<i>Dracocephalum parviflorum</i>	<i>Moldavica parviflora</i>	smallflower dragonhead	PerF	Wide/ Wide	
Labiatae (Lamiaceae)	<i>Leonurus cardiaca</i>	<i>Leonurus cardiaca</i>		motherwort	PerF	Intro/Intro	Native to Asia
Labiatae (Lamiaceae)	<i>Lycopus asper</i>	<i>Lycopus asper</i>		rough bugleweed	PerF	Wide/ Wide	
Labiatae (Lamiaceae)	<i>Monarda fistulosa</i> var. <i>menthifolia</i>	<i>Monarda fistulosa</i> var. <i>menthifolia</i>		beebalm	PerF	Periph/ Wide	
Labiatae (Lamiaceae)	<i>Salvia reflexa</i>	<i>Salvia reflexa</i>		annual sage	PerF	Sparse/ Wide	

Appendix B. Potential (unconfirmed) taxa of Dinosaur National Monument, cont.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range (UT/CO)	Comments
	Utah	Colorado					
Labiatae (Lamiaceae)	<i>Stachys palustris</i> var. <i>pilosa</i>	<i>Stachys palustris</i> ssp. <i>pilosa</i>	<i>S. pilosa</i> var. <i>pilosa</i>	hairy hedge-nettle	PerF	Wide/ Wide	
Leguminosae (Fabaceae)	<i>Astragalus amphioxys</i> var. <i>vespertinus</i>	<i>Astragalus amphioxys</i> var. <i>vespertinus</i>		Sheldon's milkvetch	PerF	RegEn/ RegEn	
Leguminosae (Fabaceae)	<i>Astragalus bisulcatus</i> var. <i>bisulcatus</i>	<i>Astragalus bisulcatus</i>		two-grooved milkvetch	PerF	Wide/ Wide	
Leguminosae (Fabaceae)	<i>Astragalus cicer</i>	<i>Astragalus cicer</i>		chickpea milkvetch	PerF	Intro/Intro	Native to Europe
Leguminosae (Fabaceae)	<i>Astragalus detritalis</i>	<i>Astragalus detritalis</i>		debris milkvetch	PerF	RegEn/ RegEn	Type locality is 'SW of Theodore' (Duchesne), Duchesne Co., UT (Jones s.n. POM). USFWS: Category 3C. CO BLM: Sensitive
Leguminosae (Fabaceae)	<i>Astragalus equisolensis</i>		<i>A. desperatus</i> var. <i>neeseae</i>	horseshoe milkvetch	PerF	LocEn/ NA	Type locality is E of Horseshoe Bend, Uintah Co., UT (Neese & Welsh 7380 BRV). USFWS: former Category 1 Candidate
Leguminosae (Fabaceae)	<i>Astragalus kentrophyta</i> var. <i>tegetarius</i>	<i>Astragalus kentrophyta</i> ssp. <i>implexus</i>		mountain kentrophyta	PerF	Wide/ Wide	
Leguminosae (Fabaceae)	<i>Astragalus pattersonii</i>	<i>Astragalus pattersonii</i>		Patterson's milkvetch	PerF	RegEn/ RegEn	Type locality is near Grand Canyon of the Grand River, Grand Co., CO (Patterson s.n. GH)

Appendix B. Potential (unconfirmed) taxa of Dinosaur National Monument, cont.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range (UT/CO)	Comments
	Utah	Colorado					
Leguminosae (Fabaceae)	<i>Astragalus pubentissimus</i> var. <i>pubentissimus</i>	<i>Astragalus pubentissimus</i>		Green River milkvetch	PerF	RegEn/ RegEn	
Leguminosae (Fabaceae)	<i>Astragalus wetherillii</i>	<i>Astragalus wetherillii</i>		Wetherill's milkvetch	PerF	RegEn/ RegEn	USFWS: 3C, USFS Region 2: Sensitive
Leguminosae (Fabaceae)	<i>Lathyrus latifolius</i>	<i>Lathyrus latifolius</i>		perennial sweetpea	PerF	Intro/Intro	Native to Europe
Leguminosae (Fabaceae)	<i>Lupinus brevicaulis</i>	<i>Lupinus brevicaulis</i>		shortstem lupine	AnnF	Wide/ Wide	
Leguminosae (Fabaceae)	<i>Lupinus lepidus</i> var. <i>utahensis</i>	<i>Lupinus lepidus</i> ssp. <i>caespitosus</i>	<i>L. caespitosus</i> var. <i>utahensis</i>	stemless lupine	PerF	Wide/ Wide	
Leguminosae (Fabaceae)	<i>Lupinus sericeus</i> var. <i>sericeus</i>	<i>Lupinus sericeus</i>	Vars. not recognized in Barneby (1989)	silky lupine	PerF	Wide/ Wide	
Leguminosae (Fabaceae)	<i>Oxytropis oreophila</i> var. <i>jonesii</i>			Jones' locoweed	PerF	RegEn/ NA	USFWS: Category 3C.
Leguminosae (Fabaceae)	<i>Sophora stenophylla</i>			silvery sophora	PerF	Wide/NA	
Leguminosae (Fabaceae)	<i>Sphaerophysa salsula</i>	<i>Sphaerophysa salsula</i>	<i>Swainsona salsula</i>	red bladder-vetch	PerF	Intro/Intro	Native to Asia
Leguminosae (Fabaceae)	<i>Trifolium fragiferum</i>	<i>Trifolium fragiferum</i>		strawberry clover	PerF	Intro/Intro	Native to Europe
Leguminosae (Fabaceae)	<i>Trifolium pratense</i>	<i>Trifolium pratense</i>		red clover	PerF	Intro/Intro	Native to Europe
Leguminosae (Fabaceae)	<i>Vicia americana</i> var. <i>americana</i>	<i>Vicia americana</i> var. <i>americana</i>		American vetch	PerF	Wide/ Wide	
Liliaceae (Calochortaceae)	<i>Calochortus gunnisonii</i>	<i>Calochortus gunnisonii</i>	<i>C. gunnisonii</i> var. <i>gunnisonii</i>	Gunnison's mariposa	PerF	Wide/ Wide	
Liliaceae (Convallariaceae, Rusaceae)	<i>Smilacina racemosa</i>	<i>Maianthemum amplexicaule</i>	<i>M. racemosum</i> var. <i>amplexicaule</i>	false Solomon's-seal	PerF	Wide/ Wide	
Linaceae	<i>Linum subteres</i>			Utah yellow-flax	PerF	RegEn/ NA	
Loasaceae	<i>Mentzelia pterosperma</i>	<i>Nuttallia pterosperma</i>		wing-seed stickleaf	PerF	Wide/ Wide	

Appendix B. Potential (unconfirmed) taxa of Dinosaur National Monument, cont.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range (UT/CO)	Comments
	Utah	Colorado					
Loasaceae	<i>Mentzelia rusbyi</i>	<i>Nuttallia rusbyi</i>		Rusby's stickleaf	PerF	Periph/ Wide	
Lythraceae	<i>Ammannia robusta</i>	<i>Ammannia robusta</i>		robust toothcup	AnnF	Sparse/ Sparse	
Malvaceae	<i>Malva neglecta</i>	<i>Malva neglecta</i>		common mallow	AnnF	Intro/Intro	Native to Eurasia
Malvaceae	<i>Malvella leprosa</i>	<i>Malvella leprosa</i>		alkali mallow	PerF	Wide/ Periph	
Malvaceae	<i>Sidalcea candida</i>	<i>Sidalcea candida</i>	Includes vars. <i>candida</i> & <i>glabrata</i>	white checker-mallow	PerF	Wide/ Wide	
Malvaceae	<i>Sidalcea neomexicana</i>	<i>Sidalcea neomexicana</i>	Includes vars. <i>crenulata</i> & <i>neomexicana</i>	New Mexico checker-mallow	PerF	Wide/ Wide	
Malvaceae	<i>Sphaeralcea grossulariifolia</i>	<i>Sphaeralcea grossulariifolia</i>	<i>S. grossulariifolia</i> var. <i>grossulariifolia</i>	gooseberry-leaf globemallow	PerF	Wide/NA	
Marsileaceae	<i>Marsilea vestita</i>	<i>Marsilea vestita</i>	<i>M. vestita</i> var. <i>vestita</i>	pepperwort	Fern	Wide/NA	
Nyctaginaceae	<i>Mirabilis alipes</i>	<i>Mirabilis alipes</i>	<i>Hermidium alipes</i>	Watson's four-o'clock	PerF	Wide/ Periph	
Onagraceae	<i>Boisduvalia glabella</i>		<i>Epilobium pygmaeum</i>	smooth spike-primrose	AnnF	Periph/ NA	
Onagraceae	<i>Camissonia andina</i>	<i>Camissonia andina</i>	<i>Oenothera andina</i>	Andean camissonia	AnnF	Periph/ Periph	
Onagraceae	<i>Camissonia pterosperma</i>		wingseed camissonia		AnnF	Periph/ NA	
Onagraceae	<i>Epilobium alpinum</i> var. <i>clavatum</i>	<i>Epilobium clavatum</i>		club willow-herb	PerF	Wide/ Wide	
Onagraceae	<i>Epilobium hornemannii</i> var. <i>lactiflorum</i>	<i>Epilobium lactiflorum</i>	<i>E. alpinum</i> var. <i>lactiflorum</i>	white-flower willow-herb	PerF	Wide/ Wide	
Onagraceae	<i>Epilobium leptophyllum</i>	<i>Epilobium leptophyllum</i>	<i>E. palustre</i> var. <i>gracile</i>	slender willow-herb	PerF	Periph/ Sparse	
Onagraceae	<i>Epilobium saximontanum</i>	<i>Epilobium saximontanum</i>		Rocky Mountain willow-herb	PerF	Wide/ Wide	
Onagraceae	<i>Gaura parviflora</i>	<i>Gaura mollis</i>		small-flowered gaura	AnnF	Wide/ Wide	
Onagraceae	<i>Oenothera flava</i> var. <i>flava</i>	<i>Oenothera flava</i>		yellow evening-primrose	PerF	Wide/ Wide	

Appendix B. Potential (unconfirmed) taxa of Dinosaur National Monument, cont.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range (UT/CO)	Comments
	Utah	Colorado					
Onagraceae	<i>Oenothera howardii</i>	<i>Oenothera howardii</i>	<i>O. brachycarpa</i>	bronze evening-primrose	PerF	Wide/ Wide	
Onagraceae	<i>Oenothera pallida</i> var. <i>pallida</i>	<i>Oenothera pallida</i> ssp. <i>pallida</i>	Includes var. <i>runcinata</i>	pale evening-primrose	PerF	Wide/ Periph	
Orobanchaceae	<i>Orobanche uniflora</i>	<i>Aphyllon uniflorum</i>	<i>O. uniflora</i> var. <i>occidentalis</i>	naked broomrape	PerF	Sparse/ Wide	
Pinaceae	<i>Pinus flexilis</i>	<i>Pinus flexilis</i>		limber pine	Tree	Wide/ Wide	
Plantaginaceae	<i>Plantago elongata</i>	<i>Plantago elongata</i>		longleaf plantain	AnnF	Periph/ Sparse	
Plantaginaceae	<i>Plantago lanceolata</i>	<i>Plantago lanceolata</i>		English plantain	PerF	Intro/Intro	Native to Eurasia
Polemoniaceae	<i>Gilia leptomeria</i> var. <i>leptomeria</i>	<i>Aliciella leptomeria</i>		common gilia	AnnF	Wide/ Periph	
Polemoniaceae	<i>Gilia stenothyrsa</i>	<i>Aliciella stenothyrsa</i>	<i>Ipomopsis stenothyrsa</i>	Uinta gilia	PerF	RegEn/ RegEn	
Polemoniaceae	<i>Linanthes nuttallii</i>	<i>Linanthes nuttallii</i>	<i>Linanthes nuttallii</i> var. <i>nuttallii</i> , <i>Leptosiphon nuttallii</i>	Nuttall's linanthus	PerF	Wide/ Wide	
Polemoniaceae	<i>Linanthes septentrionalis</i>	<i>Linanthes harknessii</i> var. <i>septentrionalis</i>	<i>Leptosiphon septentrionalis</i>	northern linanthus	AnnF	Wide/ Wide	
Polemoniaceae	<i>Polemonium caeruleum</i> var. <i>pterospermum</i>	<i>Polemonium caeruleum</i> ssp. <i>amygdalinum</i>	<i>P. occidentale</i>	western Jacob's-ladder	PerF	Wide/ Wide	
Polemoniaceae	<i>Polemonium foliosissimum</i> var. <i>foliosissimum</i>	<i>Polemonium foliosissimum</i>		blue leafy Jacob's-ladder	PerF	Wide/ Wide	
Polygonaceae	<i>Eriogonum alatum</i>	<i>Pterogonum alatum</i>	<i>E. alatum</i> var. <i>alatum</i>	winged wild buckwheat	PerF	Wide/ Wide	
Polygonaceae	<i>Eriogonum ephedroides</i>	<i>Eriogonum ephedroides</i>	<i>E. brevicaule</i> var. <i>ephedroides</i>	ephedra wild buckwheat	PerF	LocEn/ LocEn	USFWS: 3C
Polygonaceae	<i>Eriogonum lonchophyllum</i> var. <i>lonchophyllum</i>	<i>Eriogonum lonchophyllum</i>		longleaf wild buckwheat	Shrub	RegEn/ RegEn	
Polygonaceae	<i>Eriogonum umbellatum</i> var. <i>porteri</i>	<i>Eriogonum umbellatum</i> var. <i>porteri</i>		Porter's wild buckwheat	PerF	RegEn/ RegEn	

Appendix B. Potential (unconfirmed) taxa of Dinosaur National Monument, cont.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range (UT/CO)	Comments
	Utah	Colorado					
Polygonaceae	<i>Polygonum persicaria</i>	<i>Persicaria maculosa</i>		lady's-thumb	AnnF	Intro/Intro	Native to Eurasia
Polygonaceae	<i>Polygonum ramosissimum</i>	<i>Polygonum ramosissimum</i>	<i>P. ramosissimum</i> var. <i>prolificum</i> , <i>P. ramosissimum</i> var. <i>ramosissimum</i>	bushy knotweed	AnnF	Wide/ Wide	Vars. not recognized in Welsh et al. 2003
Polygonaceae	<i>Rumex acetosella</i>	<i>Acetosella vulgaris</i>		sheep sorrel	PerF	Intro/Intro	Native to Eurasia
Polygonaceae	<i>Rumex occidentalis</i>	<i>Rumex aquaticus</i> ssp. <i>occidentalis</i>	<i>R. aquaticus</i> var. <i>fenestratus</i>	western dock	PerF	Wide/ Wide	
Polygonaceae	<i>Rumex stenophyllus</i>	<i>Rumex stenophyllus</i>		narrow-leaved dock	PerF	Intro/Intro	Native to Eurasia
Polygonaceae	<i>Rumex venosus</i>	<i>Rumex venosus</i>		veiny dock	PerF	Wide/ Wide	
Polypodiaceae (Aspleniaceae)	<i>Asplenium viride</i>	<i>Asplenium viride</i>	<i>A. trichomanes-ramosum</i>	green spleenwort	Fern	Periph/ Sparse	
Polypodiaceae (Aspleniaceae, Woodsiaceae)	<i>Woodsia scopulina</i>	<i>Woodsia scopulina</i>	<i>W. scopulina</i> ssp. <i>scopulina</i>	Rocky Mountain woodsia	Fern	Wide/ Wide	
Portulacaceae	<i>Lewisia pygmaea</i>	<i>Oreobroma pygmaea</i>		alpine bitter-root	PerF	Wide/ Wide	
Potamogetonaceae	<i>Potamogeton filiformis</i> var. <i>occidentalis</i>	<i>Potamogeton filiformis</i>	<i>Stuckenia filiformis</i> var. <i>occidentalis</i>	slenderleaf pondweed	PerF	Wide/ Wide	
Potamogetonaceae	<i>Potamogeton foliosus</i> var. <i>foliosus</i>	<i>Potamogeton foliosus</i>		leafy pondweed	PerF	Wide/ Wide	
Potamogetonaceae	<i>Potamogeton gramineus</i>	<i>Potamogeton gramineus</i>	Includes vars. <i>maximus</i> & <i>gramineus</i>	grass pondweed	PerF	Wide/ Wide	
Potamogetonaceae	<i>Potamogeton richardsonii</i>	<i>Potamogeton perfoliatus</i> ssp. <i>richardsonii</i>		Richardson's pondweed	PerF	Wide/ Wide	
Primulaceae	<i>Dodecatheon pulchellum</i> var. <i>zionense</i>		Includes "subvar." <i>huberi</i>	Zion shooting-star	PerF	RegEn/ NA	
Pyrolaceae (Ericaceae, Monotropaceae)	<i>Pterospora andromedeae</i>	<i>Pterospora andromedeae</i>		woodland pinedrops	PerF	Wide/ Wide	

Appendix B. Potential (unconfirmed) taxa of Dinosaur National Monument, cont.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range (UT/CO)	Comments
	Utah	Colorado					
Ranunculaceae	<i>Clematis hirsutissima</i>	<i>Coriflora hirsutissima</i>	<i>C. hirsutissima</i> var. <i>hirsutissima</i>	sugar-bowls	PerF	Wide/ Wide	
Ranunculaceae	<i>Clematis occidentalis</i> var. <i>grosseserrata</i>	<i>Atragene occidentalis</i>		purple virgin's-bower	PerF	Wide/ Wide	
Ranunculaceae (Helleboraceae)	<i>Delphinium geyeri</i>	<i>Delphinium geyeri</i>		Geyer's larkspur	PerF	RegEn/ RegEn	
Ranunculaceae (Helleboraceae)	<i>Delphinium occidentale</i>	<i>Delphinium occidentale</i>	<i>D. glaucum</i> x <i>D. barbeyi</i> ; <i>D. glaucum</i>	western larkspur	PerF	Wide/ Wide	
Ranunculaceae	<i>Myosurus apetalus</i> var. <i>montanus</i>	<i>Myosurus apetalus</i>	<i>M. aristatus</i>	bristly mouse-tail	AnnF	Wide/ Wide	
Ranunculaceae	<i>Myosurus minimus</i>	<i>Myosurus minimus</i>		tiny mouse-tail	AnnF	Sparse/ Wide	
Ranunculaceae	<i>Ranunculus adoneus</i>	<i>Ranunculus adoneus</i>	Includes vars. <i>adoneus</i> & <i>alpinus</i>	alpine buttercup	PerF	Wide/ Wide	
Ranunculaceae	<i>Ranunculus alismifolius</i> var. <i>montanus</i>	<i>Ranunculus alismifolius</i> var. <i>montanus</i>		plantain buttercup	PerF	Wide/ Wide	
Ranunculaceae	<i>Ranunculus cardiophyllus</i>	<i>Ranunculus cardiophyllus</i>		heart-leaf buttercup	PerF	Wide/ Wide	
Ranunculaceae	<i>Ranunculus flammula</i> var. <i>ovalis</i>	<i>Ranunculus reptans</i>	<i>R. flammula</i> var. <i>filiformis</i> , <i>R. flammula</i> var. <i>reptans</i>	creeping buttercup	PerF	Wide/ Wide	
Ranunculaceae	<i>Ranunculus inamoenus</i>	<i>Ranunculus inamoenus</i> var. <i>inamoenus</i>	Includes var. <i>alpeophilus</i>	drab buttercup	PerF	Wide/ Wide	
Ranunculaceae	<i>Ranunculus repens</i> var. <i>repens</i>	<i>Ranunculus repens</i>		creeping buttercup	PerF	Intro/ Intro	Native to Eurasia
Ranunculaceae (Thalictraceae)	<i>Thalictrum sparsiflorum</i>	<i>Thalictrum sparsiflorum</i>	<i>T. sparsiflorum</i> var. <i>saximontanum</i>	few-flower meadow-rue	PerF	Wide/ Wide	
Rhamnaceae	<i>Ceanothus fendleri</i>	<i>Ceanothus fendleri</i>		Fendler's mountain-lilac	Shrub	Wide/ Wide	
Rosaceae	<i>Fragaria virginiana</i>	<i>Fragaria virginiana</i> ssp. <i>glauca</i>	Includes ssp. <i>glauca</i> & <i>platypetala</i>	Virginia strawberry	PerF	Wide/ Wide	
Rosaceae	<i>Geum aleppicum</i>	<i>Geum aleppicum</i>		erect avens	PerF	Sparse/ Wide	

Appendix B. Potential (unconfirmed) taxa of Dinosaur National Monument, cont.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range (UT/CO)	Comments
	Utah	Colorado					
Rosaceae	<i>Geum triflorum</i> var. <i>ciliatum</i>	<i>Erythrocoma triflora</i>		prairie smoke	PerF	Wide/ Wide	
Rosaceae	<i>Potentilla glandulosa</i> var. <i>pseudorupestris</i>	<i>Drymocallis glandulosa</i>		sticky cinquefoil	PerF	Wide/ Wide	
Rosaceae	<i>Potentilla hippiana</i>	<i>Potentilla hippiana</i>	<i>P. hippiana</i> var. <i>hippiana</i>	woolly cinquefoil	PerF	Wide/ Wide	
Rosaceae	<i>Potentilla ovina</i> var. <i>decurrens</i>	<i>Potentilla ovina</i> var. <i>decurrens</i>		sheep cinquefoil	PerF	Wide/ Periph	
Rosaceae	<i>Potentilla paradoxa</i>	<i>Potentilla supina</i> ssp. <i>paradoxa</i>		bushy cinquefoil	AnnF	Wide/ Wide	
Rosaceae	<i>Potentilla rivalis</i>	<i>Potentilla rivalis</i>		brook cinquefoil	AnnF	Sparse/ Sparse	
Rosaceae	<i>Prunus americana</i>	<i>Prunus americana</i>		American plum	Shrub	Intro/ Wide	Native to C North America
Rosaceae	<i>Rubus parviflorus</i> var. <i>parviflorus</i>	<i>Rubacer parviflorum</i>		western thimbleberry	Shrub	Wide/ Wide	
Rosaceae	<i>Sorbus scopulina</i>	<i>Sorbus scopulina</i>	<i>S. scopulina</i> var. <i>scopulina</i>	rock mountain-ash	Shrub	Wide/ Wide	
Rubiaceae	<i>Galium boreale</i>	<i>Galium septentrionale</i>		northern bedstraw	PerF	Wide/ Wide	
Rubiaceae	<i>Galium mexicanum</i> var. <i>asperulum</i>	<i>Galium mexicanum</i> ssp. <i>asperillum</i>		rough bedstraw	PerF	Periph/ Wide	
Ruppiaceae	<i>Ruppia cirrhosa</i>	<i>Ruppia cirrhosa</i> ssp. <i>occidentalis</i>	<i>R. maritima</i> var. <i>occidentalis</i>	ditch-grass	PerF	Wide/ Wide	
Salicaceae	<i>Populus alba</i>	<i>Populus alba</i>		white poplar	Tree	Intro/Intro	Native to Eurasia
Salicaceae	<i>Salix drummondiana</i>	<i>Salix drummondiana</i>		Drummond's willow	Shrub	Wide/ Wide	
Salicaceae	<i>Salix fragilis</i>	<i>Salix fragilis</i>		crack willow	Tree	Intro/Intro	Native to Eurasia
Salicaceae	<i>Salix geeyeriana</i>	<i>Salix geeyeriana</i>	<i>S. geeyeriana</i> var. <i>geeyeriana</i>	Geyer's willow	Shrub	Wide/ Wide	
Scrophulariaceae	<i>Castilleja applegatei</i> var. <i>viscida</i>		<i>C. applegatei</i> ssp. <i>pinetorum</i>	wavy-leaved Indian-paintbrush	PerF	RegEn/ NA	
Scrophulariaceae	<i>Cordylanthus kingii</i> var. <i>densiflorus</i>			saline bird's-beak	AnnF	LocEn/ NA	

Appendix B. Potential (unconfirmed) taxa of Dinosaur National Monument, cont.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range (UT/CO)	Comments
	Utah	Colorado					
Scrophulariaceae	<i>Mimulus glabratus</i> var. <i>fremontii</i>	<i>Mimulus glabratus</i>	<i>M. glabratus</i> var. <i>jamesii</i>	glabrous monkeyflower	PerF	Periph/ Wide	
Scrophulariaceae	<i>Pedicularis centranthera</i>	<i>Pedicularis centranthera</i>		dwarf lousewort	PerF	Wide/ Wide	
Scrophulariaceae	<i>Penstemon acaulis</i> var. <i>yampaensis</i>	<i>Penstemon acaulis</i> var. <i>yampaensis</i>	<i>P. yampaensis</i>	Yampa penstemon	PerF	LocEn/ LocEn	
Scrophulariaceae	<i>Penstemon caespitosus</i> var. <i>perbrevis</i>			shortleaf penstemon	PerF	RegEn/ NA	
Scrophulariaceae	<i>Penstemon carnosus</i>			fleshy penstemon	PerF	RegEn/ NA	
Scrophulariaceae	<i>Penstemon comarrhenus</i>	<i>Penstemon comarrhenus</i>		dusty penstemon	PerF	RegEn/ RegEn	
Scrophulariaceae	<i>Penstemon goodrichii</i>			Goodrich's penstemon	PerF	LocEn/ NA	Type locality is 3.7 km E of Lapoint, Uintah Co., UT (Holmgren, & Holmgren, Barneby 8760 NY). UT BLM: Sensitive, USFWS: former C2 candidate
Scrophulariaceae	<i>Penstemon grahamii</i>	<i>Penstemon grahamii</i>		Graham's penstemon	PerF	LocEn/ LocEn	Type locality is near Sand Wash, Uintah Co., UT (Graham 7883 CM). USFWS: formerly Proposed Threatened
Scrophulariaceae	<i>Penstemon pachyphyllus</i> var. <i>pachyphyllus</i>			thickleaf penstemon	PerF	RegEn/ NA	
Scrophulariaceae	<i>Penstemon scariousus</i> var. <i>albifluvis</i>	<i>Penstemon scariousus</i> var. <i>albifluvis</i>		White River penstemon	PerF	LocEn/ LocEn	USFWS: Candidate

Appendix B. Potential (unconfirmed) taxa of Dinosaur National Monument, cont.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range (UT/CO)	Comments
	Utah	Colorado					
Scrophulariaceae	<i>Penstemon scarious</i> var. <i>scarious</i>			plateau penstemon	PerF	RegEn/ NA	
Scrophulariaceae	<i>Veronica biloba</i>	<i>Pocilla biloba</i>		two-lobe speedwell	AnnF	Intro/Intro	Native to Asia
Scrophulariaceae	<i>Veronica catenata</i>	<i>Veronica catenata</i>	Included in <i>V. anagallis-aquatica</i> by some authors	chain speedwell	PerF	Sparse/ Wide	
Scrophulariaceae	<i>Veronica wormskjoldii</i>	<i>Veronica nutans</i>		American alpine speedwell	PerF	Wide/ Wide	
Solanaceae	<i>Lycium barbarum</i>	<i>Lycium barbarum</i>	<i>L. halmifolium</i>	matrimony-vine	Shrub	Intro/Intro	Native to Eurasia
Solanaceae	<i>Physalis longifolia</i>		<i>P. virginiana</i> var. <i>sonorae</i>	long-leaf ground-cherry	PerF	Wide/NA	
Solanaceae	<i>Solanum dulcamara</i>	<i>Solanum dulcamara</i>		European bittersweet	PerF	Intro/Intro	Native to Eurasia
Solanaceae	<i>Solanum rostratum</i>	<i>Solanum rostratum</i>		buffalobur	AnnF	Intro/ Wide	Native to C North America
Solanaceae	<i>Solanum sarrachoides</i>	<i>Solanum physalifolium</i> var. <i>nitidibaccatum</i>	<i>S. villosum</i>	ground-cherry nightshade	AnnF	Intro/Intro	Native to South America
Sparganiaceae	<i>Sparganium angustifolium</i>	<i>Sparganium angustifolium</i>		narrowleaved bur-reed	PerF	Wide/ Wide	
Umbelliferae (Apiaceae)	<i>Carum carvi</i>	<i>Carum carvi</i>		caraway	PerF	Intro/ Intro	CO state noxious weed (List B). Native to Eurasia.
Umbelliferae (Apiaceae)	<i>Cicuta maculata</i> var. <i>angustifolia</i>	<i>Cicuta douglasii</i>	<i>C. occidentalis</i>	water-hemlock	PerF	Wide/ Wide	
Umbelliferae (Apiaceae)	<i>Conium maculatum</i>	<i>Conium maculatum</i>		poison-hemlock	PerF	Intro/Intro	CO state noxious weed (List C). Native to Eurasia.
Umbelliferae (Apiaceae)	<i>Cymopterus longipes</i>		<i>C. longipes</i> var. <i>longipes</i>	long-stalk spring-parsley	PerF	Wide/NA	
Umbelliferae (Apiaceae)	<i>Cymopterus purpurascens</i>			basin white-cup spring-parsley	PerF	Wide/NA	

Appendix B. Potential (unconfirmed) taxa of Dinosaur National Monument, cont.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range (UT/CO)	Comments
	Utah	Colorado					
Umbelliferae (Apiaceae)	<i>Heracleum lanatum</i>	<i>Heracleum sphondylium</i> ssp. <i>montanum</i>	<i>H. maximum</i> , <i>H. sphondylium</i> var. <i>lanatum</i>	cow parsnip	PerF	Wide/ Wide	
Umbelliferae (Apiaceae)	<i>Pastinaca sativa</i>	<i>Pastinaca sativa</i>		common parsnip	PerF	Intro/Intro	Native to Europe
Urticaceae	<i>Parietaria pennsylvanica</i>	<i>Parietaria pennsylvanica</i>		Pennsylvania pellitory	AnnF	Wide/ Wide	
Urticaceae	<i>Urtica dioica</i> var. <i>procera</i>	<i>Urtica gracilis</i> ssp. <i>gracilis</i>	<i>U. dioica</i> ssp. <i>gracilis</i>	stinging nettle	PerF	Periph/ Wide	
Valerianaceae	<i>Valeriana edulis</i>	<i>Valeriana edulis</i>		tobacco-root	PerF	Wide/ Wide	
Verbenaceae	<i>Phyla cuneifolia</i>	<i>Phyla cuneifolia</i>	<i>Lippia cuneifolia</i>	wedge-leaf fog-fruit	PerF	Sparse/ Wide	
Verbenaceae	<i>Verbena hastata</i>	<i>Verbena hastata</i>		blue vervain	PerF	Wide/ Wide	
Violaceae	<i>Viola tricolor</i>			pansy	AnnF	Intro/NA	Native to Eurasia
Viscaceae	<i>Arceuthobium americanum</i>	<i>Arceuthobium americanum</i>		lodgepole pine dwarf-mistletoe	PerF	Periph/ Wide	Typically parasitic on <i>Pinus contorta</i> (rarely on <i>P. ponderosa</i>)
Vitaceae	<i>Parthenocissus quinquefolia</i>	<i>Parthenocissus quinquefolia</i>		Virginia creeper	Shrub	Intro/Intro	Native to E North America
Zygophyllaceae	<i>Tribulus terrestris</i>	<i>Tribulus terrestris</i>		puncture vine	AnnF	Intro/Intro	CO state noxious weed (List C). Native to Eurasia.

The vascular plant species listed here are known from the vicinity of Dinosaur NM, in Daggett, Duchesne, and Uintah counties (Utah) and Moffat County, Colorado, but have not previously been reported or confirmed for the monument. Species on this list are derived from a checklist of potential species for NCPN parks prepared by Dr. N. Duane Atwood, of Brigham Young University, in 2001, the *Atlas of the Vascular Flora of Utah* (Albee et al. 1988), and records collected just outside Dinosaur NM (Weber et al. 1982). Some species from Appendix C could be considered as potentially occurring in the monument, but are not included here.

Appendix C. Rejected (falsely reported or questionable) taxa of Dinosaur National Monument.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range	Park status	UT	CO	Comments
	Utah	Colorado								
Berberidaceae	<i>Mahonia aquilifolium</i>			shining mahonia	Shrub	Intro/ NA	FalsRep	X		Report from Carnegie Museum herbarium based on misidentified specimen of <i>M. repens</i> . Native to NW North America.
Boraginaceae	<i>Cryptantha fulvocanescens</i>	<i>Oreocarya fulvocanescens</i>		plateau cryptanth	PerF	RegEn/ RegEn	FalsRep	X		Reported by Holmgren (1962) based on misidentified specimen of <i>C. breviflora</i> .
Boraginaceae	<i>Cryptantha watsonii</i>	<i>Cryptantha watsonii</i>		Watson's cryptanth	AnnF	Wide/ Wide	FalsRep	X		Reported by Holmgren (1962) based on misidentified specimen of <i>Lappula occidentalis</i> . Type locality is Wasatch Mountains, Salt Lake Co., UT (Watson 858 GH)
Boraginaceae	<i>Mertensia brevistyla</i>	<i>Mertensia brevistyla</i>		short-styled bluebell	PerF	Wide/ Wide	FalsRep	X		Reported by Weber et al. (1982) based on misidentified specimens of <i>M. fusiformis</i> .
Cactaceae	<i>Opuntia phaeacantha</i>	<i>Opuntia phaeacantha</i>		berry pricklypear	PerF	Wide/ Wide	FalsRep	X		Report from DINO herbarium (without variety) based on misidentified specimens of <i>O. erinacea</i> var. <i>utahensis</i> .
Caryophyllaceae (Alsiniaceae)	<i>Arenaria fendleri</i> var. <i>glabrescens</i>	<i>Eremogone kingii</i> ssp. <i>uintahensis</i>	<i>E. kingii</i> var. <i>glabrescens</i> , <i>A. kingii</i> ssp. <i>uintahensis</i> , <i>A. kingii</i> ssp. <i>compacta</i> , <i>A. kingii</i> ssp. <i>plateauensis</i> , <i>A. uintahensis</i>	basin sandwort	PerF	Wide/ Wide	FalsRep	X		Reported by Holmgren (1962) as <i>A. uintahensis</i> based on misidentified specimens of <i>A. fendleri</i> var. <i>eastwoodiae</i> .

Appendix C. Rejected (falsely reported or questionable) taxa of Dinosaur National Monument, cont.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range	Park status	UT	CO	Comments
	Utah	Colorado								
Chenopodiaceae	<i>Chenopodium album</i> var. <i>album</i>	<i>Chenopodium album</i>		lambquarter	AnnF	Intro/ Intro	FalsRep	X		Reported by Holmgren (1962) based on misidentified specimen of <i>C. simplex</i> . Native to Eurasia.
Chenopodiaceae	<i>Corispermum villosum</i>		<i>C. hyssopifolium</i> , <i>C. nitidum</i>	hairy bugseed	AnnF	Wide/ NA	FalsRep	X		Reported by Holmgren (1962) based on misidentified specimen of <i>C. americanum</i> .
Chenopodiaceae	<i>Krascheninikovia lanata</i> var. <i>subspinosa</i>		<i>Ceratooides lanata</i> var. <i>subspinosa</i> . Vars. not recognized in <i>Flora of North America</i> (2003).	shrubby winterfat	Shrub	Periph/ NA	FalsRep	X		Report from DINO herbarium based on misidentified specimen of <i>K. lanata</i> var. <i>lanata</i> .
Compositae (Asteraceae)		<i>Ambrosia linearis</i>		linearleaf ragweed	AnnF	NA/ LocEn	FalsRep	X		Reported by Holmgren (1962) based on misidentified specimen of <i>Ambrosia tomentosa</i> .
Compositae (Asteraceae)	<i>Aster eatonii</i>	<i>Aster bracteolatus</i>	<i>Symphotrichum eatonii</i>	Eaton's aster	PerF	Wide/ Wide	FalsRep	X		Reported by Naumann (2002) based on misidentified specimen of <i>A. pansus</i> .
Compositae (Asteraceae)	<i>Aster engelmannii</i>	<i>Eucephalus engelmannii</i>		Engelmann's aster	PerF	Wide/ Wide	FalsRep	X		Reported by Holmgren (1962) based on misidentified specimen of <i>A. perelegans</i> .
Compositae (Asteraceae)	<i>Brickellia longifolia</i>	<i>Brickellia longifolia</i>	<i>B. longifolia</i> var. <i>longifolia</i>	longleaf brickellbush	Shrub	Wide/ Periph	Ques?			Reported by NCPN (in ed.), but DINO is outside the expected range of the species.
Compositae (Asteraceae)	<i>Brickellia microphylla</i> var. <i>watsonii</i>			Watson's brickellbush	Shrub	Wide/ NA	FalsRep	X		Reported by Holmgren (1962) based on misidentified specimen of <i>B. microphylla</i> var. <i>scabra</i> .

Appendix C. Rejected (falsely reported or questionable) taxa of Dinosaur National Monument, cont.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range	Park status	UT	CO	Comments
	Utah	Colorado								
Compositae (Asteraceae)	<i>Chrysothamnus viscidiflorus</i> var. <i>lanceolatus</i>	<i>Chrysothamnus viscidiflorus</i> ssp. <i>lanceolatus</i>		lanceleaf rabbitbrush	Shrub	Wide/ Wide	FalsRep	X		Reported by Naumann (2002) based on misidentified specimen of <i>C. viscidiflorus</i> var. <i>stenophyllus</i> .
Compositae (Asteraceae)	<i>Cirsium calcareum</i> var. <i>pulchellum</i>	<i>Cirsium calcareum</i> var. <i>pulchellum</i>	Var. not recognized by Cronquist (1994), included in <i>C. arizonicum</i> var. <i>bipinnatum</i> in <i>Flora of North America</i> 2006)	pretty thistle	PerF	Wide/ Wide	FalsRep	X		Reported by Naumann (2002) without variety based on misidentified specimen of <i>C. undulatum</i> var. <i>undulatum</i> .
Compositae (Asteraceae)			<i>Cirsium drummondii</i>	dwarf thistle	PerF	NA/NA	FalsRep	X		Reported by Holmgren (1962) based on misidentified specimen of <i>C. scariosum</i> from outside DINO. Native to northern North America. Not native to UT or CO.
Compositae (Asteraceae)	<i>Erigeron bellidiastrum</i>	<i>Erigeron bellidiastrum</i>	<i>E. bellidiastrum</i> var. <i>bellidiastrum</i>	pretty daisy	AnnF	Wide/ Wide	FalsRep	X		Reported by Naumann (2002) based on misidentified specimen of <i>E. divergens</i> var. <i>divergens</i> .
Compositae (Asteraceae)	<i>Erigeron utahensis</i> var. <i>sparsifolius</i>		<i>E. sparsifolius</i>	slenderleaf daisy	PerF	RegEn/ NA	FalsRep	X		Reported by Holmgren (1962) without variety based on misidentified specimen of <i>E. pulcherrimus</i> .
Compositae (Asteraceae)	<i>Erigeron vetensis</i>	<i>Erigeron vetensis</i>		La Veta Pass fleabane	PerF	RegEn/ RegEn	FalsRep	X		Reported by Holmgren (1962) and Weber et al. (1982) based on misidentified specimen of <i>E. pumilus</i> var. <i>concinus</i> .

Appendix C. Rejected (falsely reported or questionable) taxa of Dinosaur National Monument, cont.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range	Park status	UT	CO	Comments
	Utah	Colorado								
Compositae (Asteraceae)	<i>Grindelia aphanactis</i>	<i>Grindelia aphanactis</i>	<i>G. nuda</i> var. <i>aphanactis</i>	Rydberg's gumweed	PerF	Periph/ Periph	FalsRep	X		Reported by Holmgren (1962) based on misidentified specimen of <i>G. squarrosa</i> var. <i>serrulata</i> .
Compositae (Asteraceae)	<i>Helianthus pumilus</i>	<i>Helianthus pumilus</i>		little sunflower	PerF	Intro/ RegEn	FalsRep	X	X	Report from DINO herbarium based on misidentified specimen of <i>Viguiera multiflora</i> var. <i>multiflora</i> .
Compositae (Asteraceae)	<i>Hymenopappus filifolius</i> var. <i>eriopodus</i>			bulb hyalineherb	PerF	RegEn/ NA	FalsRep	X		Reported by Holmgren (1962) based on misidentified specimen of <i>H. filifolius</i> var. <i>cinereus</i> .
Compositae (Asteraceae)	<i>Hymenoxys acaulis</i> var. <i>nana</i>		<i>H. depressa</i> , <i>Tetranneuris acaulis</i> var. <i>nana</i>	low hymenoxys	PerF	LocEn/ NA	FalsRep	X		Report from DINO herbarium based on misidentified specimen of <i>H. lapidicola</i> . USFWS: former C2
Compositae (Asteraceae)	<i>Lygodesmia juncea</i>	<i>Lygodesmia juncea</i>		rush skeleton-plant	PerF	Periph/ Wide	FalsRep	X		Reported by Holmgren (1962) based on misidentified specimens of <i>L. grandiflora</i> var. <i>grandiflora</i> and <i>Stephanomeria runcinata</i> .
Compositae (Asteraceae)	<i>Machaeranthera bigelovii</i> var. <i>bigelovii</i>	<i>Machaeranthera bigelovii</i>	<i>Dieteria bigelovii</i> var. <i>bigelovii</i> , <i>Aster rubrotinctus</i>	Bigelow's tansy-aster	PerF	Wide/ Wide	Ques?	X		Reported by Holmgren (1962) as <i>Aster rubrotinctus</i> , but monument is outside the expected range of this taxon (report probably based on <i>M. canescens</i>).

Appendix C. Rejected (falsely reported or questionable) taxa of Dinosaur National Monument, cont.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range	Park status	UT	CO	Comments
	Utah	Colorado								
Compositae (Asteraceae)	<i>Machaeranthera canescens</i> var. <i>leucanthemifolia</i>		<i>M. leucanthemifolia</i> , <i>Aster leucanthemifolius</i>	thickleaf aster	PerF	RegEn/ NA	FalsRep	X		Report from DINO herbarium based on misidentified specimen of <i>M. canescens</i> var. <i>canescens</i> .
Compositae (Asteraceae)		<i>Packera fendleri</i>	<i>Senecio fendleri</i>	Fendler's groundsel	PerF	NA/ Wide	FalsRep	X		Reported by Holmgren (1962) based on misidentified specimen of <i>S. multilobatus</i> .
Compositae (Asteraceae)	<i>Platyschkuhria integrifolia</i> var. <i>oblongifolia</i>	<i>Platyschkuhria integrifolia</i> var. <i>oblongifolia</i>	<i>Bahia nudicaulis</i> var. <i>oblongifolia</i> , <i>B. oblongifolia</i>	San Juan bahia	PerF	RegEn/ RegEn	FalsRep	X		Reported by Holmgren (1962) based on misidentified specimen of <i>P. integrifolia</i> var. <i>ourolepis</i> .
Compositae (Asteraceae)		<i>Solidago gigantea</i>	<i>Solidago gigantea</i>	late goldenrod	PerF	Periph/ Wide	FalsRep	X		Reported by Weber et al. (1982) based on misidentified specimen of <i>S. canadensis</i> var. <i>salebrosa</i> .
Compositae (Asteraceae)	<i>Solidago multiradiata</i> var. <i>scopulorum</i>	<i>Solidago multiradiata</i>		Rocky Mountain goldenrod	PerF	Wide/ Wide	FalsRep	X		Reported by Holmgren (1962) based on a misidentified specimen of <i>S. canadensis</i> var. <i>salebrosa</i>
Compositae (Asteraceae)		<i>Solidago simplex</i>	<i>Solidago simplex</i>	coast goldenrod	PerF	Wide/ Wide	FalsRep	X		Reported by Naumann (2002) as <i>S. spathulata</i> based on misidentified specimens of <i>S. nana</i> .
Compositae (Asteraceae)	<i>Thelesperma subnudum</i> var. <i>subnudum</i>	<i>Thelesperma subnudum</i>		scapose greenthread	PerF	Wide/ Periph	FalsRep	X		Report from DINO herbarium based on misidentified specimen of <i>Platyschkuhria integrifolia</i> var. <i>ourolepis</i> .
Compositae (Asteraceae)	<i>Townsendia montana</i> var. <i>montana</i>		<i>T. alpigena</i> var. <i>alpigena</i>	Wyoming townsendia	PerF	Periph/ NA	FalsRep	X		Reported by Naumann (2002) without variety based on misidentified specimens of <i>T. mensana</i> .

Appendix C. Rejected (falsely reported or questionable) taxa of Dinosaur National Monument, cont.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range	Park status	UT	CO	Comments
	Utah	Colorado								
Compositae (Asteraceae)	<i>Tragopogon porrifolius</i>	<i>Tragopogon porrifolius</i>		salsify	PerF	Intro/ Intro	FalsRep	X		Reported by Holmgren (1962) based on misidentified specimen of <i>T. dubius</i> . Native to Europe.
Compositae (Asteraceae)	<i>Wyethia amplexicaulis</i>	<i>Wyethia amplexicaulis</i>		mule's-ears	PerF	Wide/ Wide	FalsRep	X		Reported by Holmgren (1962) based on specimen collected from outside the monument.
Compositae (Asteraceae)	<i>Xylorhiza glabriuscula</i> var. <i>glabriuscula</i>	<i>Xylorhiza glabriuscula</i>	<i>Machaeranthera glabriuscula</i>	smooth woody- aster	PerF	Periph/ Wide	FalsRep	X		Reported by Holmgren (1962) as <i>Aster xylorhiza</i> based on misidentified specimen of <i>X. venusta</i> .
Cruciferae (Brassicaceae)	<i>Cardaria draba</i>	<i>Cardaria draba</i>	<i>Lepidium draba</i> , <i>C. draba</i> var. <i>draba</i>	whitetop	PerF	Intro/ Intro	FalsRep	X		Reported by Naumann (2002) based on misidentified specimen of <i>C. pubescens</i> . CO state noxious weed (List B). Native to Europe
Cruciferae (Brassicaceae)	<i>Draba stenoloba</i> var. <i>nana</i>	<i>Draba albertina</i>		slender whitlow-grass	PerF	Wide/ Wide	FalsRep	X		Reported by Holmgren (1962) based on specimen collected from outside the monument.
Cruciferae (Brassicaceae)	<i>Lepidium densiflorum</i> var. <i>densiflorum</i>	<i>Lepidium densiflorum</i>		prairie pepperwort	AnnF	Wide/ Wide	FalsRep	X		Reported by Naumann (2002) without variety based on misidentified specimen of <i>L. ramosissimum</i> var. <i>bourgeauuanum</i> .
Cruciferae (Brassicaceae)	<i>Lepidium montanum</i> var. <i>montanum</i>	<i>Lepidium montanum</i> var. <i>montanum</i>		mountain pepperwort	PerF	Wide/ Wide	FalsRep	X		Report from DINO herbarium based on misidentified specimen of <i>L. montanum</i> var. <i>jonesii</i> .

Appendix C. Rejected (falsely reported or questionable) taxa of Dinosaur National Monument, cont.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range	Park status	UT	CO	Comments
	Utah	Colorado								
Cruciferae (Brassicaceae)			<i>Physaria didymocarpa</i>	common twinpod	PerF	NA/NA	FalsRep	X		Report from Carnegie Museum herbarium based on misidentified specimen of <i>P. acutifolia</i> var. <i>acutifolia</i> . Not native to UT or CO.
Cruciferae (Brassicaceae)	<i>Physaria floribunda</i>	<i>Physaria floribunda</i>		mesa twinpod	PerF	LocEn/ LocEn	FalsRep	X	X	Report from Colorado State University herbarium based on misidentified specimen of <i>P. acutifolia</i> var. <i>acutifolia</i> .
Cruciferae (Brassicaceae)	<i>Physaria reediana</i> var. <i>reediana</i>	<i>Lesquerella alpina</i> ssp. <i>alpina</i>	<i>Lesquerella alpina</i> , includes var. <i>spatulata</i> , <i>P. reediana</i>	alpine bladderpod	PerF	Wide/ Wide	FalsRep	X	X	Reported by Weber et al. (1982) and Naumann (2002) as <i>Lesquerella alpina</i> based on misidentified specimens of <i>P. subumbellata</i> .
Cruciferae (Brassicaceae)	<i>Rorippa sphaerocarpa</i>	<i>Rorippa sphaerocarpa</i>	<i>R. obtusa</i>	round-pod yellowcress	AnnF	Sparse/ Sparse	FalsRep	X	X	Reported by Holmgren (1962) as <i>R. obtusa</i> based on misidentified specimen of <i>R. islandica</i> var. <i>glabra</i> .
Cyperaceae	<i>Carex lenticularis</i> var. <i>lipocarpa</i>	<i>Carex lenticularis</i> var. <i>lipocarpa</i>	<i>C. lenticularis</i> var. <i>pallida</i>	lakeshore sedge	PerG	Wide/ Wide	FalsRep	X	X	Reported by Naumann (2002) based on misidentified specimen of <i>C. nebrascensis</i> .
Cyperaceae	<i>Carex utriculata</i>	<i>Carex utriculata</i>	<i>C. rostrata</i> (sensu lato)	beaked sedge	PerG	Wide/ Wide	FalsRep	X	X	Reported by Holmgren (1962) based on specimen collected from outside the monument.
Cyperaceae	<i>Eleocharis ovata</i>	<i>Eleocharis obtusa</i> var. <i>detonsa</i>	<i>E. obtusa</i> var. <i>ovata</i> , <i>E. engelmannii</i>	ovate spikerush	AnnG	Periph/ Wide	FalsRep	X	X	Reported by Holmgren (1962) as <i>E. engelmannii</i> based on misidentified specimen of <i>E. palustris</i> .

Appendix C. Rejected (falsely reported or questionable) taxa of Dinosaur National Monument, cont.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range	Park status	UT	CO	Comments
	Utah	Colorado								
Cyperaceae	<i>Scirpus americanus</i>		<i>Scirpus olneyi</i> , <i>Schoenoplectus americanus</i>	American bulrush	PerG	Wide/ NA	FalsRep	X		Reported by Holmgren (1962) based on misidentified specimen of <i>S. pungens</i> var. <i>longispicatus</i> .
Elatinaceae	<i>Bergia texana</i>	<i>Bergia texana</i>		Texas bergia	AnnF	Sparse/ Disj	FalsRep	X		Report from DINO herbarium based on misidentified specimen of <i>Limosella romati</i> .
Equisetaceae	<i>Equisetum variegatum</i>	<i>Hippochaete variegata</i>	<i>E. variegatum</i> var. <i>variegatum</i>	northern scouring-rush	Fern	Disj/ Sparse	FalsRep	X		Reported by Weber et al. (1982) based on misidentified specimen of <i>E. laevigatum</i> .
Ericaceae	<i>Arctostaphylos uva-ursi</i>	<i>Arctostaphylos uva-ursi</i> ssp. <i>coactilis</i>	Vars. not recognized in Holmgren et al. (2005)	bearberry	Shrub	Wide/ Wide	FalsRep	X		Reported by Holmgren (1962) based on specimen collected from outside the monument.
Gramineae (Poaceae)	<i>Bromus ciliatus</i>	<i>Bromopsis canadensis</i>	Includes vars. <i>ciliatus</i> & <i>richardsonii</i>	fringed brome	PerG	Wide/ Wide	FalsRep	X		Reported by Naumann (2002) based on misidentified specimen of <i>B. carinatus</i> .
Gramineae (Poaceae)	<i>Elymus multisetus</i>	<i>Elymus multisetus</i>	<i>Sitanion jubatum</i>	big squirreltail	PerG	Sparse/ Periph	FalsRep	X		Report from DINO herbarium based on misidentified specimen of <i>E. elymoides</i> .
Gramineae (Poaceae)	<i>Elymus x pseudorepens</i>		<i>Agropyron x pseudorepens</i> . Hybrid of <i>E. trachycaulus</i> x <i>E. lanceolatus</i>	false quackgrass	PerG	Sparse/ NA	FalsRep	X		Report from DINO herbarium based on misidentified specimen of <i>E. smithii</i> .
Gramineae (Poaceae)	<i>Festuca rubra</i>	<i>Festuca rubra</i>	<i>F. rubra</i> var. <i>rubra</i>	red fescue	PerG	Intro/ Intro	FalsRep	X		Reported by Weber et al. (1982) based on misidentified specimen of <i>F. ovina</i> var. <i>saximontana</i> . Native to E and N North America

Appendix C. Rejected (falsely reported or questionable) taxa of Dinosaur National Monument, cont.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range	Park status	UT	CO	Comments
	Utah	Colorado								
Gramineae (Poaceae)	<i>Hordeum pusillum</i>	<i>Critesion pusillum</i>		little barley	AnnG	Wide/ Wide	FalsRep	X		Reported by Goodrich and Neese (1986) based on Goodrich # 12317 which was collected just outside the monument.
Gramineae (Poaceae)	<i>Melica spectabilis</i>	<i>Bromelica spectabilis</i>		purple oniongrass	PerG	Wide/ Wide	FalsRep	X		Reported by Holmgren (1962), Weber et al. (1982), and Naumann (2002) based on misidentified specimen of <i>M. bulbosa</i> .
Gramineae (Poaceae)	<i>Panicum oligosanthes</i> var. <i>scribnerianum</i>	<i>Dichanthelium oligosanthes</i>	<i>D. oligosanthes</i> var. <i>scribnerianum</i>	Scribner panicgrass	PerG	Sparse/ Wide	FalsRep	X		Reported by Holmgren (1962) based on misidentified specimen of <i>P. acuminatum</i> .
Gramineae (Poaceae)	<i>Poa leptocoma</i>	<i>Poa leptocoma</i>		bog bluegrass	PerG	Wide/ Wide	FalsRep	X		Reported by Naumann (2002) based on misidentified hybrid specimen of <i>P. nervosa</i> x <i>P. pratensis</i> .
Gramineae (Poaceae)	<i>Stipa comata</i> var. <i>intermedia</i>	<i>Hesperostipa comata</i> var. <i>intermedia</i>		needle-and-thread	PerG	Wide/ Wide	FalsRep	X		Report from DINO herbarium based on misidentified specimen of <i>S. comata</i> var. <i>comata</i> .
Hydrophyllaceae	<i>Phacelia glandulosa</i>	<i>Phacelia glandulosa</i>		glandular scorpion-weed	PerF	RegEn/ RegEn	FalsRep	X		Reported by Naumann (2002) based on misidentified specimen of <i>P. crenulata</i> var. <i>corrugata</i>
Hydrophyllaceae	<i>Phacelia heterophylla</i>	<i>Phacelia heterophylla</i>	Includes ssp. <i>heterophylla</i> & var. <i>virgata</i>	wand phacelia	PerF	Wide/ Wide	FalsRep	X		Reported by Naumann (2002) based on misidentified specimen of <i>P. hastata</i> .
Hydrophyllaceae			<i>Phacelia idahoensis</i>	Idaho phacelia	PerF	NA/NA	FalsRep	X	X	Reported by Holmgren (1962) based on misidentified specimens of <i>P. sericea</i> var. <i>ciliifolia</i> . Endemic to Idaho.

Appendix C. Rejected (falsely reported or questionable) taxa of Dinosaur National Monument, cont.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range	Park status	UT	CO	Comments
	Utah	Colorado								
Juncaceae	<i>Juncus confusus</i>	<i>Juncus confusus</i>		perplexing rush	PerG	Wide/ Wide	FalsRep	X		Reported by Holmgren (1962) and Naumann (2002) based on misidentified specimen of <i>J. tenuis</i> .
Leguminosae (Fabaceae)	<i>Astragalus coltonii</i> var. <i>coltonii</i>			Colton's milkvetch	PerF	RegEn/ NA	FalsRep	X		Reports from DINO herbarium based on misidentified specimens of <i>A. saurinus</i> .
Leguminosae (Fabaceae)	<i>Astragalus cymboides</i>			canoe milkvetch	PerF	LocEn/ NA	FalsRep	X		Reported by Holmgren (1962) based on misidentified specimen of <i>A. chamaeleuce</i> .
Leguminosae (Fabaceae)	<i>Astragalus diversifolius</i>		<i>A. diversifolius</i> var. <i>diversifolius</i>	meadow milkvetch	PerF	RegEn/ NA	FalsRep	X	X	Reported by Holmgren (1962) based on misidentified specimen of <i>A. convallarius</i> var. <i>convallarius</i> . USFS Region 4: Sensitive
Leguminosae (Fabaceae)	<i>Astragalus lancearius</i>			lancer milkvetch	PerF	RegEn/ NA	FalsRep	X		Report from DINO herbarium based on misidentified specimen of <i>A. duchesnensis</i> . USFWS: 3C
Leguminosae (Fabaceae)	<i>Astragalus moencoppensis</i>			Moenkopi milkvetch	PerF	RegEn/ NA	FalsRep	X		Reported by Holmgren (1962) based on misidentified specimens of <i>A. chloodes</i> .
Leguminosae (Fabaceae)	<i>Astragalus rafaensis</i>	<i>Astragalus rafaensis</i>		San Rafael milkvetch	PerF	RegEn/ RegEn	FalsRep	X		Reported by Holmgren (1962) based on misidentified specimen of <i>A. saurinus</i> . USFWS: 3C
Leguminosae (Fabaceae)			<i>Astragalus simplicifolius</i>	little bun milkvetch	PerF	NA/NA	FalsRep	X		Reported by Holmgren (1962) based on misidentified specimen of <i>A. spatulatus</i> or <i>A. chloodes</i> . Endemic to Wyoming.

Appendix C. Rejected (falsely reported or questionable) taxa of Dinosaur National Monument, cont.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range	Park status	UT	CO	Comments
	Utah	Colorado								
Leguminosae (Fabaceae)	<i>Astragalus utahensis</i>			Utah milkvetch	PerF	Wide/ NA	FalsRep	X		Reported by Naumann (2002) based on misidentified specimens of <i>A. mollissimus</i> var. <i>thompsoniae</i>
Leguminosae (Fabaceae)	<i>Lupinus pusillus</i> var. <i>rubens</i>		<i>L. rubens</i> , included in var. <i>pusillus</i> by some authors	blackbrush lupine	AnnF	Wide/ NA	FalsRep	X		Reported by Holmgren (1962) based on misidentified specimen of <i>L. pusillus</i> var. <i>pusillus</i> .
Leguminosae (Fabaceae)	<i>Oxytropis lambertii</i> var. <i>bigelovii</i>	<i>Oxytropis lambertii</i>	Includes var. <i>lambertii</i>	Lambert's locoweed	PerF	Wide/ Wide	FalsRep	X		Reported by Naumann (2002) without variety based on misidentified specimen of <i>O. besseyi</i> var. <i>obnapiformis</i> .
Leguminosae (Fabaceae)	<i>Oxytropis sericea</i> var. <i>sericea</i>	<i>Oxytropis sericea</i>		white locoweed	PerF	Wide/ Wide	FalsRep	X		Reported by Holmgren (1962) based on specimen collected from outside the monument.
Leguminosae (Fabaceae)	<i>Pediomelum mephiticum</i>		<i>Psoralea mephitica</i> var. <i>mephitica</i>	skunk breadroot	PerF	RegEn/ NA	FalsRep	X		Report from DINO herbarium based on misidentified specimen of <i>P. megalanthum</i> .
Leguminosae (Fabaceae)	<i>Thermopsis montana</i>	<i>Thermopsis montana</i>	<i>T. pinetorum</i> , <i>T. rhombifolia</i> var. <i>montana</i> , includes <i>T. rhombifolia</i> var. <i>ovata</i>	montane golden pea	PerF	Wide/ Wide	FalsRep	X		Reported by Holmgren (1962) based on misidentified specimen of <i>T. rhombifolia</i> .
Leguminosae (Fabaceae)	<i>Trifolium longipes</i> var. <i>reflexum</i>	<i>Trifolium longipes</i>		Wind River clover	PerF	Wide/ Wide	FalsRep	X		Reported by Holmgren (1962) based on specimen collected from outside the monument. Report from DINO herbarium based on a misidentified specimen of <i>T. gymnocarpon</i> .

Appendix C. Rejected (falsely reported or questionable) taxa of Dinosaur National Monument, cont.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range	Park status	UT	CO	Comments
	Utah	Colorado								
Liliaceae (Alliaceae)	<i>Allium cernuum</i>	<i>Allium cernuum</i>	Includes vars. <i>cernuum</i> & <i>obtusum</i>	nodding onion	PerF	Wide/ Wide	FalsRep	X		Report from DINO herbarium based on misidentified specimen of <i>A. acuminatum</i> .
Liliaceae (Melianthaceae)	<i>Zigadenus elegans</i>	<i>Anticlea elegans</i>		mountain death camas	PerF	Wide/ Wide	FalsRep	X		Reported by Holmgren (1962) based on misidentified specimen of <i>Z. vaginatus</i>
Loasaceae	<i>Mentzelia dispersa</i>	<i>Acrolasia dispersa</i>	Includes vars. <i>compacta</i> , <i>dispersa</i> , & <i>latifolia</i>	Nevada stickleaf	AnnF	Wide/ Wide	FalsRep	X		Reported by Holmgren (1962) based on misidentified specimen of <i>M. thompsonii</i> .
Malvaceae	<i>Sphaeralcea munroana</i>		Includes ssp. <i>munroana</i> & <i>subrhoamboidea</i>	white-stem globe-mallow	PerF	Wide/ NA	FalsRep	X		Reported by Naumann (2002) based on misidentified specimen of <i>S. parvifolia</i> .
Onagraceae	<i>Gayophytum diffusum</i> var. <i>strictipes</i>	<i>Gayophytum diffusum</i> ssp. <i>parviflorum</i>	<i>G. lasiospermum</i>	diffuse groundsmoke	AnnF	Wide/ Wide	FalsRep	X		Reported by Weber et al. (1982) based on misidentified specimen of <i>G. ramosissimum</i> .
Onagraceae	<i>Gayophytum racemosum</i>	<i>Gayophytum racemosum</i>		raceme groundsmoke	AnnF	Wide/ Wide	FalsRep	X		Reported by Naumann (2002) based on misidentified specimen of <i>G. decipiens</i> .
Orchidaceae	<i>Habenaria hyperborea</i>	<i>Limnorchis hyperborea</i>	Includes <i>Platanthera aquilonis</i> , <i>P. huronensis</i>	northern bog orchid	PerF	Wide/ Wide	FalsRep	X		Reported by Holmgren (1962) based on misidentified specimen of <i>H. zothecina</i> .
Polemoniaceae	<i>Eriastrum diffusum</i>	<i>Eriastrum diffusum</i>		spreading eriastrum	AnnF	Wide/ Periph	FalsRep	X		Reported by Holmgren (1962) based on misidentified specimen of <i>Ipomopsis pumila</i> .

Appendix C. Rejected (falsely reported or questionable) taxa of Dinosaur National Monument, cont.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range	Park status	UT	CO	Comments
	Utah	Colorado								
Polemoniaceae	<i>Gilia haydenii</i>	<i>Gilia haydenii</i>	<i>Alicella haydenii</i>	San Juan gilia	PerF	RegEn/ RegEn	FalsRep	X		Reported by Holmgren (1962) based on misidentified specimen of <i>G. pinnatifida</i> . Type locality is "plains of the San Juan River in S Colorado or adjacent Utah" (Brandege s.n.).
Polemoniaceae	<i>Ipomopsis aggregata</i> var. <i>maculata</i>	<i>Ipomopsis aggregata</i> ssp. <i>formosissima</i>	<i>Gilia aggregata</i> var. <i>maculata</i>	scarlet gilia	PerF	Wide/ Wide	FalsRep	X		Report from DINO herbarium based on misidentified specimen of <i>I. aggregata</i> var. <i>aggregata</i>
Polemoniaceae	<i>Ipomopsis roseata</i>	<i>Ipomopsis roseata</i>	<i>Gilia roseata</i>	San Rafael gilia	PerF	RegEn/ RegEn	FalsRep	X		Reported by Holmgren (1962) based on misidentified specimens of <i>I. congesta</i> var. <i>congesta</i> . Type locality is Grand Junction, Mesa Co., CO (Eastwood s.n. NY).
Polemoniaceae	<i>Linanthus harknessii</i>	<i>Linanthus harknessii</i> var. <i>septentrionalis</i>	<i>Leptosiphon harknessii</i>	Harkness' linanthus	AnnF	Sparse/ Wide	FalsRep	X		Reported by Holmgren (1962) based on specimen collected from outside the monument.
Polemoniaceae			<i>Phlox diffusa</i>	spreading phlox	PerF	NA/NA	Ques?	X		Reported by Holmgren (1962), but DINO is well outside the expected range of this species (Cronquist et al. 1984). Not native to UT or CO.
Polygonaceae	<i>Eriogonum acaule</i>	<i>Eriogonum acaule</i>		single-stem wild buckwheat	PerF	RegEn/ RegEn	FalsRep	X		Report from DINO herbarium based on misidentified specimen of <i>E. tumulosum</i> . CO BLM: Sensitive.

Appendix C. Rejected (falsely reported or questionable) taxa of Dinosaur National Monument, cont.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range	Park status	UT	CO	Comments
	Utah	Colorado								
Polygonaceae	<i>Eriogonum bicolor</i>	<i>Eriogonum bicolor</i>		pretty wild buckwheat	PerF	RegEn/ RegEn	FalsRep	X		Reported by Holmgren (1962) probably based on misidentified specimens of <i>E. batemanii</i> var. <i>batemanii</i> (Goodrich & Neese 1986). Type locality is Thompson's Springs, Grand Co., UT (Jones s.n. POM).
Polygonaceae	<i>Eriogonum caespitosum</i>			matted wild buckwheat	PerF	Wide/ NA	FalsRep	X		Report from DINO herbarium based on misidentified specimen of <i>E. tumulosum</i> .
Polygonaceae	<i>Eriogonum villiflorum</i>			Gray's wild buckwheat	PerF	RegEn/ NA	FalsRep	X		Report from DINO herbarium based on misidentified specimen of <i>E. tumulosum</i> .
Polygonaceae	<i>Polygonum bistortoides</i>	<i>Bistorta bistortoides</i>		American bistort	PerF	Wide/ Wide	FalsRep	X		Reported by Holmgren (1962) based on specimen collected from outside the monument.
Polygonaceae	<i>Polygonum minimum</i>	<i>Polygonum minimum</i>		broadleaf knotweed	AnnF	Periph/ Wide	FalsRep	X		Report from DINO herbarium based on misidentified specimen of <i>P. kelloggii</i> from outside the monument
Polypodiaceae	<i>Pellaea glabella</i> ssp. <i>simplex</i>	<i>Pellaea glabella</i> ssp. <i>simplex</i>	<i>P. suksdorfiana</i>	Suksdorf's cliffbrake	Fern	Wide/ Periph	FalsRep	X		Reported by Holmgren (1962) as <i>P. suksdorfiana</i> based on misidentified specimens of <i>P. glabella</i> var. <i>occidentalis</i> and <i>P. breweri</i> .

Appendix C. Rejected (falsely reported or questionable) taxa of Dinosaur National Monument, cont.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range	Park status	UT	CO	Comments
	Utah	Colorado								
Ranunculaceae	<i>Clematis orientalis</i>	<i>Viticella orientalis</i>		Oriental clematis	PerF	Intro/ Intro	FalsRep	X		Reported by Holmgren (1962) based on specimen collected from outside the monument. Native to Asia.
Ranunculaceae (Helleboraceae)	<i>Aquilegia coerulea</i>	<i>Aquilegia coerulea</i>	<i>A. caerulea</i> , includes vars. <i>ochroleuca</i> & <i>pinetorum</i>	Colorado columbine	PerF	Wide/ Wide	FalsRep	X		Reported by Holmgren (1962) based on specimen collected from outside the monument. State flower of Colorado.
Ranunculaceae (Thalictraceae)	<i>Thalictrum fendleri</i>	<i>Thalictrum fendleri</i>		Fendler's meadow-rue	PerF	Wide/ Wide	FalsRep	X		Reported by Holmgren (1962) based on specimen collected from outside the monument.
Rosaceae			<i>Potentilla egedii</i>	Pacific silverweed	PerF	NA/NA	FalsRep	X		Report from DINO herbarium based on misidentified specimen of <i>P. anserina</i> . Native to northern North America and Pacific Coast states.
Rosaceae	<i>Potentilla fruticosa</i>	<i>Pentaphylloides floribunda</i>	<i>Pentaphylloides fruticosa</i> , <i>Dasiphora fruticosa</i> ssp. <i>floribunda</i> , <i>D. floribunda</i>	shrubby cinquefoil	Shrub	Wide/ Wide	FalsRep	X		Reported by Holmgren (1962) based on specimen collected from outside the monument.
Rosaceae	<i>Potentilla norvegica</i>	<i>Potentilla norvegica</i>	<i>P. norvegica</i> ssp. <i>monspeliensis</i>	Norwegian cinquefoil	AnnF	Intro/ Intro	FalsRep	X		Reported by Naumann (2002) based on misidentified specimen of <i>P. biennis</i> . Native to Europe and possibly E North America.

Appendix C. Rejected (falsely reported or questionable) taxa of Dinosaur National Monument, cont.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range	Park status	UT	CO	Comments
	Utah	Colorado								
Rosaceae	<i>Potentilla rubricaulis</i>	<i>Potentilla rubricaulis</i>		redstem cinquefoil	PerF	Wide/ Wide	FalsRep	X		Report from Colorado State University herbarium based on misidentified specimen of <i>P. ovina</i> .
Salicaceae	<i>Salix bebbiana</i>	<i>Salix bebbiana</i>		Bebb's willow	Shrub	Wide/ Wide	FalsRep	X		Reported by Holmgren (1962) and Naumann (2002) based on misidentified specimen of <i>S. eriocephala</i> var. <i>watsonii</i> .
Saxifragaceae (Hydrangeaceae)	<i>Fendlera rupicola</i>	<i>Fendlera falcata</i>		Fendlerbush	Shrub	Wide/ Wide	FalsRep	X		Report from DINO herbarium based on misidentified specimen of <i>Fendlerella utahensis</i> .
Scrophulariaceae	<i>Castilleja flava</i>	<i>Castilleja flava</i>	<i>C. flava</i> var. <i>flava</i>	yellow paintbrush	PerF	Wide/ Wide	FalsRep	X		Reported by Holmgren (1962) based on specimen collected from outside the monument. Type locality is upper Bear River Valley near the Uintas, Summit Co., UT (Watson 811 NY).
Scrophulariaceae	<i>Castilleja miniata</i>	<i>Castilleja miniata</i>		scarlet paintbrush	PerF	Wide/ Wide	FalsRep	X		Reported by Holmgren (1962) and Naumann (2002) based on misidentified specimen of <i>C. exilis</i> .
Scrophulariaceae	<i>Castilleja rhexifolia</i> var. <i>rhexifolia</i>	<i>Castilleja rhexifolia</i>		rhexia-leaved paintbrush	PerF	Wide/ Wide	FalsRep	X		Reported by Holmgren (1962) based on specimen collected from outside the monument.

Appendix C. Rejected (falsely reported or questionable) taxa of Dinosaur National Monument, cont.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range	Park status	UT	CO	Comments
	Utah	Colorado								
Scrophulariaceae	<i>Penstemon arenicola</i>	<i>Penstemon arenicola</i>		Red Desert penstemon	PerF	RegEn/ RegEn	FalsRep	X		Reported by Holmgren (1962) based on misidentified specimens of <i>P. angustifolius</i> var. <i>vernalensis</i> .
Scrophulariaceae	<i>Penstemon cyanocaulis</i>	<i>Penstemon cyanocaulis</i>		bluestem penstemon	PerF	RegEn/ RegEn	FalsRep	X		Reported by Holmgren (1962) based on misidentified specimen of <i>P. scariosus</i> var. <i>cyanomontanus</i> .
Scrophulariaceae	<i>Penstemon moffatii</i>	<i>Penstemon moffatii</i>		Moffat penstemon	PerF	RegEn/ RegEn	FalsRep	X		Reported by Holmgren (1962) based on misidentified specimen of <i>P. humilis</i> var. <i>humilis</i> .
Scrophulariaceae		<i>Penstemon osterhoutii</i>		Osterhout's beardtongue	PerF	NA/ RegEn	Ques?	X		Reported by Holmgren (1962), but DINO is well outside the expected range of this species (Cronquist et al. 1984)
Scrophulariaceae	<i>Penstemon rydbergii</i> var. <i>rydbergii</i>	<i>Penstemon rydbergii</i>		Rydberg's penstemon	PerF	Periph/ Wide	FalsRep	X		Reported by Holmgren (1962) based on misidentified specimen of <i>P. procerus</i> var. <i>procerus</i> .
Scrophulariaceae	<i>Veronica serpyllifolia</i>	<i>Veronica serpyllifolia</i> ssp. <i>humifusum</i>	<i>Veronica serpyllifolia</i> var. <i>humifusa</i>	thyme-leaved speedwell	PerF	Wide/ Wide	FalsRep	X		Reported by Holmgren (1962) based on specimen collected from outside the monument.
Sparganiaceae	<i>Sparganium emersum</i>	<i>Sparganium emersum</i>	<i>S. simplex</i> , <i>S. erectum</i> ssp. <i>stoloniferum</i>	emersed burr- reed	PerF	Wide/ Wide	FalsRep	X		Report from BYU Herbarium based on a misidentified specimen of <i>Zannichellia palustris</i> .
Typhaceae	<i>Typha angustifolia</i>	<i>Typha angustifolia</i>	<i>Typha angustifolia</i>	narrowleaf cattail	PerG	NA/ Wide	FalsRep	X		Reported by Holmgren (1962) based on misidentified specimen of <i>T. latifolia</i> .

Appendix C. Rejected (falsely reported or questionable) taxa of Dinosaur National Monument, cont.

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range	Park status	UT	CO	Comments
	Utah	Colorado								
Typhaceae	<i>Typha domingensis</i>	<i>Typha domingensis</i>		southern cattail	PerG	Wide/ Wide	FalsRep	X		Reported by Naumann (2002) based on misidentified specimen of <i>T. latifolia</i> .
Ulmaceae (Celtidaceae)	<i>Celtis occidentalis</i>	<i>Celtis occidentalis</i>		common hackberry	Tree	Intro/ Wide	FalsRep	X	X	Reported by Holmgren (1962) based on misidentified specimen of <i>C. reticulata</i> . Native to E. North America.
Umbelliferae (Apiaceae)	<i>Angelica pinnata</i>	<i>Angelica pinnata</i>		pinnate angelica	PerF	Wide/ Wide	FalsRep		X	Reported by Holmgren (1962) based on specimen collected from outside the monument. Type locality is Uinta Mountains, Summit Co., UT (Watson 458 GH)
Valerianaceae	<i>Valeriana occidentalis</i>	<i>Valeriana occidentalis</i>		western valerian	PerF	Wide/ Wide	FalsRep		X	Reported by Holmgren (1962) based on specimen collected from outside the monument.

The vascular plant species listed here have been reported for Dinosaur NM from published and unpublished literature (Goodrich and Neese 1986; Holmgren 1962; Naumann 2002; NCPN, in ed.; and Weber et al. 1982) or from herbarium specimens, but are now believed to be erroneous because of misidentifications (False Reports or FalsRep) or because the monument is well outside the known or expected range of the species (Questionable or Ques?).

Appendix D. Confirmed, historical, and reported taxa of Dinosaur National Monument, organized by life form with ecological notes.

Family	Species name		Common name	Nativity	Park status	Flower time	Des Shr	PJ	Mit Con	Wet	Comments
	Utah	Colorado									
Trees											
Aceraceae	<i>Acer negundo</i>	<i>Negundo aceroides</i> ssp. <i>interius</i>	box elder	Native	Pres	Apr–Jun				X	
Betulaceae	<i>Betula occidentalis</i>	<i>Betula fontinalis</i>	water birch	Native	Pres	Apr–May				X	
Cupressaceae	<i>Juniperus scopulorum</i>	<i>Sabina scopulorum</i>	Rocky Mountain juniper	Native	Pres	NA		X	X	X	
Elaeagnaceae	<i>Elaeagnus angustifolia</i>	<i>Elaeagnus angustifolia</i>	Russian olive	Intro	Rep	May–Jul				X	
Pinaceae	<i>Pinus edulis</i>	<i>Pinus edulis</i>	two-needle pinyon	Native	Pres	NA		X	X		
Pinaceae	<i>Pinus ponderosa</i> var. <i>scopulorum</i>	<i>Pinus ponderosa</i> var. <i>scopulorum</i>	ponderosa pine	Native	Pres	NA			X		
Pinaceae	<i>Pseudotsuga menziesii</i> var. <i>glauca</i>	<i>Pseudotsuga menziesii</i>	Douglas-fir	Native	Pres	NA			X		
Salicaceae	<i>Populus angustifolia</i>	<i>Populus angustifolia</i>	narrow-leaved cottonwood	Native	Pres	Apr–Jun				X	
Salicaceae	<i>Populus fremontii</i> var. <i>fremontii</i>	<i>Populus fremontii</i>	Fremont cottonwood	Native	Pres	Mar–Jun				X	
Salicaceae	<i>Populus fremontii</i> var. <i>wislizeni</i>	<i>Populus deltoides</i> ssp. <i>wislizenii</i>	Rio Grande cottonwood	Native	Pres	Mar–Jun				X	
Salicaceae	<i>Populus tremuloides</i>	<i>Populus tremuloides</i>	quaking aspen	Native	Pres	Mar–Jun			X	X	
Salicaceae	<i>Populus x intercurrentens</i>	<i>Populus x acuminata</i>	lance-leaf cottonwood	Native	Pres	Apr–Jun				X	
Salicaceae	<i>Salix amygdaloides</i>	<i>Salix amygdaloides</i>	peach-leaf willow	Native	Pres	Apr–Jun				X	
Ulmaceae (Celtidaceae)	<i>Celtis reticulata</i>	<i>Celtis reticulata</i>	netleaf hackberry	Native	Pres	Apr–May			X	X	
Ulmaceae	<i>Ulmus pumila</i>	<i>Ulmus pumila</i>	Siberian elm	Intro	Rep	Mar–Apr		X	X		
Shrubs											
Aceraceae	<i>Acer glabrum</i> var. <i>glabrum</i>	<i>Acer glabrum</i>	Rocky Mountain maple	Native	Pres	Apr–Jun		X	X		
Agavaceae	<i>Yucca harrimaniae</i> var. <i>harrimaniae</i>	<i>Yucca harrimaniae</i>	Harriman's yucca	Native	Hist	Apr–May		X	X		
Anacardiaceae	<i>Rhus aromatica</i> var. <i>trilobata</i>	<i>Rhus aromatica</i> ssp. <i>trilobata</i>	squawbush	Native	Pres	May–Jul				X	

Appendix D. Confirmed, historical, and reported taxa of Dinosaur National Monument, organized by life form with ecological notes, cont.

Family	Species name		Common name	Nativity	Park status	Flower time	Des Shr	PJ	Mt Con	Wet	Comments
	Utah	Colorado									
<i>Shrubs, cont.</i>											
Anacardiaceae	<i>Toxicodendron rydbergii</i>	<i>Toxicodendron rydbergii</i>	western poison ivy	Native	Hist	May–Jun				X	
Berberidaceae	<i>Mahonia repens</i>	<i>Mahonia repens</i>	Oregon-grape	Native	Pres	Apr–Jun	X	X	X		
Betulaceae	<i>Alnus incana</i> var. <i>occidentalis</i>	<i>Alnus incana</i> ssp. <i>tenuifolia</i>	thinleaf alder	Native	Pres	Apr–May				X	
Caprifoliaceae (Adoxaceae)	<i>Sambucus caerulea</i>	<i>Sambucus caerulea</i>	blue elderberry	Native	Pres	May–Jul	X	X	X	X	
Caprifoliaceae	<i>Symphoricarpos longiflorus</i>	<i>Symphoricarpos longiflorus</i>	long-flower snowberry	Native	Pres	May–Jul	X	X	X	X	
Caprifoliaceae	<i>Symphoricarpos occidentalis</i>	<i>Symphoricarpos occidentalis</i>	western snowberry	Native	Hist	Jun–Aug				X	
Caprifoliaceae	<i>Symphoricarpos oreophilus</i> var. <i>utahensis</i>	<i>Symphoricarpos rotundifolius</i>	mountain snowberry	Native	Pres	Jun–Aug	X		X		
Celastraceae	<i>Pachystima myrsinites</i>	<i>Pachystima myrsinites</i>	mountain-lover	Native	Pres	May–Aug	X	X	X		
Chenopodiaceae	<i>Atriplex canescens</i> var. <i>canescens</i>	<i>Atriplex canescens</i>	four-wing saltbush	Native	Pres	May–Sep	X	X	X		Sandy soils
Chenopodiaceae	<i>Atriplex confertifolia</i>	<i>Atriplex confertifolia</i>	shadscale	Native	Pres	May–Sep	X	X			Clayey soils
Chenopodiaceae	<i>Atriplex corrugata</i>	<i>Atriplex corrugata</i>	mat saltbush	Native	Pres	Apr–Sep	X				Morrison F
Chenopodiaceae	<i>Atriplex gardneri</i> var. <i>cuneata</i>	<i>Atriplex gardneri</i>	Castle Valley saltbush	Native	Pres	May–Sep	X	X			Saline clays
Chenopodiaceae	<i>Atriplex gardneri</i> var. <i>utahensis</i>		basin saltbush	Native	Rep	Jun–Sep	X				
Chenopodiaceae	<i>Grayia spinosa</i>	<i>Atriplex grayi</i>	spiny hopsage	Native	Pres	Apr–Jul	X	X			
Chenopodiaceae	<i>Krascheninnikovia lanata</i> var. <i>lanata</i>	<i>Krascheninnikovia lanata</i>	winterfat	Native	Pres	May–Jul	X	X			
Chenopodiaceae (Sarcobataceae)	<i>Sarcobatus vermiculatus</i>	<i>Sarcobatus vermiculatus</i>	greasewood	Native	Pres	May–Aug	X				
Chenopodiaceae	<i>Zuckia brandegei</i> var. <i>plummeri</i>	<i>Atriplex brandegei</i>	Plummer's siltbush	Native	Hist	Jun–Aug	X				
Compositae (Asteraceae)	<i>Artemisia arbuscula</i>	<i>Seriphidium arbusculum</i> var. <i>arbusculum</i>	low sagebrush	Native	Rep	Jun–Sep	X	X			

Appendix D. Confirmed, historical, and reported taxa of Dinosaur National Monument, organized by life form with ecological notes, cont.

Family	Species name		Common name	Nativity	Park status	Flower time	Des Shr	PJ	Mt Con	Wet	Comments
	Utah	Colorado									
<i>Shrubs, cont.</i>											
Compositae (Asteraceae)	<i>Artemisia bigelovii</i>	<i>Artemisia bigelovii</i>	Bigelow's sagebrush	Native	Pres	Aug–Oct	X	X			Rocky areas
Compositae (Asteraceae)	<i>Artemisia cana</i> var. <i>viscidula</i>	<i>Seriphidium canum</i> ssp. <i>viscidulum</i>	silver sagebrush	Native	Rep	Aug–Sep	X			X	
Compositae (Asteraceae)	<i>Artemisia frigida</i>	<i>Artemisia frigida</i>	fringed sagebrush	Native	Pres	Jul–Sep	X	X	X		
Compositae (Asteraceae)	<i>Artemisia nova</i> var. <i>nova</i>	<i>Seriphidium novum</i>	black sagebrush	Native	Pres	Sep–Oct	X	X	X		
Compositae (Asteraceae)	<i>Artemisia spinescens</i>	<i>Picrothamnus desertorum</i>	budsage	Native	Pres	Apr–Jun	X	X			Clayey to gravelly saline soils
Compositae (Asteraceae)	<i>Artemisia tridentata</i> var. <i>tridentata</i>	<i>Seriphidium tridentatum</i> ssp. <i>tridentatum</i>	basin big sagebrush	Native	Pres	Jul–Sep	X	X			
Compositae (Asteraceae)	<i>Artemisia tridentata</i> var. <i>vaseyana</i>	<i>Seriphidium vaseyanum</i>	mountain big sagebrush	Native	Pres	Jul–Sep	X	X	X		
Compositae (Asteraceae)	<i>Artemisia tridentata</i> var. <i>wyomingensis</i>	<i>Seriphidium tridentatum</i> ssp. <i>wyomingense</i>	Wyoming big sagebrush	Native	Pres	Jul–Sep	X	X	X		
Compositae (Asteraceae)	<i>Brickellia microphylla</i> var. <i>scabra</i>	<i>Brickellia microphylla</i> var. <i>scabra</i>	rough brickellbush	Native	Pres	Aug–Oct	X	X			Sandstone
Compositae (Asteraceae)	<i>Brickellia oblongifolia</i> var. <i>linifolia</i>	<i>Brickellia oblongifolia</i>	Mohave brickellbush	Native	Hist	Jun–Aug	X	X	X		
Compositae (Asteraceae)	<i>Chrysothamnus depressus</i>	<i>Chrysothamnus depressus</i>	dwarf rabbitbrush	Native	Pres	Jul–Sep	X	X	X		
Compositae (Asteraceae)	<i>Chrysothamnus linifolius</i>	<i>Chrysothamnus linifolius</i>	spear-leaf rabbitbrush	Native	Pres	Jul–Sep				X	Sandy to saline soils
Compositae (Asteraceae)	<i>Chrysothamnus nauseosus</i> var. <i>consimilis</i>	<i>Chrysothamnus nauseosus</i> ssp. <i>consimilis</i>	greenish rabbitbrush	Native	Pres	Aug–Oct	X	X	X	X	
Compositae (Asteraceae)	<i>Chrysothamnus nauseosus</i> var. <i>graveolens</i>	<i>Chrysothamnus nauseosus</i> ssp. <i>graveolens</i>	glabrate rabbitbrush	Native	Pres	Aug–Oct	X		X	X	
Compositae (Asteraceae)	<i>Chrysothamnus nauseosus</i> var. <i>leiospermus</i>	<i>Chrysothamnus nauseosus</i> ssp. <i>leiospermus</i>	smoothseed rabbitbrush	Native	Pres	Aug–Oct	X	X	X		

Appendix D. Confirmed, historical, and reported taxa of Dinosaur National Monument, organized by life form with ecological notes, cont.

Family	Utah	Species name	Common name	Nativity	Park status	Flower time	Des Shr	PJ	Mt Con	Wet	Comments
<i>Shrubs, cont.</i>											
Compositae (Asteraceae)	<i>Chrysothamnus parryi</i> var. <i>howardii</i>	<i>Chrysothamnus parryi</i> sp. <i>howardii</i>	longbract rabbitbrush	Native	Pres	Jul-Sep	X	X	X		
Compositae (Asteraceae)	<i>Chrysothamnus parryi</i> var. <i>nevadensis</i>		Nevada rabbitbrush	Native	Pres	Jul-Sep	X	X	X		
Compositae (Asteraceae)	<i>Chrysothamnus viscidiflorus</i> var. <i>stenophyllus</i>	<i>Chrysothamnus viscidiflorus</i> sp. <i>stenophyllus</i>	slenderleaf rabbitbrush	Native	Pres	Jul-Sep	X	X			
Compositae (Asteraceae)	<i>Chrysothamnus viscidiflorus</i> var. <i>viscidiflorus</i>	<i>Chrysothamnus viscidiflorus</i> sp. <i>viscidiflorus</i>	green rabbitbrush	Native	Pres	Jul-Sep	X	X	X		
Compositae (Asteraceae)	<i>Gutierrezia pomariensis</i>		orchard snakeweed	Native	Pres	Jul-Sep	X				Glen Canyon, Moenkopi, & Mowry F.
Compositae (Asteraceae)	<i>Gutierrezia sarothrae</i>	<i>Gutierrezia sarothrae</i>	broom snakeweed	Native	Pres	Jul-Oct	X	X	X		
Compositae (Asteraceae)	<i>Tetradymia canescens</i>	<i>Tetradymia canescens</i>	spineless horsebrush	Native	Pres	Jun-Sep	X		X		
Compositae (Asteraceae)	<i>Tetradymia nuttallii</i>	<i>Tetradymia nuttallii</i>	Nuttall's horsebrush	Native	Hist	May-Jun	X	X			
Compositae (Asteraceae)	<i>Tetradymia spinosa</i>	<i>Tetradymia spinosa</i>	shortspine horsebrush	Native	Pres	Apr-Jun	X	X			
Cornaceae	<i>Cornus sericea</i> var. <i>sericea</i>	<i>Swida sericea</i>	red-osier dogwood	Native	Pres	May-Jul				X	
Crossosomataceae	<i>Glossopetalon spinescens</i> var. <i>meionandrum</i>	<i>Forsellesia meionandra</i>	spiny greasebush	Native	Pres	Mar-Jun	X	X			
Cupressaceae	<i>Juniperus communis</i> var. <i>depressa</i>	<i>Juniperus communis</i> sp. <i>alpina</i>	common juniper	Native	Pres	NA			X		
Cupressaceae	<i>Juniperus osteosperma</i>	<i>Sabina osteosperma</i>	Utah juniper	Native	Pres	NA	X	X	X	X	
Elaeagnaceae	<i>Shepherdia argentea</i>	<i>Shepherdia argentea</i>	silver buffaloberry	Native	Hist	Apr-May				X	
Ephedraceae	<i>Ephedra torreyana</i>	<i>Ephedra torreyana</i>	Torrey's ephedra	Native	Pres	NA	X	X	X		
Ephedraceae	<i>Ephedra viridis</i> var. <i>viridis</i>	<i>Ephedra viridis</i>	green ephedra	Native	Pres	NA	X	X	X		

Appendix D. Confirmed, historical, and reported taxa of Dinosaur National Monument, organized by life form with ecological notes, cont.

Family	Species name		Common name	Nativity	Park status	Flower time	Des Shr	PJ	Mt Con	Wet	Comments
	Utah	Colorado									
<i>Shrubs, cont.</i>											
Ephedraceae	<i>Ephedra viridis</i> var. <i>viscida</i>	<i>Ephedra cutleri</i>	Cutler's ephedra	Native	Hist	NA	X	X			Sandy soil
Ericaceae	<i>Arctostaphylos patula</i>	<i>Arctostaphylos patula</i> ssp. <i>platyphylla</i>	greenleaf manzanita	Native	Pres	Mar–Jul	X	X	X		
Oleaceae	<i>Fraxinus anomala</i>	<i>Fraxinus anomala</i>	singleleaf ash	Native	Pres	Apr–May	X	X	X		
Polemoniaceae	<i>Leptodactylon pungens</i>	<i>Leptodactylon pungens</i>	prickly-phlox	Native	Pres	May–Jul	X	X	X		
Polygonaceae	<i>Eriogonum corymbosum</i> var. <i>corymbosum</i>	<i>Eriogonum corymbosum</i> var. <i>corymbosum</i>	crisp-leaf wild buckwheat	Native	Pres	Jul–Oct	X	X			
Polygonaceae	<i>Eriogonum lonchophyllum</i> var. <i>saurinum</i>	<i>Eriogonum saurinum</i>	Dinosaur wild buckwheat	Native	Pres	Jun–Oct		X	X		Moenkopi & Mowry F.
Polygonaceae	<i>Eriogonum microthecum</i> var. <i>laxiflorum</i>	<i>Eriogonum microthecum</i> var. <i>laxiflorum</i>	slender wild buckwheat	Native	Pres	Jun–Oct	X	X	X		
Rhamnaceae	<i>Ceanothus velutinus</i>	<i>Ceanothus velutinus</i>	deer-brush	Native	Pres	Jun–Jul	X		X		
Rosaceae	<i>Amelanchier alnifolia</i>	<i>Amelanchier alnifolia</i>	Saskatoon serviceberry	Native	Rep	May–Jul	X		X	X	
Rosaceae	<i>Amelanchier utahensis</i>	<i>Amelanchier utahensis</i>	Utah serviceberry	Native	Pres	Apr–Jun	X	X	X	X	
Rosaceae	<i>Cercocarpus intricatus</i>	<i>Cercocarpus intricatus</i>	dwarf mountain mahogany	Native	Pres	Apr–Jun	X	X	X		Rock crevices
Rosaceae	<i>Cercocarpus ledifolius</i> var. <i>intermontanus</i>	<i>Cercocarpus ledifolius</i> mountain mahogany	curl-leaf mountain mahogany	Native	Pres	May–Jun		X	X		Rocky sites
Rosaceae	<i>Cercocarpus montanus</i>	<i>Cercocarpus montanus</i>	alder-leaf mountain mahogany	Native	Pres	May–Jun	X	X	X		
Rosaceae	<i>Crataegus douglasii</i> var. <i>rivularis</i>	<i>Crataegus rivularis</i>	river hawthorn	Native	Rep	May–Jun				X	
Rosaceae	<i>Holodiscus dumosus</i>	<i>Holodiscus discolor</i>	bush oceanspray	Native	Pres	Jun–Aug	X	X	X		Rock crevices
Rosaceae	<i>Physocarpus alternans</i>	<i>Physocarpus alternans</i>	dwarf ninebark	Native	Pres	May–Aug	X	X	X		Rock crevices

Appendix D. Confirmed, historical, and reported taxa of Dinosaur National Monument, organized by life form with ecological notes, cont.

Family	Utah	Species name	Common name	Nativity	Park status	Flower time	Des Shr	PJ	Mt Con	Wet	Comments
<i>Shrubs, cont.</i>											
Rosaceae	<i>Prunus virginiana</i> var. <i>melanocarpa</i>	<i>Padus virginiana</i> ssp. <i>melanocarpa</i>	western chokecherry	Native	Pres	May–Jul	X	X	X		
Rosaceae	<i>Purshia tridentata</i>	<i>Purshia tridentata</i>	antelope bitterbrush	Native	Pres	Apr–Jul	X	X	X		
Rosaceae	<i>Rosa nutkana</i> var. <i>hispida</i>	<i>Rosa nutkana</i>	Nootka rose	Native	Pres	Jun–Jul			X		
Rosaceae	<i>Rosa odorata</i>	<i>Rosa odorata</i>	tea rose	Intro	Pres	May–Jul					Cultivated
Rosaceae	<i>Rosa woodsii</i>	<i>Rosa woodsii</i>	Woods' rose	Native	Pres	May–Jul			X	X	
Rosaceae	<i>Rubus idaeus</i> var. <i>strigosus</i>	<i>Rubus idaeus</i> ssp. <i>melanolasius</i>	common red raspberry	Native	Pres	Jun–Aug			X	X	
Salicaceae	<i>Salix eriocephala</i> var. <i>watsonii</i>	<i>Salix lutea</i>	yellow willow	Native	Pres	Apr–Jun				X	
Salicaceae	<i>Salix exigua</i> var. <i>stenophylla</i>	<i>Salix exigua</i>	coyote willow	Native	Pres	Apr–Aug				X	
Salicaceae	<i>Salix lucida</i> ssp. <i>caudata</i>	<i>Salix lucida</i> ssp. <i>caudata</i>	whiplash willow	Native	Pres	Apr–Jun				X	
Salicaceae	<i>Salix monticola</i>	<i>Salix monticola</i>	mountain willow	Native	Rep	May–Jun				X	
Salicaceae	<i>Salix scouleriana</i>	<i>Salix scouleriana</i>	Scouler's willow	Native	Pres	Apr–Jun			X	X	
Saxifragaceae (Hydrangeaceae)	<i>Fendlerella utahensis</i>	<i>Fendlerella utahensis</i>	Utah fendlerella	Native	Pres	Apr–Sep	X	X	X		
Saxifragaceae (Hydrangeaceae)	<i>Philadelphus microphyllus</i>	<i>Philadelphus microphyllus</i>	littleleaf mock-orange	Native	Pres	May–Sep			X	X	
Saxifragaceae (Grossulariaceae)	<i>Ribes aureum</i>	<i>Ribes aureum</i>	golden currant	Native	Pres	Mar–Jul	X	X	X	X	
Saxifragaceae (Grossulariaceae)	<i>Ribes cereum</i> var. <i>inebrians</i>	<i>Ribes cereum</i>	wax currant	Native	Pres	Apr–Aug	X	X	X		
Tamaricaceae	<i>Tamarix chinensis</i>	<i>Tamarix ramosissima</i>	five-stamen tamarisk	Intro	Pres	Apr–Sep				X	
Perennial Forbs											
Alismataceae	<i>Alisma plantago-aquatica</i>	<i>Alisma triviale</i>	water-plantain	Native	Pres	Jun–Sep				X	
Alismataceae	<i>Sagittaria cuneata</i>	<i>Sagittaria cuneata</i>	northern arrowhead	Native	Hist	Jun–Sep				X	

Appendix D. Confirmed, historical, and reported taxa of Dinosaur National Monument, organized by life form with ecological notes, cont.

Family	Utah	Species name	Common name	Nativity	Park status	Flower time	Des Shr	PJ	Mt Con	Wet	Comments
<i>Perennial Forbs, cont.</i>											
Apocynaceae	<i>Amsonia jonesii</i>	<i>Amsonia jonesii</i>	Jones' amsonia	Native	Pres	Apr–Jun	X	X	X		Bishop, Chinle Glen Canyon, & Moenkopi F.
Apocynaceae	<i>Apocynum cannabinum</i>	<i>Apocynum cannabinum</i>	common dogbane	Native	Pres	Jun–Aug				X	
Asclepiadaceae	<i>Asclepias asperula</i> var. <i>asperula</i>	<i>Asclepias asperula</i> ssp. <i>asperula</i>	spider milkweed	Native	Pres	May–Jul	X	X	X		
Asclepiadaceae	<i>Asclepias cryptoceras</i> var. <i>cryptoceras</i>	<i>Asclepias cryptoceras</i>	pallid milkweed	Native	Pres	Apr–Jun	X	X			
Asclepiadaceae	<i>Asclepias incarnata</i>	<i>Asclepias incarnata</i>	swamp milkweed	Native	Pres	Jun–Aug				X	
Asclepiadaceae	<i>Asclepias speciosa</i>	<i>Asclepias speciosa</i>	showy milkweed	Native	Pres	May–Aug				X	Disturbed areas
Boraginaceae	<i>Cryptantha breviflora</i>	<i>Oreocarya breviflora</i>	Uinta Basin cryptanth	Native	Pres	May–Jun	X	X	X		Bishop, Moenkopi, & Morrison
Boraginaceae	<i>Cryptantha flava</i>	<i>Oreocarya flava</i>	plateau yellow cryptanth	Native	Pres	Apr–Jun	X	X			
Boraginaceae	<i>Cryptantha flavoculata</i>	<i>Oreocarya flavoculata</i>	yellow-eye cryptanth	Native	Pres	Apr–Jun	X	X	X		
Boraginaceae	<i>Cryptantha humilis</i>	<i>Oreocarya humilis</i> ssp. <i>nana</i>	dwarf cryptanth	Native	Pres	Apr–Jun	X	X	X		
Boraginaceae	<i>Cryptantha rollinsii</i>	<i>Oreocarya rollinsii</i>	Rollins' cryptanth	Native	Pres	May–Jun	X	X	X		Moenkopi F.
Boraginaceae	<i>Cryptantha stricta</i>	<i>Oreocarya stricta</i>	erect cryptanth	Native	Pres	May–Jun	X	X	X		
Boraginaceae	<i>Cynoglossum officinale</i>	<i>Cynoglossum officinale</i>	common hound's-tongue	Intro	Rep	May–Jul	X	X	X	X	Disturbed areas
Boraginaceae	<i>Hackelia floribunda</i>	<i>Hackelia floribunda</i>	showy stickseed	Native	Pres	Jun–Aug	X		X	X	
Boraginaceae	<i>Lithospermum incisum</i>	<i>Lithospermum incisum</i>	showy stoneseed	Native	Pres	Apr–Jul	X	X	X		
Boraginaceae	<i>Lithospermum ruderale</i>	<i>Lithospermum ruderale</i>	western stoneseed	Native	Pres	Apr–Jun	X	X	X		
Boraginaceae	<i>Mertensia fusiformis</i>	<i>Mertensia fusiformis</i>	spindle-rooted bluebell	Native	Pres	May–Jun	X	X	X		

Appendix D. Confirmed, historical, and reported taxa of Dinosaur National Monument, organized by life form with ecological notes, cont.

Family	Utah	Species name	Common name	Nativity	Park status	Flower time	Des Shr	PJ	Mt Con	Wet	Comments
<i>Perennial Forbs, cont.</i>											
Boraginaceae	<i>Mertensia lanceolata</i> var. <i>coriacea</i>	<i>Mertensia lanceolata</i>	lanceleaf bluebell	Native	Pres	Jun-Aug	X	X	X		
Boraginaceae	<i>Mertensia oblongifolia</i>	<i>Mertensia oblongifolia</i>	western bluebell	Native	Pres	Apr-May	X	X	X		
Cactaceae	<i>Echinocereus triglochidiatus</i> var. <i>melanacanthus</i>	<i>Echinocereus triglochidiatus</i>	claretcup	Native	Pres	Apr-Jun	X	X	X		
Cactaceae	<i>Opuntia erinacea</i> var. <i>utahensis</i>		Utah pricklypear	Native	Hist	May-Jun	X	X	X		
Cactaceae	<i>Opuntia fragilis</i>	<i>Opuntia fragilis</i> var. <i>brachyartha</i>	brittle prickly-pear	Native	Pres	Jun-Jul	X	X	X	X	
Cactaceae	<i>Opuntia polyacantha</i> var. <i>polyacantha</i>	<i>Opuntia polyacantha</i>	plains prickly-pear	Native	Pres	May-Jun	X	X	X		
Cactaceae	<i>Opuntia polyacantha</i> var. <i>trichophora</i>		slenderspine pricklypear	Native	Pres	May-Jun	X	X	X		
Cactaceae	<i>Pediocactus simpsonii</i>	<i>Pediocactus simpsonii</i> var. <i>minor</i>	Simpson's hedgehog cactus	Native	Pres	May-Jul	X	X	X		
Cannabaceae	<i>Humulus lupulus</i> var. <i>neomexicanus</i>	<i>Humulus lupulus</i> ssp. <i>americanus</i>	common hops	Native	Pres	Jul-Aug				X	
Caryophyllaceae (Asteraceae)	<i>Arenaria congesta</i> var. <i>congesta</i>	<i>Eremogone congesta</i>	ball-head sandwort	Native	Pres	May-Aug	X	X	X		
Caryophyllaceae (Asteraceae)	<i>Arenaria fendleri</i> var. <i>eastwoodiae</i>	<i>Eremogone eastwoodiae</i>	Eastwood's sandwort	Native	Pres	May-Sep	X	X	X		
Caryophyllaceae (Asteraceae)	<i>Arenaria hookeri</i> var. <i>desertorum</i>	<i>Eremogone hookeri</i>	Hooker's sandwort	Native	Pres	Apr-Aug	X	X	X		
Caryophyllaceae (Asteraceae)	<i>Arenaria nuttallii</i>	<i>Minuopsis nuttallii</i>	Nuttall's sandwort	Native	Rep	May-Aug					Talus and scree
Caryophyllaceae (Asteraceae)	<i>Cerastium arvense</i>	<i>Cerastium strictum</i>	field chickweed	Native	Pres	Apr-Jun	X	X	X		
Caryophyllaceae	<i>Saponaria officinalis</i>	<i>Saponaria officinalis</i>	bouncing-bet	Intro	Pres	May-Sep					Disturbed areas
Caryophyllaceae (Asteraceae)	<i>Stellaria jamesiana</i>	<i>Pseudostellaria jamesiana</i>	James' chickweed	Native	Pres	Jun-Aug	X	X	X		
Chenopodiaceae	<i>Bassia americana</i>	<i>Kochia americana</i>	greenmolly	Native	Pres	Aug-Oct	X	X	X		

Appendix D. Confirmed, historical, and reported taxa of Dinosaur National Monument, organized by life form with ecological notes, cont.

Family	Species name		Common name	Nativity	Park status	Flower time	Des Shr	PJ	Mt Con	Wet	Comments
	Utah	Colorado									
<i>Perennial Forbs, cont.</i>											
Compositae (Asteraceae)	<i>Achillea millefolium</i> ssp. <i>lanulosa</i>	<i>Achillea lanulosa</i>	common yarrow	Native	Pres	May-Sep	X	X	X	X	
Compositae (Asteraceae)	<i>Agoseris aurantiaca</i> var. <i>aurantiaca</i>	<i>Agoseris aurantiaca</i> var. <i>aurantiaca</i>	orange agoseris	Native	Pres	Jun-Aug	X	X	X		
Compositae (Asteraceae)	<i>Agoseris glauca</i> var. <i>glauca</i>	<i>Agoseris glauca</i> var. <i>glauca</i>	pale agoseris	Native	Pres	May-Sep	X	X	X		
Compositae (Asteraceae)	<i>Agoseris glauca</i> var. <i>laciniata</i>	<i>Agoseris glauca</i> var. <i>laciniata</i>	cutleaf agoseris	Native	Pres	May-Sep	X	X	X		
Compositae (Asteraceae)	<i>Ambrosia tomentosa</i>	<i>Ambrosia tomentosa</i>	skeleton-leaf bursage	Native	Pres	Jun-Oct				X	
Compositae (Asteraceae)	<i>Antennaria anaphaloides</i>	<i>Antennaria pulcherrima</i> ssp. <i>anaphaloides</i>	tall pussytoes	Native	Pres	Jun-Aug			X		
Compositae (Asteraceae)	<i>Antennaria dimorpha</i>	<i>Antennaria dimorpha</i>	low pussytoes	Native	Pres	Apr-Jun	X	X	X		
Compositae (Asteraceae)	<i>Antennaria microphylla</i>	<i>Antennaria microphylla</i>	small-leaf pussytoes	Native	Pres	Jun-Aug	X	X	X		
Compositae (Asteraceae)	<i>Antennaria parvifolia</i>	<i>Antennaria parvifolia</i>	common pussytoes	Native	Pres	May-Jul	X	X	X		
Compositae (Asteraceae)	<i>Arctium minus</i>	<i>Arctium minus</i>	burdock	Intro	Rep	Jul-Sep				X	Disturbed areas
Compositae (Asteraceae)	<i>Arnica cordifolia</i> var. <i>cordifolia</i>	<i>Arnica cordifolia</i>	heartleaf arnica	Native	Pres	May-Aug	X		X		
Compositae (Asteraceae)	<i>Arnica fulgens</i>	<i>Arnica fulgens</i>	orange arnica	Native	Hist	May-Aug	X		X		
Compositae (Asteraceae)	<i>Artemisia biennis</i>	<i>Artemisia biennis</i>	biennial wormwood	Native	Pres	Aug-Oct				X	
Compositae (Asteraceae)	<i>Artemisia dracunculus</i> ssp. <i>glauca</i>	<i>Oligosporus dracunculus</i> ssp. <i>glauca</i>	tarragon	Native	Pres	Jul-Oct	X	X	X	X	
Compositae (Asteraceae)	<i>Artemisia ludoviciana</i> var. <i>ludoviciana</i>	<i>Artemisia ludoviciana</i> ssp. <i>ludoviciana</i>	Louisiana wormwood	Native	Pres	Jul-Oct	X	X	X	X	
Compositae (Asteraceae)	<i>Aster ascendens</i>	<i>Virgulastrer ascendens</i>	Pacific aster	Native	Pres	Jul-Oct	X	X	X	X	

Appendix D. Confirmed, historical, and reported taxa of Dinosaur National Monument, organized by life form with ecological notes, cont.

Family	Utah	Species name	Common name	Nativity	Park status	Flower time	Des Shr	PJ	Mt Con	Wet	Comments
Perennial Forbs, cont.											
Compositae (Asteraceae)	<i>Aster glaucodes</i>	<i>Eucephalus glaucus</i>	blueleaf aster	Native	Pres	Jul-Sep	X	X	X	X	
Compositae (Asteraceae)	<i>Aster hesperius</i>	<i>Aster lanceolatus</i> sp. <i>hesperius</i>	Siskiyou aster	Native	Pres	Jul-Sep				X	
Compositae (Asteraceae)	<i>Aster pensus</i>	<i>Virgulus ericoides</i>	white heath aster	Native	Pres	Aug-Oct				X	
Compositae (Asteraceae)	<i>Aster perelegans</i>	<i>Eucephalus elegans</i>	elegant aster	Native	Pres	Jul-Aug	X		X		
Compositae (Asteraceae)	<i>Aster spathulatus</i>	<i>Aster spathulatus</i>	western aster	Native	Rep	Jul-Sep			X	X	
Compositae (Asteraceae)	<i>Balsamorhiza hookeri</i> var. <i>hispidula</i>	<i>Balsamorhiza hispidula</i>	hairy balsamroot	Native	Pres	Apr-Jul	X	X	X		
Compositae (Asteraceae)	<i>Balsamorhiza sagittata</i>	<i>Balsamorhiza sagittata</i>	arrowleaf balsamroot	Native	Pres	Apr-Jul	X	X	X		
Compositae (Asteraceae)	<i>Bidens frondosa</i>	<i>Bidens frondosa</i>	Devil's beggarsticks	Native	Rep	Jun-Aug				X	
Compositae (Asteraceae)	<i>Brickellia grandiflora</i>	<i>Brickellia grandiflora</i>	tassel-flower brickellbush	Native	Pres	Jul-Oct		X	X		
Compositae (Asteraceae)	<i>Carduus nutans</i>	<i>Carduus nutans</i> var. <i>macrolepis</i>	musk thistle	Intro	Pres	Jun-Sep	X	X	X		Disturbed areas
Compositae (Asteraceae)	<i>Centaurea diffusa</i>	<i>Acosta diffusa</i>	diffuse knapweed	Intro	Rep	Jul-Sep					Disturbed areas
Compositae (Asteraceae)	<i>Centaurea maculosa</i>	<i>Acosta maculosa</i>	spotted knapweed	Intro	Rep	Jul-Sep					Disturbed areas
Compositae (Asteraceae)	<i>Centaurea repens</i>	<i>Acroptilon repens</i>	Russian knapweed	Intro	Pres	Jun-Sep				X	Disturbed areas
Compositae (Asteraceae)	<i>Chaenactis douglasii</i>	<i>Chaenactis douglasii</i>	hoary dusty-maiden	Native	Pres	May-Sep	X	X	X		
Compositae (Asteraceae)	<i>Chaetopappa ericoides</i>	<i>Leucelele ericoides</i>	rose-heath	Native	Pres	May-Sep	X	X	X		
Compositae (Asteraceae)	<i>Chrysopsis villosa</i> var. <i>minor</i>	<i>Heterotheca villosa</i>	hispid golden-aster	Native	Pres	May-Sep	X	X	X		
Compositae (Asteraceae)	<i>Cichorium intybus</i>	<i>Cichorium intybus</i>	chicory	Intro	Pres	Jul-Oct					Disturbed areas
Compositae (Asteraceae)	<i>Cirsium arvense</i>	<i>Breea arvensis</i>	Canada thistle	Intro	Pres	Jul-Sep			X	X	Disturbed areas

Appendix D. Confirmed, historical, and reported taxa of Dinosaur National Monument, organized by life form with ecological notes, cont.

Family	Species name		Common name	Nativity	Park status	Flower time	Des Shr	PJ	Mt Con	Wet	Comments
	Utah	Colorado									
<i>Perennial Forbs, cont.</i>											
Compositae (Asteraceae)	<i>Cirsium ownbeyi</i>	<i>Cirsium ownbeyi</i>	Ownbey's thistle	Native	Pres	Jun-Aug	X	X		X	Lodore & Weber F.
Compositae (Asteraceae)	<i>Cirsium scariosum</i> var. <i>scariosum</i>	<i>Cirsium scariosum</i>	elk thistle	Native	Rep	Jun-Aug				X	
Compositae (Asteraceae)	<i>Cirsium undulatum</i> var. <i>undulatum</i>	<i>Cirsium undulatum</i>	wavy-leaved thistle	Native	Pres	Jun-Sep	X	X	X		
Compositae (Asteraceae)	<i>Cirsium vulgare</i>	<i>Cirsium vulgare</i>	bull thistle	Intro	Pres	Jul-Aug	X			X	Disturbed areas
Compositae (Asteraceae)	<i>Crepis acuminata</i>	<i>Psilochenia acuminata</i>	mountain hawksbeard	Native	Pres	May-Jul	X		X		
Compositae (Asteraceae)	<i>Crepis intermedia</i>	<i>Psilochenia intermedia</i>	gray hawksbeard	Native	Pres	May-Jul	X	X	X		
Compositae (Asteraceae)	<i>Crepis modocensis</i>	<i>Psilochenia modocensis</i>	Modoc hawksbeard	Native	Pres	May-Jul	X	X	X		
Compositae (Asteraceae)	<i>Crepis occidentalis</i> var. <i>occidentalis</i>	<i>Psilochenia occidentalis</i>	western hawksbeard	Native	Pres	May-Jul	X	X	X		
Compositae (Asteraceae)	<i>Crepis runcinata</i> var. <i>glauca</i>	<i>Psilochenia glauca</i> ssp. <i>runcinata</i>	glaucous hawksbeard	Native	Pres	May-Aug				X	
Compositae (Asteraceae)	<i>Enceliopsis nudicaulis</i> var. <i>nudicaulis</i>	<i>Enceliopsis nudicaulis</i>	nakedstem	Native	Pres	May-Jun	X	X			Moenkopi F.
Compositae (Asteraceae)	<i>Enceliopsis nutans</i>	<i>Enceliopsis nutans</i>	noddinghead	Native	Hist	May-Jun	X				
Compositae (Asteraceae)	<i>Erigeron caespitosus</i>	<i>Erigeron caespitosus</i>	tufted fleabane	Native	Rep	Jun-Aug	X	X	X		
Compositae (Asteraceae)	<i>Erigeron compositus</i> var. <i>glabratus</i>	<i>Erigeron compositus</i>	cut-leaved daisy	Native	Pres	May-Aug	X				
Compositae (Asteraceae)	<i>Erigeron divergens</i> var. <i>divergens</i>	<i>Erigeron divergens</i>	spreading daisy	Native	Pres	May-Sep	X	X	X	X	
Compositae (Asteraceae)	<i>Erigeron eatonii</i>	<i>Erigeron eatonii</i>	Eaton's daisy	Native	Pres	May-Jul	X	X	X		
Compositae (Asteraceae)	<i>Erigeron engelmannii</i>	<i>Erigeron engelmannii</i>	Engelmann's daisy	Native	Pres	May-Jul	X	X			
Compositae (Asteraceae)	<i>Erigeron glabellus</i>	<i>Erigeron glabellus</i>	smooth daisy	Native	Pres	Jun-Aug				X	

Appendix D. Confirmed, historical, and reported taxa of Dinosaur National Monument, organized by life form with ecological notes, cont.

Family	Species name		Common name	Nativity	Park status	Flower time	Des Shr	PJ	Mt Con	Wet	Comments
	Utah	Colorado									
Perennial Forbs, cont.											
Compositae (Asteraceae)	<i>Erigeron nematophyllus</i>	<i>Erigeron wilkenii</i>	needle-leaf fleabane	Native	Pres	May–Jul	X	X	X		Green River Shale & Weber Sandstone
Compositae (Asteraceae)	<i>Erigeron pulcherrimus</i>	<i>Erigeron pulcherrimus</i>	basin daisy	Native	Hist	May–Jun	X	X			
Compositae (Asteraceae)	<i>Erigeron pumilus</i> var. <i>concinus</i>	<i>Erigeron concinnus</i>	Navajo fleabane	Native	Pres	May–Aug	X	X	X		
Compositae (Asteraceae)	<i>Erigeron speciosus</i> var. <i>uintahensis</i>	<i>Erigeron uintahensis</i>	Uinta daisy	Native	Pres	Jul–Aug	X		X		
Compositae (Asteraceae)	<i>Eupatorium maculatum</i> var. <i>bruneri</i>	<i>Eupatorium maculatum</i>	spotted joe-pye weed	Native	Pres	Jul–Sep				X	
Compositae (Asteraceae)	<i>Euthamia occidentalis</i>	<i>Euthamia occidentalis</i>	western goldenrod	Native	Pres	Jul–Oct				X	
Compositae (Asteraceae)	<i>Gaillardia aristata</i>	<i>Gaillardia aristata</i>	common blanketflower	Native	Pres	Jun–Sep		X	X		
Compositae (Asteraceae)	<i>Grindelia squarrosa</i> var. <i>serrulata</i>	<i>Grindelia squarrosa</i> var. <i>serrulata</i>	curly-cup gumweed	Native	Pres	Jul–Sep	X		X	X	
Compositae (Asteraceae)	<i>Haplopappus acaulis</i> var. <i>acaulis</i>	<i>Stenotus acaulis</i>	stemless goldenweed	Native	Pres	May–Jul	X	X	X		
Compositae (Asteraceae)	<i>Haplopappus armerioides</i> var. <i>armerioides</i>	<i>Stenotus armerioides</i>	thrift goldenweed	Native	Pres	May–Jun	X	X	X		
Compositae (Asteraceae)	<i>Helenium autumnale</i> var. <i>montanum</i>	<i>Helenium autumnale</i> var. <i>montanum</i>	fall sneezeweed	Native	Pres	Jul–Sep				X	
Compositae (Asteraceae)	<i>Helianthella microcephala</i>	<i>Helianthella microcephala</i>	purpldisk sunflower	Native	Pres	Jul–Sep	X	X	X		
Compositae (Asteraceae)	<i>Helianthella uniflora</i>	<i>Helianthella uniflora</i>	little sunflower	Native	Pres	Jun–Aug	X	X	X		
Compositae (Asteraceae)	<i>Helianthus nuttallii</i>	<i>Helianthus nuttallii</i>	Nuttall's sunflower	Native	Pres	Jul–Sep				X	
Compositae (Asteraceae)	<i>Hymenopappus filifolius</i> var. <i>cinereus</i>	<i>Hymenopappus filifolius</i> var. <i>cinereus</i>	common hyalineherb	Native	Pres	May–Oct	X	X	X		
Compositae (Asteraceae)	<i>Hymenopappus filifolius</i> var. <i>luteus</i>	<i>Hymenopappus filifolius</i> var. <i>luteus</i>	Wyoming hyalineherb	Native	Pres	May–Oct	X	X	X		

Appendix D. Confirmed, historical, and reported taxa of Dinosaur National Monument, organized by life form with ecological notes, cont.

Family	Species name		Common name	Nativity	Park status	Flower time	Des Shr	PJ	Mt Con	Wet	Comments
	Utah	Colorado									
<i>Perennial Forbs, cont.</i>											
Compositae (Asteraceae)	<i>Hymenoxys acaulis</i> var. <i>arizonica</i>	<i>Tetraneris acaulis</i>	Arizona hymenoxys	Native	Pres	Apr–Jun	X	X	X		
Compositae (Asteraceae)	<i>Hymenoxys acaulis</i> var. <i>caespitosa</i>	<i>Tetraneris brevifolia</i>	lanate hymenoxys	Native	Pres	May–Jul	X	X			
Compositae (Asteraceae)	<i>Hymenoxys lapidicola</i>	<i>Hymenoxys lapidicola</i>	rock hymenoxys	Native	Pres	Jun		X	X		Weber F.
Compositae (Asteraceae)	<i>Hymenoxys richardsonii</i> var. <i>richardsonii</i>	<i>Picradenia richardsonii</i> var. <i>richardsonii</i>	Colorado rubber-plant	Native	Pres	May–Aug	X	X	X		
Compositae (Asteraceae)	<i>Hymenoxys torreyana</i>	<i>Tetraneris torreyana</i>	Torrey's hymenoxys	Native	Pres	May–Jul	X	X	X		
Compositae (Asteraceae)	<i>Iva axillaris</i>	<i>Iva axillaris</i>	poverty-weed	Native	Pres	May–Sep	X	X	X	X	
Compositae (Asteraceae)	<i>Lactuca tatarica</i> var. <i>pulchella</i>	<i>Lactuca tatarica</i> var. <i>pulchella</i>	blue lettuce	Native	Pres	Jun–Sep				X	
Compositae (Asteraceae)	<i>Lygodesmia grandiflora</i> var. <i>grandiflora</i>	<i>Lygodesmia grandiflora</i>	showy rush-pink	Native	Pres	May–Jun	X	X	X		
Compositae (Asteraceae)	<i>Machaeranthera canescens</i> var. <i>canescens</i>	<i>Machaeranthera canescens</i>	hoary aster	Native	Pres	May–Sep	X	X	X		
Compositae (Asteraceae)	<i>Machaeranthera grindeloides</i> var. <i>grindeloides</i>	<i>Machaeranthera grindeloides</i>	gumweed aster	Native	Pres	May–Jul	X	X	X		
Compositae (Asteraceae)	<i>Microseris nutans</i>	<i>Microseris nutans</i>	nodding microseris	Native	Hist	Apr–Aug	X	X	X		
Compositae (Asteraceae)	<i>Onopordum acanthium</i>	<i>Onopordum acanthium</i>	Scotch thistle	Intro	Rep	Jun–Sep					Disturbed areas
Compositae (Asteraceae)	<i>Petrorhiza pumila</i> var. <i>pumila</i>	<i>Petrorhiza pumila</i>	rock-goldenrod	Native	Pres	Jul–Sep	X	X	X		
Compositae (Asteraceae)	<i>Platyschuhria integrifolia</i> var. <i>ourolepis</i>	<i>Platyschuhria integrifolia</i> var. <i>ourolepis</i>	Uintah bahia	Native	Pres	May–Jun	X	X			
Compositae (Asteraceae)	<i>Senecio canus</i>	<i>Packera cana</i>	woolly groundsel	Native	Pres	May–Aug	X	X	X		

Appendix D. Confirmed, historical, and reported taxa of Dinosaur National Monument, organized by life form with ecological notes, cont.

Family	Utah	Species name	Common name	Nativity	Park status	Flower time	Des Shr	PJ	Mt Con	Wet	Comments
<i>Perennial Forbs, cont.</i>											
Compositae (Asteraceae)	<i>Senecio integerrimus</i> var. <i>exaltatus</i>	<i>Senecio integerrimus</i>	western groundsel	Native	Pres	Jun–Aug	X	X	X		
Compositae (Asteraceae)	<i>Senecio multilobatus</i>	<i>Packera multilobata</i>	basin groundsel	Native	Pres	Apr–Aug	X	X	X		
Compositae (Asteraceae)	<i>Senecio spartioides</i> var. <i>spartioides</i>	<i>Senecio spartioides</i>	broom groundsel	Native	Pres	Jun–Oct	X	X	X		Sandy soils
Compositae (Asteraceae)	<i>Senecio streptanthifolius</i> var. <i>streptanthifolius</i>	<i>Packera streptanthifolia</i>	Rocky Mountain groundsel	Native	Pres	Jun–Aug	X	X	X		
Compositae (Asteraceae)	<i>Senecio werneriiifolius</i> var. <i>werneriiifolius</i>	<i>Packera werneriiifolia</i>	montane groundsel	Native	Pres	Jul–Aug		X	X		
Compositae (Asteraceae)	<i>Solidago canadensis</i> var. <i>salebrosa</i>	<i>Solidago canadensis</i>	Canadian goldenrod	Native	Pres	Aug–Oct			X	X	
Compositae (Asteraceae)	<i>Solidago missouriensis</i>	<i>Solidago missouriensis</i>	Missouri goldenrod	Native	Pres	Jul–Oct				X	
Compositae (Asteraceae)	<i>Solidago nana</i>	<i>Solidago nana</i>	baby goldenrod	Native	Pres	Aug–Sep	X	X	X		
Compositae (Asteraceae)	<i>Solidago velutina</i>	<i>Solidago velutina</i>	three-nerve goldenrod	Native	Pres	Aug–Oct	X	X	X		
Compositae (Asteraceae)	<i>Sonchus arvensis</i>	<i>Sonchus arvensis</i>	field sow-thistle	Intro	Rep	Jul–Oct				X	
Compositae (Asteraceae)	<i>Sonchus uliginosus</i>	<i>Sonchus uliginosus</i>	marsh sow-thistle	Intro	Pres	Jul–Oct				X	
Compositae (Asteraceae)	<i>Sphaeromeria argentea</i>	<i>Sphaeromeria argentea</i>	silver chicken-sage	Native	Rep	Jun–Jul	X				
Compositae (Asteraceae)	<i>Stephanomeria runcinata</i>	<i>Stephanomeria runcinata</i>	desert wirelettuce	Native	Pres	Jul–Aug	X	X			
Compositae (Asteraceae)	<i>Stephanomeria tenuifolia</i> var. <i>tenuifolia</i>	<i>Stephanomeria tenuifolia</i>	slender wirelettuce	Native	Pres	Jun–Sep	X	X	X	X	
Compositae (Asteraceae)	<i>Taraxacum laevigatum</i>	<i>Taraxacum laevigatum</i>	red-seed dandelion	Intro	Pres	Mar–Dec					
Compositae (Asteraceae)	<i>Taraxacum officinale</i>	<i>Taraxacum officinale</i>	common dandelion	Intro	Pres	Apr–Dec	X	X	X	X	Disturbed areas

Appendix D. Confirmed, historical, and reported taxa of Dinosaur National Monument, organized by life form with ecological notes, cont.

Family	Species name		Common name	Nativity	Park status	Flower time	Des Shr	PJ	Mt Con	Wet	Comments
	Utah	Colorado									
<i>Perennial Forbs, cont.</i>											
Compositae (Asteraceae)	<i>Thelesperma megapotamicum</i>	<i>Thelesperma megapotamicum</i>	Hopi-tea	Native	Pres	Jun-Aug	X		X		
Compositae (Asteraceae)	<i>Townsendia hookeri</i>	<i>Townsendia hookeri</i>	Hooker's townsendia	Native	Hist	Apr-Jun	X		X		
Compositae (Asteraceae)	<i>Townsendia incana</i>	<i>Townsendia incana</i>	hoary townsendia	Native	Pres	Apr-Jul	X	X			
Compositae (Asteraceae)	<i>Townsendia leptotes</i>	<i>Townsendia leptotes</i>	common townsendia	Native	Hist	Jun-Jul			X		
Compositae (Asteraceae)	<i>Townsendia mensana</i>	<i>Townsendia mensana</i>	plateau townsendia	Native	Pres	Apr-Jun	X	X			
Compositae (Asteraceae)	<i>Townsendia strigosa</i> var. <i>strigosa</i>	<i>Townsendia strigosa</i>	hairy townsendia	Native	Hist	May-Jun	X	X			
Compositae (Asteraceae)	<i>Tragopogon dubius</i>	<i>Tragopogon dubius</i> var. <i>major</i>	yellow salsify	Intro	Pres	May-Jul	X			X	Disturbed areas
Compositae (Asteraceae)	<i>Viguiera multiflora</i> var. <i>multiflora</i>	<i>Helioomeris multiflora</i> var. <i>multiflora</i>	showy goldeneye	Native	Pres	Jun-Sep	X	X	X	X	
Compositae (Asteraceae)	<i>Wyethia scabra</i>	<i>Wyethia scabra</i>	rough mule's-ears	Native	Pres	May-Aug	X	X	X		Sandy soils
Compositae (Asteraceae)	<i>Xylorhiza venusta</i>	<i>Xylorhiza venusta</i>	Cisco woodyaster	Native	Pres	Apr-Jun	X				Saline & seleniferous soils
Convolvulaceae	<i>Convolvulus arvensis</i>	<i>Convolvulus arvensis</i>	field bindweed	Intro	Pres	Jun-Aug					Disturbed areas
Crassulaceae	<i>Sedum lanceolatum</i>	<i>Amerosedum lanceolatum</i>	lance-leaved stonecrop	Native	Pres	Jun-Aug	X	X	X		
Cruciferae (Brassicaceae)	<i>Arabis demissa</i>	<i>Boechera demissa</i> var. <i>demissa</i>	nodding rock cress	Native	Pres	May-Aug	X	X	X		
Cruciferae (Brassicaceae)	<i>Arabis drummondii</i>	<i>Boechera drummondii</i>	Drummond's rockcress	Native	Pres	May-Sep	X		X		
Cruciferae (Brassicaceae)	<i>Arabis glabra</i>	<i>Turritis glabra</i>	tower-mustard	Native	Pres	May-Sep	X	X	X		
Cruciferae (Brassicaceae)	<i>Arabis hirsuta</i>	<i>Arabis hirsuta</i>	hairy rockcress	Native	Pres	Jun-Aug	X	X	X		
Cruciferae (Brassicaceae)	<i>Arabis holboellii</i> var. <i>brachycarpa</i>	<i>Boechera divaricarpa</i>	spreadingpod rockcress	Native	Pres	Jun-Jul	X	X	X	X	

Appendix D. Confirmed, historical, and reported taxa of Dinosaur National Monument, organized by life form with ecological notes, cont.

Family	Utah	Species name	Common name	Nativity	Park status	Flower time	Des Shr	PJ	Mt Con	Wet	Comments
<i>Perennial Forbs, cont.</i>											
Cruciferae (Brassicaceae)	<i>Arabis holboellii</i> var. <i>fendleri</i>	<i>Boecheira fendleri</i>	Fendler's rockcress	Native	Pres	Apr–Aug		X	X		
Cruciferae (Brassicaceae)	<i>Arabis holboellii</i> var. <i>secunda</i>	<i>Boecheira retrofracta</i>	Holboell's rockcress	Native	Pres	May–Jul	X	X	X		
Cruciferae (Brassicaceae)	<i>Arabis lignifera</i>	<i>Boecheira lignifera</i>	Sweetwater rockcress	Native	Pres	May–Jul	X	X	X		
Cruciferae (Brassicaceae)	<i>Arabis nuttallii</i>	<i>Boecheira nuttallii</i>	Nuttall's rockcress	Native	Pres	Apr–Jun	X		X		
Cruciferae (Brassicaceae)	<i>Arabis perennans</i> var. <i>perennans</i>	<i>Boecheira perennans</i>	perennial rockcress	Native	Pres	Mar–Jul	X	X	X		
Cruciferae (Brassicaceae)	<i>Arabis pulchra</i> var. <i>pallens</i>	<i>Boecheira pulchra</i> ssp. <i>pallens</i>	desert rockcress	Native	Pres	Mar–Jun	X	X			
Cruciferae (Brassicaceae)	<i>Arabis selbyi</i>	<i>Boecheira selbyi</i>	Selby's rockcress	Native	Pres	May–Aug	X	X	X		
Cruciferae (Brassicaceae)	<i>Arabis vivariensis</i>	<i>Boecheira fernaldiana</i>	park rockcress	Native	Pres	May	X	X			Glen Canyon & Weber F.
Cruciferae (Brassicaceae)	<i>Cardaria chalepensis</i>	<i>Cardaria chalepensis</i>	orbicular whitetop	Intro	Pres	May–Aug					Disturbed areas
Cruciferae (Brassicaceae)	<i>Cardaria pubescens</i>	<i>Cardaria pubescens</i>	hairy whitetop	Intro	Pres	May–Sep					Disturbed areas
Cruciferae (Brassicaceae)	<i>Caulanthus crassicaulis</i> var. <i>crassicaulis</i>	<i>Caulanthus crassicaulis</i>	spindlestem	Native	Pres	May–Jul	X	X	X		
Cruciferae (Brassicaceae)	<i>Descurainia californica</i>	<i>Descurainia californica</i>	California tansy-mustard	Native	Pres	Jun–Sep	X	X	X		
Cruciferae (Brassicaceae)	<i>Draba oligosperma</i> var. <i>juniperina</i>	<i>Draba juniperina</i>	Uinta draba	Native	Pres	May–Jun	X	X	X		Weber F.
Cruciferae (Brassicaceae)	<i>Draba oligosperma</i> var. <i>oligosperma</i>	<i>Draba oligosperma</i>	few-seed whitlow-grass	Native	Pres	May–Aug	X		X		
Cruciferae (Brassicaceae)	<i>Erysimum asperum</i> var. <i>elatum</i>	<i>Erysimum capitatum</i>	western wallflower	Native	Pres	Apr–Aug	X	X	X		
Cruciferae (Brassicaceae)	<i>Erysimum asperum</i> var. <i>purshii</i>	<i>Erysimum asperum</i>	sand dune wallflower	Native	Pres	Apr–Aug	X	X	X		
Cruciferae (Brassicaceae)	<i>Erysimum inconspicuum</i>	<i>Erysimum inconspicuum</i>	shy wallflower	Native	Pres	Apr–Jul	X		X		

Appendix D. Confirmed, historical, and reported taxa of Dinosaur National Monument, organized by life form with ecological notes, cont.

Family	Species name		Common name	Nativity	Park status	Flower time	Des Shr	PJ	Mt Con	Wet	Comments
	Utah	Colorado									
<i>Perennial Forbs, cont.</i>											
Cruciferae (Brassicaceae)	<i>Lepidium latifolium</i>	<i>Cardaria latifolia</i>	broad-leaf pepperwort	Intro	Pres	Jun–Oct				X	Disturbed areas
Cruciferae (Brassicaceae)	<i>Lepidium montanum</i> var. <i>jonesii</i>	<i>Lepidium montanum</i> var. <i>jonesii</i>	Jones' pepperwort	Native	Pres	Apr–Sep	X	X			
Cruciferae (Brassicaceae)	<i>Lepidium ramosissimum</i> var. <i>bourgeauanum</i>	<i>Lepidium ramosissimum</i> var. <i>bourgeauanum</i>	branched pepperwort	Native	Pres	Jun–Aug	X				
Cruciferae (Brassicaceae)	<i>Nasturtium officinale</i>	<i>Nasturtium officinale</i>	watercress	Intro	Pres	May–Sep				X	
Cruciferae (Brassicaceae)	<i>Physaria acutifolia</i> var. <i>acutifolia</i>	<i>Physaria acutifolia</i>	sharp-leaf twinpod	Native	Pres	May–Jul	X	X			
Cruciferae (Brassicaceae)	<i>Physaria ludoviciana</i>	<i>Lesquerella ludoviciana</i>	silver bladderpod	Native	Pres	May–Jun	X	X			
Cruciferae (Brassicaceae)	<i>Physaria subumbellata</i>	<i>Lesquerella subumbellata</i>	Rollins' bladderpod	Native	Pres	May–Jul	X	X			
Cruciferae (Brassicaceae)	<i>Rorippa islandica</i> var. <i>glabra</i>	<i>Rorippa palustris</i> var. <i>glabra</i>	smooth yellowcress	Native	Hist	Jun–Sep				X	
Cruciferae (Brassicaceae)	<i>Rorippa islandica</i> var. <i>hispida</i>	<i>Rorippa palustris</i> var. <i>hispida</i>	hairy yellowcress	Native	Hist	Jun–Sep				X	
Cruciferae (Brassicaceae)	<i>Rorippa sinuata</i>	<i>Rorippa sinuata</i>	spreading yellowcress	Native	Hist	Apr–Sep				X	
Cruciferae (Brassicaceae)	<i>Schoenocrambe linifolia</i>	<i>Schoenocrambe linifolia</i>	flax-leaved plainsmustard	Native	Pres	Apr–Jul	X	X			
Cruciferae (Brassicaceae)	<i>Stanleya integrifolia</i>	<i>Stanleya pinnata</i> var. <i>integrifolia</i>	smoothleaf prince's-plume	Native	Pres	Apr–Sep	X	X			
Cruciferae (Brassicaceae)	<i>Stanleya pinnata</i>	<i>Stanleya pinnata</i> var. <i>pinnata</i>	prince's-plume	Native	Pres	Apr–Sep	X	X			Often on seleniferous soils
Cruciferae (Brassicaceae)	<i>Streptanthus cordatus</i>	<i>Streptanthus cordatus</i>	heart-leaf jewelflower	Native	Pres	Apr–Jul	X	X			
Cruciferae (Brassicaceae)	<i>Thelypodopsis elegans</i>	<i>Thelypodopsis elegans</i>	elegant thelypody	Native	Pres	Apr–Jul	X	X			
Cruciferae (Brassicaceae)	<i>Thelypodium integrifolium</i> var. <i>gracilipes</i>	<i>Thelypodium integrifolium</i> var. <i>gracilipes</i>	Moab thelypody	Native	Pres	Jun–Sep				X	

Appendix D. Confirmed, historical, and reported taxa of Dinosaur National Monument, organized by life form with ecological notes, cont.

Family	Utah	Species name	Common name	Nativity	Park status	Flower time	Des Shr	PJ	Mt Con	Wet	Comments
<i>Perennial Forbs, cont.</i>											
Cruciferae (Brassicaceae)	<i>Thlaspi montanum</i> var. <i>montanum</i>	<i>Nocca montana</i>	alpine pennycress	Native	Pres	Apr–Aug	X		X		
Dipsacaceae	<i>Dipsacus sylvestris</i>	<i>Dipsacus fullonum</i>	teasel	Intro	Rep	Jul–Sep				X	Disturbed areas
Euphorbiaceae	<i>Chamaesyce fendleri</i>	<i>Chamaesyce fendleri</i>	Fendler's spurge	Native	Pres	May–Sep	X	X	X		
Euphorbiaceae	<i>Euphorbia brachycera</i>	<i>Tithymalus brachyceras</i>	shorthorn spurge	Native	Pres	May–Jun	X	X	X	X	
Euphorbiaceae	<i>Euphorbia esula</i>	<i>Tithymalus esula</i>	leafy spurge	Intro	Rep	May–Aug				X	
Fumariaceae	<i>Corydalis aurea</i> var. <i>occidentalis</i>	<i>Corydalis curvisiliqua</i> ssp. <i>occidentalis</i>	golden corydalis	Native	Pres	Apr–Sep	X	X	X		
Gentianaceae	<i>Centaurium exaltatum</i>	<i>Centaurium exaltatum</i>	Great Basin centaury	Native	Rep	Jun–Sep				X	
Gentianaceae	<i>Gentiana affinis</i> var. <i>affinis</i>	<i>Pneumonanthe affinis</i>	Rocky Mountain gentian	Native	Rep	Jul–Sep			X	X	
Geraniaceae	<i>Geranium viscosissimum</i> var. <i>incisum</i>	<i>Geranium viscosissimum</i> var. <i>nervosum</i>	sticky crane's-bill	Native	Pres	Jun–Aug	X		X		
Hippuridaceae	<i>Hippuris vulgaris</i>	<i>Hippuris vulgaris</i>	common mare's-tail	Native	Hist	Jun–Sep				X	
Hydrophyllaceae	<i>Phacelia hastata</i>	<i>Phacelia hastata</i>	lanceleaf phacelia	Native	Pres	May–Aug	X		X		
Hydrophyllaceae	<i>Phacelia sericea</i> var. <i>ciliosa</i>	<i>Phacelia sericea</i> ssp. <i>ciliosa</i>	silky phacelia	Native	Pres	Jun–Aug	X		X		
Iridaceae	<i>Iris missouriensis</i>	<i>Iris missouriensis</i>	Rocky Mountain iris	Native	Pres	May–Jul				X	
Iridaceae	<i>Sisyrinchium idahoense</i>	<i>Sisyrinchium idahoense</i> var. <i>occidentale</i>	Idaho blue-eyed grass	Native	Pres	May–Aug				X	
Labiatae (Lamiaceae)	<i>Lycopus americanus</i>	<i>Lycopus americanus</i>	American bugleweed	Native	Pres	Jul–Aug				X	
Labiatae (Lamiaceae)	<i>Mentha arvensis</i> var. <i>glabrata</i>	<i>Mentha arvensis</i>	field mint	Native	Pres	Jun–Sep				X	
Labiatae (Lamiaceae)	<i>Nepeta cataria</i>	<i>Nepeta cataria</i>	catnip	Intro	Pres	Jun–Sep	X	X	X		

Appendix D. Confirmed, historical, and reported taxa of Dinosaur National Monument, organized by life form with ecological notes, cont.

Family	Utah	Species name	Common name	Nativity	Park status	Flower time	Des Shr	PJ	Mt Con	Wet	Comments
<i>Perennial Forbs, cont.</i>											
Labiatae (Lamiaceae)	<i>Prunella vulgaris</i> var. <i>lanceolata</i>	<i>Prunella vulgaris</i>	self-heal	Native	Pres	May–Sep			X	X	
Labiatae (Lamiaceae)	<i>Scutellaria galericulata</i>	<i>Scutellaria galericulata</i> var. <i>epilobifolia</i>	little skullcap	Native	Pres	Jun–Aug				X	
Leguminosae (Fabaceae)	<i>Astragalus agrestis</i>	<i>Astragalus agrestis</i>	field milkvetch	Native	Rep	May–Aug	X	X	X		
Leguminosae (Fabaceae)	<i>Astragalus argophyllus</i> var. <i>martinii</i>	<i>Astragalus argophyllus</i> var. <i>martinii</i>	Martin's milkvetch	Native	Pres	Apr–Jun	X		X		Weber F.
Leguminosae (Fabaceae)	<i>Astragalus asclepiadoides</i>	<i>Astragalus asclepiadoides</i>	milkweed milkvetch	Native	Hist	May–Jun	X				
Leguminosae (Fabaceae)	<i>Astragalus bisulcatus</i> var. <i>haydenianus</i>	<i>Astragalus haydenianus</i>	Hayden's milkvetch	Native	Pres	May–Aug	X		X		
Leguminosae (Fabaceae)	<i>Astragalus ceramicus</i> var. <i>ceramicus</i>	<i>Astragalus ceramicus</i> var. <i>ceramicus</i>	painted milkvetch	Native	Hist	Apr–Jun	X	X		X	Sandy soils
Leguminosae (Fabaceae)	<i>Astragalus chamaeleuce</i>	<i>Astragalus chamaeleuce</i>	cicada milkvetch	Native	Pres	Apr–Jun	X	X			
Leguminosae (Fabaceae)	<i>Astragalus chloodes</i>	<i>Astragalus chloodes</i>	grass milkvetch	Native	Pres	May–Jul					Entrada, Glen Canyon, Frontier, & Dakota F.
Leguminosae (Fabaceae)	<i>Astragalus convallarius</i> var. <i>convallarius</i>	<i>Astragalus convallarius</i>	lesser rushy milkvetch	Native	Pres	May–Aug	X	X	X		
Leguminosae (Fabaceae)	<i>Astragalus duchesnensis</i>	<i>Astragalus duchesnensis</i>	Duchesne milkvetch	Native	Pres	Apr–Jul	X	X	X		Morrison F.
Leguminosae (Fabaceae)	<i>Astragalus flavus</i> var. <i>flavus</i>	<i>Astragalus flavus</i>	yellow milkvetch	Native	Hist	Apr–Jul	X	X			
Leguminosae (Fabaceae)	<i>Astragalus hamiltonii</i>	<i>Astragalus hamiltonii</i>	Hamilton's milkvetch	Native	Pres	May–Jun		X	X		Morrison F.
Leguminosae (Fabaceae)	<i>Astragalus kentrophyta</i> var. <i>elatus</i>	<i>Astragalus kentrophyta</i> var. <i>elatus</i>	tall kentrophyta	Native	Hist	Jun–Sep	X	X	X		
Leguminosae (Fabaceae)	<i>Astragalus laxmannii</i> var. <i>robustior</i>	<i>Astragalus laxmannii</i>	standing milkvetch	Native	Pres	May–Aug	X	X	X		

Appendix D. Confirmed, historical, and reported taxa of Dinosaur National Monument, organized by life form with ecological notes, cont.

Family	Utah	Species name	Common name	Nativity	Park status	Flower time	Des Shr	PJ	Mt Con	Wet	Comments
<i>Perennial Forbs, cont.</i>											
Leguminosae (Fabaceae)	<i>Astragalus miser</i> var. <i>oblongifolius</i>	<i>Astragalus miser</i> var. <i>oblongifolius</i>	Rydberg's weedy milkvetch	Native	Pres	Jun-Aug	X		X		
Leguminosae (Fabaceae)	<i>Astragalus mollissimus</i> var. <i>thompsoniae</i>	<i>Astragalus mollissimus</i> var. <i>thompsoniae</i>	woolly milkvetch	Native	Pres	Feb-Jun	X	X			
Leguminosae (Fabaceae)	<i>Astragalus purshii</i> var. <i>purshii</i>	<i>Astragalus purshii</i>	Pursh's milkvetch	Native	Pres	Apr-Jun	X	X			
Leguminosae (Fabaceae)	<i>Astragalus racemosus</i> var. <i>treleasei</i>	<i>Astragalus racemosus</i> var. <i>treleasei</i>	Trelease's alkali milkvetch	Native	Rep	May-Jul	X	X			Uinta F.
Leguminosae (Fabaceae)	<i>Astragalus saurinus</i>	<i>Astragalus saurinus</i>	Dinosaur milkvetch	Native	Pres	Apr-Jun	X	X			Moenkopi & Morrison F.
Leguminosae (Fabaceae)	<i>Astragalus spatulatus</i>	<i>Astragalus spatulatus</i>	spoonleaf milkvetch	Native	Pres	May-Jul	X	X	X		
Leguminosae (Fabaceae)	<i>Astragalus tenellus</i>	<i>Astragalus tenellus</i>	pulse milkvetch	Native	Pres	May-Aug	X	X	X		
Leguminosae (Fabaceae)	<i>Glycyrrhiza lepidota</i>	<i>Glycyrrhiza lepidota</i>	Nuttall's licorice	Native	Pres	May-Jul				X	
Leguminosae (Fabaceae)	<i>Hedysarum boreale</i> var. <i>boreale</i>	<i>Hedysarum boreale</i>	northern sweetvetch	Native	Pres	May-Aug	X	X	X		Moenkopi F.
Leguminosae (Fabaceae)	<i>Hedysarum boreale</i> var. <i>gremiale</i>	<i>Hedysarum boreale</i> var. <i>gremiale</i>	Rollins' sweetvetch	Native	Hist	May-Aug		X	X		
Leguminosae (Fabaceae)	<i>Lupinus argenteus</i> var. <i>argentatus</i>	<i>Lupinus argenteus</i> var. <i>argentatus</i>	silvery lupine	Native	Pres	May-Aug			X	X	
Leguminosae (Fabaceae)	<i>Lupinus argenteus</i> var. <i>argenteus</i>	<i>Lupinus argenteus</i> var. <i>argenteus</i>	silvery lupine	Native	Pres	May-Aug	X	X	X		
Leguminosae (Fabaceae)	<i>Lupinus argenteus</i> var. <i>rubricaulis</i>	<i>Lupinus argenteus</i> var. <i>rubricaulis</i>	subalpine lupine	Native	Pres	May-Aug			X	X	
Leguminosae (Fabaceae)	<i>Lupinus caudatus</i> var. <i>utahensis</i>	<i>Lupinus caudatus</i> var. <i>utahensis</i>	Utah lupine	Native	Pres	May-Aug	X	X	X		
Leguminosae (Fabaceae)	<i>Lupinus leucophyllus</i>	<i>Lupinus leucophyllus</i>	white-leaved lupine	Native	Pres	Jun-Aug	X			X	
Leguminosae (Fabaceae)	<i>Medicago sativa</i>	<i>Medicago sativa</i>	alfalfa	Intro	Rep	May-Sep					Disturbed areas
Leguminosae (Fabaceae)	<i>Melilotus officinalis</i>	<i>Melilotus officinalis</i>	yellow sweet-clover	Intro	Pres	May-Oct					Disturbed areas

Appendix D. Confirmed, historical, and reported taxa of Dinosaur National Monument, organized by life form with ecological notes, cont.

Family	Species name		Common name	Nativity	Park status	Flower time	Des Shr	PJ	Mt Con	Wet	Comments
	Utah	Colorado									
<i>Perennial Forbs, cont.</i>											
Leguminosae (Fabaceae)	<i>Oxytropis besseyi</i> var. <i>obnapiformis</i>	<i>Oxytropis besseyi</i> var. <i>obnapiformis</i>	Maybell locoweed	Native	Pres	May–Jul	X	X			Brown's Park F.
Leguminosae (Fabaceae)	<i>Pediomelum megalanthum</i>	<i>Pediomelum megalanthum</i>	large-flowered breadroot	Native	Hist	Apr–Jun	X	X			Moenkopi F.
Leguminosae (Fabaceae)	<i>Psoraleidium lanceolatum</i> var. <i>lanceolatum</i>	<i>Psoraleidium lanceolatum</i>	lemon scurf-pea	Native	Pres	Apr–Aug	X				
Leguminosae (Fabaceae)	<i>Thermopsis rhombifolia</i>	<i>Thermopsis rhombifolia</i>	prairie golden pea	Native	Pres	May–Aug	X	X			
Leguminosae (Fabaceae)	<i>Trifolium andinum</i>	<i>Trifolium andinum</i>	Andean clover	Native	Pres	May–Jul	X	X	X		Weber F.
Leguminosae (Fabaceae)	<i>Trifolium gymnocarpon</i>	<i>Trifolium gymnocarpon</i>	dwarf clover	Native	Pres	Apr–Aug	X	X	X		
Leguminosae (Fabaceae)	<i>Trifolium repens</i>	<i>Trifolium repens</i>	white clover	Intro	Pres	Apr–Sep				X	
Leguminosae (Fabaceae)	<i>Vicia americana</i> var. <i>minor</i>	<i>Vicia americana</i> var. <i>minor</i>	plains vetch	Native	Pres	May–Aug	X	X			
Lemnaceae	<i>Lemna minor</i>	<i>Lemna turionifera</i>	lesser duckweed	Native	Hist	Jun–Oct				X	
Liliaceae (Alliaceae)	<i>Allium acuminatum</i>	<i>Allium acuminatum</i>	taper-tip onion	Native	Pres	May–Jul	X	X	X		
Liliaceae (Alliaceae)	<i>Allium brandegei</i>	<i>Allium brandegei</i>	Brandegge's onion	Native	Pres	Jun–Jul	X	X	X		
Liliaceae (Alliaceae)	<i>Allium geyeri</i> var. <i>geyeri</i>	<i>Allium geyeri</i>	Geyer's onion	Native	Pres	May–Sep	X	X	X		
Liliaceae (Alliaceae)	<i>Allium nevadense</i>	<i>Allium nevadense</i>	Nevada onion	Native	Pres	Apr–Jul	X	X	X		Bishop & Moenkopi F.
Liliaceae (Alliaceae)	<i>Allium textile</i>	<i>Allium textile</i>	textile onion	Native	Pres	May–Jun	X	X			
Liliaceae (Alliaceae, Themidaceae)	<i>Androstephium breviflorum</i>	<i>Androstephium breviflorum</i>	pink funnel-lily	Native	Pres	Apr–May	X	X			Saline to seleniferous soils
Liliaceae (Asparagaceae)	<i>Asparagus officinalis</i>	<i>Asparagus officinalis</i>	asparagus	Intro	Pres	Jun–Jul				X	Disturbed areas
Liliaceae (Calochortaceae)	<i>Calochortus nuttallii</i>	<i>Calochortus nuttallii</i>	sego-lily	Native	Pres	Jun–Jul	X	X	X		
Liliaceae	<i>Erythronium grandiflorum</i>	<i>Erythronium grandiflorum</i>	glacier-lily	Native	Pres	May–Jul	X		X		

Appendix D. Confirmed, historical, and reported taxa of Dinosaur National Monument, organized by life form with ecological notes, cont.

Family	Utah	Species name	Common name	Nativity	Park status	Flower time	Des Shr	PJ	Mt Con	Wet	Comments
Perennial Forbs, cont.											
Liliaceae	<i>Fritillaria atropurea</i>	<i>Fritillaria atropurea</i>	leopard-lily	Native	Pres	Apr-Jul	X	X	X		
Liliaceae	<i>Fritillaria pudica</i>	<i>Fritillaria pudica</i>	yellow-bell	Native	Pres	Mar-Jun	X		X		
Liliaceae (Convallariaceae, Ruscaceae)	<i>Smilacina stellata</i>	<i>Maianthemum stellatum</i>	starry false Solomon's-seal	Native	Pres	Apr-Jun	X	X	X	X	
Liliaceae (Melanthiaceae)	<i>Zigadenus paniculatus</i>	<i>Toxicoscordion paniculatum</i>	foothills death camas	Native	Pres	Mar-Jun	X	X	X		
Liliaceae (Melanthiaceae)	<i>Zigadenus vaginatus</i>	<i>Anticlea vaginatus</i>	alcove death camas	Native	Pres	Jul-Aug				X	
Liliaceae (Melanthiaceae)	<i>Zigadenus venenosus</i>	<i>Toxicoscordion venenosum</i>	meadow death camas	Native	Pres	Apr-Jul	X	X	X	X	
Linaceae	<i>Linum perenne</i> ssp. <i>lewisii</i>	<i>Adenolinum lewisii</i>	blue flax	Native	Pres	Apr-Aug	X	X	X		
Loasaceae	<i>Mentzelia multicaulis</i> var. <i>uintahensis</i>	<i>Nuttallia multicaulis</i>	Uinta Basin stickleaf	Native	Pres	May-Sep	X	X			
Malvaceae	<i>Iliamna rivularis</i>	<i>Iliamna rivularis</i>	wild hollyhock	Native	Pres	Jun-Oct				X	
Malvaceae	<i>Sphaeralcea coccinea</i>	<i>Sphaeralcea coccinea</i> ssp. <i>dissecta</i>	scarlet globe-mallow	Native	Pres	Apr-Oct	X	X	X		
Malvaceae	<i>Sphaeralcea parvifolia</i>	<i>Sphaeralcea parvifolia</i>	small-leaf globemallow	Native	Pres	Mar-Oct	X	X	X		
Nyctaginaceae	<i>Abronia fragrans</i>	<i>Abronia elliptica</i>	fragrant sand-verbena	Native	Pres	Apr-Sep	X	X	X		
Nyctaginaceae	<i>Mirabilis linearis</i> var. <i>linearis</i>	<i>Oxybaphus linearis</i>	narrow-leaf four-o'clock	Native	Pres	May-Aug	X	X	X	X	
Onagraceae	<i>Calylophus lavandulifolius</i>	<i>Calylophus lavandulifolius</i>	lavender-leaf sundrops	Native	Pres	May-Aug	X	X	X		
Onagraceae	<i>Epilobium ciliatum</i>	<i>Epilobium ciliatum</i>	northern willow-herb	Native	Pres	Jun-Aug				X	
Onagraceae	<i>Epilobium halleanum</i>	<i>Epilobium halleanum</i>	Hall's willow-herb	Native	Rep	Jun-Aug				X	
Onagraceae	<i>Epilobium palustre</i>	<i>Epilobium palustre</i> var. <i>grammadophyllum</i>	marsh willow-herb	Native	Rep	Jul-Aug				X	

Appendix D. Confirmed, historical, and reported taxa of Dinosaur National Monument, organized by life form with ecological notes, cont.

Family	Species name		Common name	Nativity	Park status	Flower time	Des Shr	PJ	Mt Con	Wet	Comments
	Utah	Colorado									
<i>Perennial Forbs, cont.</i>											
Onagraceae	<i>Oenothera caespitosa</i> var. <i>caespitosa</i>	<i>Oenothera caespitosa</i> ssp. <i>caespitosa</i>	tufted evening-primrose	Native	Hist	Apr–Jun	X	X	X		
Onagraceae	<i>Oenothera caespitosa</i> var. <i>marginata</i>	<i>Oenothera caespitosa</i> ssp. <i>marginata</i>	long-tube evening-primrose	Native	Pres	Apr–Jun	X	X	X		
Onagraceae	<i>Oenothera caespitosa</i> var. <i>navajoensis</i>	<i>Oenothera caespitosa</i> ssp. <i>navajoensis</i>	Paria evening-primrose	Native	Pres	Apr–Jun	X	X	X		
Onagraceae	<i>Oenothera coronopifolia</i>	<i>Oenothera coronopifolia</i>	hairy-throat evening-primrose	Native	Pres	Jun–Aug	X	X	X		
Onagraceae	<i>Oenothera elata</i>	<i>Oenothera elata</i> ssp. <i>hirsutissima</i>	western evening-primrose	Native	Pres	Jun–Aug	X	X	X	X	
Onagraceae	<i>Oenothera flava</i> var. <i>acutissima</i>	<i>Oenothera acutissima</i>	large yellow evening-primrose	Native	Pres	May–Jun	X		X		
Onagraceae	<i>Oenothera pallida</i> var. <i>trichocalyx</i>	<i>Oenothera pallida</i> ssp. <i>trichocalyx</i>	pale evening-primrose	Native	Pres	May–Jul	X	X	X		
Onagraceae	<i>Oenothera villosa</i> var. <i>strigosa</i>	<i>Oenothera villosa</i> ssp. <i>strigosa</i>	biennial evening-primrose	Native	Pres	Jun–Aug				X	
Orchidaceae	<i>Corallorhiza striata</i>	<i>Corallorhiza striata</i>	striped coral-root	Native	Hist	Jun–Jul			X		
Orchidaceae	<i>Epipactis gigantea</i>	<i>Epipactis gigantea</i>	giant helleborine	Native	Pres	Apr–Aug				X	
Orchidaceae	<i>Habenaria unalascensis</i>	<i>Piperia unalascensis</i>	Alaska rein orchid	Native	Pres	Jun–Aug	X		X		
Orchidaceae	<i>Habenaria zothecina</i>	<i>Limnorchis zothecina</i>	alcove bog-orchid	Native	Pres	Jul–Aug				X	Weber F.
Orchidaceae	<i>Spiranthes romanzoffiana</i> var. <i>diluvialis</i>	<i>Spiranthes diluvialis</i>	Ute ladies'-tresses	Native	Pres	Jul–Sep				X	
Orobanchaceae	<i>Orobanche corymbosa</i>	<i>Orobanche corymbosa</i>	flat-topped broomrape	Native	Pres	Jun–Aug	X	X	X		
Orobanchaceae	<i>Orobanche fasciculata</i>	<i>Aphyllon fasciculatum</i>	clustered broomrape	Native	Pres	Jun–Jul	X	X	X		

Appendix D. Confirmed, historical, and reported taxa of Dinosaur National Monument, organized by life form with ecological notes, cont.

Family	Utah	Species name	Common name	Nativity	Park status	Flower time	Des Shr	PJ	Mt Con	Wet	Comments
<i>Perennial Forbs, cont.</i>											
Orobanchaceae	<i>Orobanche ludoviciana</i> var. <i>cooperi</i>	<i>Orobanche ludoviciana</i>	Cooper's broomrape	Native	Hist	May-Jul	X	X	X		
Plantaginaceae	<i>Plantago major</i>	<i>Plantago major</i>	common plantain	Intro	Pres	May-Aug	X				Disturbed areas
Polemoniaceae	<i>Gilia pinnatifida</i>	<i>Gilia pinnatifida</i>	sticky gilia	Native	Pres	May-Sep	X	X			
Polemoniaceae	<i>Ipomopsis aggregata</i> var. <i>aggregata</i>	<i>Ipomopsis aggregata</i> ssp. <i>aggregata</i>	scarlet gilia	Native	Pres	May-Aug	X	X	X	X	
Polemoniaceae	<i>Ipomopsis congesta</i> var. <i>congesta</i>	<i>Ipomopsis congesta</i> var. <i>congesta</i>	ball-head gilia	Native	Pres	Jun-Aug	X	X			
Polemoniaceae	<i>Leptodactylon caespitosum</i>	<i>Leptodactylon caespitosum</i>	matted prickly-phlox	Native	Pres	May-Jul	X	X	X		
Polemoniaceae	<i>Leptodactylon watsonii</i>	<i>Leptodactylon watsonii</i>	Watson's prickly-phlox	Native	Pres	May-Aug	X	X	X		
Polemoniaceae	<i>Phlox austromontana</i> var. <i>austromontana</i>	<i>Phlox austromontana</i>	desert phlox	Native	Pres	Apr-Jun	X	X	X		
Polemoniaceae	<i>Phlox hoodii</i> var. <i>canescens</i>	<i>Phlox hoodii</i>	carpet phlox	Native	Pres	Apr-Jun	X	X	X		
Polemoniaceae	<i>Phlox longifolia</i>	<i>Phlox longifolia</i>	long-leaf phlox	Native	Pres	Apr-Jul	X	X	X		
Polemoniaceae	<i>Phlox multiflora</i>	<i>Phlox multiflora</i>	Rocky Mountain phlox	Native	Pres	Jun-Aug	X		X		
Polygonaceae	<i>Eriogonum batemanii</i> var. <i>batemanii</i>	<i>Eriogonum batemanii</i>	Bateman's wild buckwheat	Native	Pres	Jun-Sep	X	X			
Polygonaceae	<i>Eriogonum brevicaule</i> var. <i>viridulum</i>	<i>Eriogonum brevicaule</i> var. <i>viridulum</i>	Duchesne wild buckwheat	Native	Pres	Jul-Oct	X	X			Morrison F.
Polygonaceae	<i>Eriogonum heracleoides</i>	<i>Eriogonum heracleoides</i>	whorled wild buckwheat	Native	Pres	May-Sep	X	X	X		
Polygonaceae	<i>Eriogonum jamesii</i> var. <i>flavescens</i>	<i>Eriogonum jamesii</i>	Baker's wild buckwheat	Native	Hist	Jun-Oct	X	X	X		
Polygonaceae	<i>Eriogonum microthecum</i> var. <i>simpsonii</i>	<i>Eriogonum microthecum</i> var. <i>simpsonii</i>	slender wild buckwheat	Native	Pres	Jun-Oct	X	X	X		
Polygonaceae	<i>Eriogonum ovalifolium</i>	<i>Eriogonum ovalifolium</i> var. <i>ovalifolium</i> var. <i>ovalifolium</i>	cushion wild buckwheat	Native	Pres	Apr-Aug	X	X			

Appendix D. Confirmed, historical, and reported taxa of Dinosaur National Monument, organized by life form with ecological notes, cont.

Family	Utah	Species name	Common name	Nativity	Park status	Flower time	Des Shr	PJ	Mt Con	Wet	Comments
<i>Perennial Forbs, cont.</i>											
Polygonaceae	<i>Eriogonum shockleyi</i>	<i>Eriogonum shockleyi</i> var. <i>longilobum</i>	Shockley's wild buckwheat	Native	Hist	May–Aug	X	X			
Polygonaceae	<i>Eriogonum tumulosum</i>	<i>Eriogonum tumulosum</i>	Woodside wild buckwheat	Native	Pres	May–Jul	X	X			Brown's Park & Weber F.
Polygonaceae	<i>Eriogonum umbellatum</i> var. <i>aureum</i>	<i>Eriogonum umbellatum</i> var. <i>aureum</i>	golden sulphur wild buckwheat	Native	Pres	Jun–Sep	X	X	X		
Polygonaceae	<i>Eriogonum umbellatum</i> var. <i>umbellatum</i>	<i>Eriogonum umbellatum</i> var. <i>umbellatum</i>	sulfur wild buckwheat	Native	Pres	Jun–Sep	X	X	X		
Polygonaceae	<i>Polygonum amphibium</i>	<i>Persicaria amphibia</i>	water smartweed	Native	Hist	Jun–Sep				X	
Polygonaceae	<i>Rumex crispus</i>	<i>Rumex crispus</i>	curly dock	Intro	Pres	May–Sep				X	Disturbed areas
Polygonaceae	<i>Rumex hymenosepalus</i>	<i>Rumex hymenosepalus</i>	canaigre dock	Native	Hist	Apr–Jun	X				
Polygonaceae	<i>Rumex salicifolius</i> ssp. <i>triangulivalvis</i>	<i>Rumex triangulivalvis</i>	willow dock	Native	Hist	May–Sep	X	X	X		Disturbed areas
Portulacaceae	<i>Claytonia lanceolata</i>	<i>Claytonia lanceolata</i>	lanceleaf springbeauty	Native	Pres	Apr–Jul		X	X		
Portulacaceae	<i>Lewisia rediviva</i>	<i>Lewisia rediviva</i>	Oregon bitter-root	Native	Pres	May–Jun	X	X	X		
Portulacaceae	<i>Talinum parviflorum</i>	<i>Talinum parviflorum</i>	small-flowered fame-flower	Native	Pres	Apr–Sep	X	X	X		
Potamogetonaceae	<i>Potamogeton alpinus</i>	<i>Potamogeton alpinus</i> var. <i>tenuifolius</i>	northern pondweed	Native	Hist	Jun–Aug				X	
Potamogetonaceae	<i>Potamogeton nodosus</i>	<i>Potamogeton nodosus</i>	longleaf pondweed	Native	Hist	Jun–Aug				X	
Potamogetonaceae	<i>Potamogeton pectinatus</i>	<i>Potamogeton pectinatus</i>	fennel-leaf pondweed	Native	Hist	Jul–Sep				X	
Potamogetonaceae	<i>Potamogeton pusillus</i>	<i>Potamogeton pusillus</i>	dwarf pondweed	Native	Rep	Jul–Aug				X	
Primulaceae	<i>Dodecatheon pulchellum</i> var. <i>pulchellum</i>	<i>Dodecatheon pulchellum</i>	dark-throat shooting-star	Native	Pres	Mar–Aug				X	

Appendix D. Confirmed, historical, and reported taxa of Dinosaur National Monument, organized by life form with ecological notes, cont.

Family	Utah	Species name	Common name	Nativity	Park status	Flower time	Des Shr	PJ	Mt Con	Wet	Comments
<i>Perennial Forbs, cont.</i>											
Primulaceae (Myrsinaceae)	<i>Glaux maritima</i>	<i>Glaux maritima</i>	sea-milkwort	Native	Hist	May–Jul				X	
Pyrolaceae (Ericaceae)	<i>Pyrola secunda</i>	<i>Orthilia secunda</i>	sidebells pyrola	Native	Hist	Jun–Aug		X			
Ranunculaceae (Helleboraceae)	<i>Aquilegia grahamii</i>		Graham's columbine	Native	Pres	Jun–Jul				X	
Ranunculaceae (Helleboraceae)	<i>Aquilegia micrantha</i>	<i>Aquilegia micrantha</i>	alcove columbine	Native	Pres	May–Jun				X	
Ranunculaceae	<i>Clematis ligusticifolia</i>	<i>Clematis ligusticifolia</i>	white virgin's-bower	Native	Pres	Jul–Aug				X	
Ranunculaceae (Helleboraceae)	<i>Delphinium nuttallianum</i>	<i>Delphinium nuttallianum</i>	Nuttall's larkspur	Native	Pres	Apr–Jul	X	X			
Ranunculaceae	<i>Ranunculus aquatilis</i> var. <i>diffusus</i>	<i>Batrachium circinatum</i>	thread water-buttercup	Native	Rep	May–Sep				X	
Ranunculaceae	<i>Ranunculus cymbalaria</i>	<i>Halerpestes cymbalaria</i> ssp. <i>saximontana</i>	marsh buttercup	Native	Pres	May–Sep				X	
Ranunculaceae	<i>Ranunculus glaberrimus</i> var. <i>ellipticus</i>	<i>Ranunculus glaberrimus</i> var. <i>ellipticus</i>	sagebrush buttercup	Native	Pres	Apr–Jun	X	X			
Ranunculaceae	<i>Ranunculus gmelinii</i>	<i>Ranunculus gmelinii</i> var. <i>hookeri</i>	lesser yellow water buttercup	Native	Rep	Jun–Aug				X	
Ranunculaceae	<i>Ranunculus jovis</i>	<i>Ranunculus jovis</i>	Jupiter buttercup	Native	Pres	Feb–Jun	X		X		
Ranunculaceae	<i>Ranunculus macounii</i>	<i>Ranunculus macounii</i>	Macoun's buttercup	Native	Rep	May–Jul				X	
Rosaceae	<i>Ivesia gordonii</i>	<i>Ivesia gordonii</i>	Gordon's ivesia	Native	Pres	Jun–Aug			X		
Rosaceae	<i>Petrophyton caespitosum</i>	<i>Petrophyton caespitosum</i>	rock spiraea	Native	Pres	Aug–Sep	X	X			Rock crevices
Rosaceae	<i>Potentilla anserina</i>	<i>Argentina anserina</i>	silverweed	Native	Pres	May–Aug				X	
Rosaceae	<i>Potentilla arguta</i> var. <i>convallaria</i>	<i>Drymocalis arguta</i>	tall cinquefoil	Native	Hist	Jun–Jul			X		
Rosaceae	<i>Potentilla concinna</i> var. <i>modesta</i>	<i>Potentilla concinna</i>	modest cinquefoil	Native	Pres	Jun–Aug	X		X		

Appendix D. Confirmed, historical, and reported taxa of Dinosaur National Monument, organized by life form with ecological notes, cont.

Family	Utah	Species name	Common name	Nativity	Park status	Flower time	Des Shr	PJ	Mt Con	Wet	Comments
<i>Perennial Forbs, cont.</i>											
Rosaceae	<i>Potentilla gracilis</i> var. <i>brunnescens</i>	<i>Potentilla gracilis</i> var. <i>brunnescens</i>	glandular cinquefoil	Native	Hist	Jun–Aug			X		
Rosaceae	<i>Potentilla gracilis</i> var. <i>elmeri</i>	<i>Potentilla gracilis</i> var. <i>elmeri</i>	comb-leaf cinquefoil	Native	Rep	Jun–Aug				X	
Rosaceae	<i>Potentilla gracilis</i> var. <i>fastigiata</i>	<i>Potentilla gracilis</i> var. <i>glabrata</i>	glabrate cinquefoil	Native	Pres	Jun–Aug	X		X		
Rosaceae	<i>Potentilla gracilis</i> var. <i>pulcherrima</i>	<i>Potentilla pulcherrima</i>	beautiful cinquefoil	Native	Hist	Jun–Aug	X		X		
Rosaceae	<i>Potentilla ovina</i> var. <i>ovina</i>	<i>Potentilla ovina</i>	sheep cinquefoil	Native	Pres	Jul–Aug			X		
Rubiaceae	<i>Galium multiflorum</i> var. <i>coloradoense</i>	<i>Galium coloradoense</i>	Colorado bedstraw	Native	Pres	May–Aug	X	X	X		
Rubiaceae	<i>Galium multiflorum</i> var. <i>multiflorum</i>	<i>Galium multiflorum</i>	shrubby bedstraw	Native	Pres	May–Aug	X	X	X	X	
Rubiaceae	<i>Galium triflorum</i>	<i>Galium triflorum</i>	sweet-scented bedstraw	Native	Pres	Jul–Aug				X	
Santalaceae	<i>Comandra umbellata</i> var. <i>pallida</i>	<i>Comandra umbellata</i>	bastard toadflax	Native	Pres	Apr–Aug	X	X	X		
Saxifragaceae	<i>Heuchera parvifolia</i>	<i>Heuchera parvifolia</i>	littleleaf alumroot	Native	Pres	May–Sep	X	X	X		
Saxifragaceae	<i>Lithophragma glabrum</i> var. <i>ramulosum</i>	<i>Lithophragma glabrum</i>	fringecup woodlandstar	Native	Pres	Mar–Aug	X	X	X	X	
Saxifragaceae	<i>Lithophragma parviflorum</i>	<i>Lithophragma parviflorum</i>	smallflower woodlandstar	Native	Pres	Apr–Aug	X		X	X	
Saxifragaceae	<i>Lithophragma tenellum</i>	<i>Lithophragma tenellum</i>	slender woodlandstar	Native	Pres	Apr–Aug	X	X	X	X	
Saxifragaceae (Parnassiaceae)	<i>Parnassia palustris</i> var. <i>montanensis</i>	<i>Parnassia palustris</i>	marsh grass-of-Parnassus	Native	Pres	May–Oct				X	
Scrophulariaceae	<i>Castilleja chromosa</i>	<i>Castilleja chromosa</i>	desert paintbrush	Native	Pres	Apr–Jun	X	X			
Scrophulariaceae	<i>Castilleja linariifolia</i>	<i>Castilleja linariifolia</i>	Wyoming paintbrush	Native	Pres	Jul–Aug	X	X	X		
Scrophulariaceae	<i>Castilleja scabrida</i> var. <i>scabrida</i>	<i>Castilleja scabrida</i>	Eastwood's paintbrush	Native	Pres	May–Jul	X	X	X		Sandstone

Appendix D. Confirmed, historical, and reported taxa of Dinosaur National Monument, organized by life form with ecological notes, cont.

Family	Utah	Species name	Common name	Nativity	Park status	Flower time	Des Shr	PJ	Mt Con	Wet	Comments
Perennial Forbs, cont.											
Scrophulariaceae	<i>Limosella aquatica</i>	<i>Limosella aquatica</i>	mudwort	Native	Pres	Jun-Aug				X	
Scrophulariaceae	<i>Linaria dalmatica</i>	<i>Linaria genistifolia</i> ssp. <i>dalmatica</i>	Dalmatian toadflax	Intro	Rep	Jul-Aug	X		X	X	Disturbed areas
Scrophulariaceae	<i>Linaria vulgaris</i>	<i>Linaria vulgaris</i>	butter-and-eggs	Intro	Pres	Jun-Aug	X		X		Disturbed areas
Scrophulariaceae	<i>Mimulus guttatus</i>	<i>Mimulus guttatus</i>	yellow monkeyflower	Native	Pres	Jun-Aug				X	
Scrophulariaceae	<i>Penstemon angustifolius</i> var. <i>vernalensis</i>	<i>Penstemon angustifolius</i> var. <i>vernalensis</i>	Vernal penstemon	Native	Hist	May-Jun	X				
Scrophulariaceae	<i>Penstemon caespitosus</i> var. <i>caespitosus</i>	<i>Penstemon caespitosus</i> var. <i>caespitosus</i>	mat penstemon	Native	Pres	May-Jul	X	X	X		
Scrophulariaceae	<i>Penstemon fremontii</i>	<i>Penstemon fremontii</i> var. <i>fremontii</i>	Fremont's penstemon	Native	Pres	May-Jun	X	X	X		
Scrophulariaceae	<i>Penstemon humilis</i> var. <i>humilis</i>	<i>Penstemon humilis</i> var. <i>humilis</i>	low penstemon	Native	Pres	May-Jun	X	X	X		
Scrophulariaceae	<i>Penstemon pachyphyllus</i> var. <i>mucronatus</i>	<i>Penstemon pachyphyllus</i> var. <i>mucronatus</i>	thick-leaf penstemon	Native	Pres	May-Jun	X	X			
Scrophulariaceae	<i>Penstemon procerus</i> var. <i>procerus</i>	<i>Penstemon confertus</i> ssp. <i>procerus</i>	small-flower penstemon	Native	Hist	Jun-Aug			X		
Scrophulariaceae	<i>Penstemon radicosus</i>	<i>Penstemon radicosus</i>	mat-root penstemon	Native	Pres	May-Jul	X	X	X		
Scrophulariaceae	<i>Penstemon scariosus</i> var. <i>cyanomontanus</i>	<i>Penstemon scariosus</i> var. <i>cyanomontanus</i>	Blue Mountain penstemon	Native	Pres	May-Jul	X	X			Lodore & Weber F.
Scrophulariaceae	<i>Penstemon strictus</i>	<i>Penstemon strictus</i>	Rocky Mountain penstemon	Native	Pres	Jun-Aug	X	X	X		
Scrophulariaceae	<i>Penstemon watsonii</i>	<i>Penstemon watsonii</i>	Watson's penstemon	Native	Pres	Jun-Aug	X	X	X		
Scrophulariaceae	<i>Scrophularia lanceolata</i>	<i>Scrophularia lanceolata</i>	lance-leaf figwort	Native	Hist	Jun-Jul	X		X		
Scrophulariaceae	<i>Verbascum thapsus</i>	<i>Verbascum thapsus</i>	woolly mullein	Intro	Rep	Jun-Aug	X	X	X		Disturbed areas
Scrophulariaceae	<i>Veronica americana</i>	<i>Veronica americana</i>	American brooklime	Native	Pres	Jul-Aug				X	

Appendix D. Confirmed, historical, and reported taxa of Dinosaur National Monument, organized by life form with ecological notes, cont.

Family	Utah	Species name	Common name	Nativity	Park status	Flower time	Des Shr	PJ	Mt Con	Wet	Comments
<i>Perennial Forbs, cont.</i>											
Scrophulariaceae	<i>Veronica anagallis-aquatica</i>	<i>Veronica anagallis-aquatica</i>	water speedwell	Intro	Pres	Jun-Aug				X	
Umbelliferae (Apiaceae)	<i>Berula erecta</i> var. <i>incisa</i>	<i>Berula erecta</i>	cutleaf water-parsnip	Native	Pres	Jun-Sep				X	
Umbelliferae (Apiaceae)	<i>Cymopterus acaulis</i> var.	<i>Cymopterus acaulis</i>	plains spring-parsley	Native	Pres	Apr-May	X	X			
Umbelliferae (Apiaceae)	<i>Cymopterus acaulis</i> var. <i>fendleri</i>	<i>Cymopterus fendleri</i>	Fendler's cymopterus	Native	Hist	Apr-May	X	X			Sandy soils
Umbelliferae (Apiaceae)	<i>Cymopterus bulbosus</i>	<i>Cymopterus bulbosus</i>	onion spring-parsley	Native	Hist	Apr-May	X	X			
Umbelliferae (Apiaceae)	<i>Cymopterus constancei</i>	<i>Cymopterus constancei</i>	Constance's spring-parsley	Native	Pres	Apr-May					
Umbelliferae (Apiaceae)	<i>Cymopterus duchesnensis</i>	<i>Cymopterus duchesnensis</i>	Duchesne spring-parsley	Native	Pres	Apr-May	X	X			Morrison F.
Umbelliferae (Apiaceae)	<i>Cymopterus purpureus</i> var. <i>purpureus</i>	<i>Cymopterus purpureus</i>	Colorado Plateau spring-parsley	Native	Pres	Apr-Jun	X	X	X		Sandy to heavy clay soils
Umbelliferae (Apiaceae)	<i>Cymopterus terebinthinus</i> var. <i>albiflorus</i>	<i>Cymopterus terebinthinus</i> var. <i>calcareus</i>	aromatic spring-parsley	Native	Pres	Apr-Jun	X	X	X		
Umbelliferae (Apiaceae)	<i>Cymopterus terebinthinus</i> var. <i>petraeus</i>	<i>Aletes petraeus</i>	rock spring-parsley	Native	Pres	Apr-May	X	X			Sandy to clayey soils
Umbelliferae (Apiaceae)	<i>Ligusticum porteri</i>	<i>Ligusticum porteri</i>	southern ligusticum	Native	Rep	Jun-Aug	X		X		
Umbelliferae (Apiaceae)	<i>Lomatium dissectum</i> var. <i>eatonii</i>	<i>Lomatium dissectum</i>	giant lomatium	Native	Pres	Apr-Jun	X	X	X	X	
Umbelliferae (Apiaceae)	<i>Lomatium grayi</i> var.	<i>Lomatium grayi</i>	milfoil lomatium	Native	Pres	Apr-May	X	X	X		
Umbelliferae (Apiaceae)	<i>Lomatium juniperinum</i>	<i>Lomatium juniperinum</i>	juniper lomatium	Native	Pres	May-Jul	X	X	X		
Umbelliferae (Apiaceae)	<i>Lomatium macrocarpum</i>	<i>Lomatium macrocarpum</i>	big-seed lomatium	Native	Rep	Apr-May	X	X			
Umbelliferae (Apiaceae)	<i>Lomatium triternatum</i> ssp. <i>platycarpum</i>	<i>Lomatium triternatum</i> var. <i>platycarpum</i>	flat-seed lomatium	Native	Pres	May-Jul	X	X	X		

Appendix D. Confirmed, historical, and reported taxa of Dinosaur National Monument, organized by life form with ecological notes, cont.

Family	Utah	Species name	Common name	Nativity	Park status	Flower time	Des Shr	PJ	Mt Con	Wet	Comments
<i>Perennial Forbs, cont.</i>											
Umbelliferae (Apiaceae)	<i>Orogenia linearifolia</i>	<i>Orogenia linearifolia</i>	Indian-potato	Native	Pres	Mar–May	X		X		
Umbelliferae (Apiaceae)	<i>Osmorhiza chilensis</i>	<i>Osmorhiza chilensis</i>	Chilean sweet-cicely	Native	Pres	May–Jul			X	X	
Umbelliferae (Apiaceae)	<i>Osmorhiza depauperata</i>	<i>Osmorhiza depauperata</i>	blunt sweet-cicely	Native	Pres	Jun–Jul			X	X	
Urticaceae	<i>Urtica dioica</i> var. <i>occidentalis</i>	<i>Urtica gracilis</i> ssp. <i>holosericea</i>	stinging nettle	Native	Pres	Jul–Aug	X		X	X	
Verbenaceae	<i>Verbena bracteata</i>	<i>Verbena bracteata</i>	prostrate vervain	Native	Hist	May–Sep	X	X	X		
Violaceae	<i>Viola adunca</i>	<i>Viola adunca</i>	hook-spur violet	Native	Pres	Mar–Aug			X		
Violaceae	<i>Viola nephrophylla</i>	<i>Viola sororia</i>	northern bog violet	Native	Pres	Apr–Jul				X	
Violaceae	<i>Viola nuttallii</i> var. <i>major</i>	<i>Viola praemorsa</i> ssp. <i>major</i>	upland yellow violet	Native	Hist	Apr–Aug	X		X		
Violaceae	<i>Viola nuttallii</i> var. <i>vallicola</i>	<i>Viola vallicola</i>	valley violet	Native	Pres	Mar–Jul	X		X		
Violaceae	<i>Viola purpurea</i> var. <i>venosa</i>	<i>Viola purpurea</i> ssp. <i>venosa</i>	goose-foot violet	Native	Hist	Mar–Aug	X	X	X		
Viscaceae	<i>Arceuthobium divaricatum</i>	<i>Arceuthobium divaricatum</i>	pinyon dwarf-mistletoe	Native	Hist	Aug–Sep		X			
Zannichelliaceae	<i>Zannichellia palustris</i>	<i>Zannichellia palustris</i>	horned pondweed	Native	Hist	Mar–Nov				X	
Annual Forbs											
Amaranthaceae	<i>Amaranthus blitoides</i>	<i>Amaranthus blitoides</i>	prostrate pigweed	Native	Pres	Jun–Sep					Disturbed areas
Boraginaceae	<i>Cryptantha ambigua</i>	<i>Cryptantha ambigua</i>	obscure cryptanth	Native	Hist	May–Jul	X	X	X		
Boraginaceae	<i>Cryptantha crassisejala</i> var. <i>elachantha</i>	<i>Cryptantha crassisejala</i> var. <i>elachantha</i>	thick-sepaled cryptanth	Native	Pres	Apr–Jun	X	X			
Boraginaceae	<i>Cryptantha fendleri</i>	<i>Cryptantha fendleri</i>	sand dune cryptanth	Native	Hist	May–Jul	X	X	X		

Appendix D. Confirmed, historical, and reported taxa of Dinosaur National Monument, organized by life form with ecological notes, cont.

Family	Utah	Species name	Common name	Nativity	Park status	Flower time	Des Shr	PJ	Mt Con	Wet	Comments
<i>Annual Forbs, cont.</i>											
Boraginaceae	<i>Cryptantha gracilis</i>	<i>Cryptantha gracilis</i>	slender cryptanth	Native	Pres	Apr-Jul	X	X	X		
Boraginaceae	<i>Cryptantha kelseyana</i>	<i>Cryptantha kelseyana</i>	Kelsey's cryptanth	Native	Pres	Jun-Jul	X	X	X		
Boraginaceae	<i>Cryptantha pterocarya</i> var. <i>pterocarya</i>	<i>Cryptantha pterocarya</i>	wing-nut cryptanth	Native	Hist	Apr-Jul	X	X			
Boraginaceae	<i>Cryptantha recurvata</i>	<i>Cryptantha recurvata</i>	recurved cryptanth	Native	Hist	Apr-Jun	X	X			
Boraginaceae	<i>Lappula occidentalis</i> var. <i>cupulata</i>	<i>Lappula marginata</i>	cupseed stickseed	Native	Pres	Apr-Jun	X	X	X		Disturbed areas
Boraginaceae	<i>Lappula occidentalis</i> var. <i>occidentalis</i>	<i>Lappula redowskii</i>	western stickseed	Native	Pres	Apr-Jun	X	X	X		Disturbed areas
Boraginaceae	<i>Plagiobothrys scouleri</i> var. <i>penicillatus</i>	<i>Plagiobothrys scouleri</i> ssp. <i>penicillatus</i>	meadow popcorn-flower	Native	Pres	May-Aug	X	X	X	X	
Capparaceae (Cleomaceae)	<i>Cleome lutea</i>	<i>Cleome lutea</i>	yellow beeplant	Native	Pres	Apr-Sep	X	X	X		
Capparaceae (Cleomaceae)	<i>Cleome serrulata</i>	<i>Cleome serrulata</i>	Rocky Mountain beeplant	Native	Pres	May-Oct				X	Disturbed areas
Capparaceae (Cleomaceae)	<i>Cleomella palmeriana</i> var. <i>goodrichii</i>		Goodrich's stinkweed	Native	Rep	Apr-Jun	X				Morrison F
Caryophyllaceae (Alsinaeae)	<i>Holosteum umbellatum</i>	<i>Holosteum umbellatum</i>	holosteum	Intro	Rep	Feb-May	X		X		
Caryophyllaceae (Alsinaeae)	<i>Spergularia marina</i>	<i>Spergularia marina</i>	salt sand-spurrey	Intro	Pres	Jun-Sep				X	
Chenopodiaceae	<i>Atriplex argentea</i> var. <i>argentea</i>	<i>Atriplex argentea</i>	silver orach	Native	Hist	Jun-Sep	X				
Chenopodiaceae	<i>Atriplex saccaria</i> var. <i>saccaria</i>	<i>Atriplex saccaria</i>	stalked orach	Native	Hist	Aug-Sep	X	X			Mancos & Morrison F
Chenopodiaceae	<i>Atriplex truncata</i>	<i>Atriplex truncata</i>	wedge orach	Native	Rep	Jun-Sep	X			X	
Chenopodiaceae	<i>Atriplex wolfii</i> var. <i>tenuissima</i>	<i>Atriplex wolfii</i>	slender orach	Native	Hist	Jun-Sep	X				
Chenopodiaceae	<i>Bassia hyssopifolia</i>	<i>Bassia hyssopifolia</i>	five-horn smotherweed	Intro	Hist	Aug-Oct	X			X	Saline soils
Chenopodiaceae	<i>Bassia scoparia</i>	<i>Bassia sieversiana</i>	summer-cypress	Intro	Hist	Aug-Oct	X	X	X	X	Disturbed areas

Appendix D. Confirmed, historical, and reported taxa of Dinosaur National Monument, organized by life form with ecological notes, cont.

Family	Species name		Common name	Nativity	Park status	Flower time	Des Shr	PJ	Mt Con	Wet	Comments
	Utah	Colorado									
<i>Annual Forbs, cont.</i>											
Chenopodiaceae	<i>Chenopodium album</i> var. <i>berlandieri</i>	<i>Chenopodium berlandieri</i>	pitseed goosefoot	Native	Pres	Jul-Sep	X	X			Disturbed areas
Chenopodiaceae	<i>Chenopodium atrovirens</i>	<i>Chenopodium atrovirens</i>	mountain goosefoot	Native	Pres	Jul-Sep	X	X	X		
Chenopodiaceae	<i>Chenopodium capitatum</i> var. <i>parvicapitatum</i>	<i>Chenopodium foliosum</i>	smallhead goosefoot	Native	Pres	Jun-Sep			X		
Chenopodiaceae	<i>Chenopodium fremontii</i> var. <i>fremontii</i>	<i>Chenopodium fremontii</i>	Fremont's goosefoot	Native	Pres	Aug-Oct	X	X	X		
Chenopodiaceae	<i>Chenopodium fremontii</i> var. <i>incanum</i>	<i>Chenopodium incanum</i>	silvery goosefoot	Native	Pres	Jun-Aug	X	X	X		
Chenopodiaceae	<i>Chenopodium glaucum</i> var. <i>salinum</i>	<i>Chenopodium glaucum</i>	oakleaf goosefoot	Native	Pres	Aug-Sep				X	
Chenopodiaceae	<i>Chenopodium leptophyllum</i>	<i>Chenopodium leptophyllum</i>	narrow-leaf goosefoot	Native	Pres	Jul-Sep	X		X	X	
Chenopodiaceae	<i>Chenopodium simplex</i>	<i>Chenopodium simplex</i>	maple-leaf goosefoot	Native	Pres	Jul-Oct	X	X	X	X	
Chenopodiaceae	<i>Corispermum americanum</i>	<i>Corispermum americanum</i>	American bugseed	Native	Hist	Aug-Oct	X	X			Sandy soils
Chenopodiaceae	<i>Halogeton glomeratus</i>	<i>Halogeton glomeratus</i>	halogeton	Intro	Pres	Jul-Aug	X	X			Disturbed areas
Chenopodiaceae	<i>Monolepis nuttalliana</i>	<i>Monolepis nuttalliana</i>	Nuttall's poverty-weed	Native	Pres	Apr-Jul	X	X	X		
Chenopodiaceae	<i>Monolepis pusilla</i>	<i>Monolepis pusilla</i>	tiny poverty-weed	Native	Hist	Jun-Aug	X				
Chenopodiaceae	<i>Salsola tragus</i>	<i>Salsola australis</i>	Russian thistle	Intro	Pres	Jun-Sep					Disturbed areas
Chenopodiaceae	<i>Suaeda occidentalis</i>		western seepweed	Native	Pres	Jun-Sep				X	
Chenopodiaceae	<i>Suaeda torreyana</i> var. <i>torreyana</i>	<i>Suaeda moquini</i>	Torrey's seepweed	Native	Hist	Jun-Sep				X	
Compositae (Asteraceae)	<i>Ambrosia acanthicarpa</i>	<i>Ambrosia acanthicarpa</i>	bur ragweed	Native	Pres	Jul-Oct	X	X	X	X	Sandy soils
Compositae (Asteraceae)	<i>Aster brachyactis</i>	<i>Brachyactis ciliata</i> ssp. <i>angusta</i>	rayless alkali aster	Native	Rep	Aug-Sep				X	

Appendix D. Confirmed, historical, and reported taxa of Dinosaur National Monument, organized by life form with ecological notes, cont.

Family	Species name		Common name	Nativity	Park status	Flower time	Des Shr	PJ	Mt Con	Wet	Comments
	Utah	Colorado									
<i>Annual Forbs, cont.</i>											
Compositae (Asteraceae)	<i>Chaenactis stevioides</i>	<i>Chaenactis stevioides</i>	stevia dusty- maiden	Native	Pres	Apr–Jul	X	X			
Compositae (Asteraceae)	<i>Conyza canadensis</i> var. <i>glabrata</i>	<i>Conyza canadensis</i>	Canadian horseweed	Native	Pres	Jul–Sep			X		
Compositae (Asteraceae)	<i>Gnaphalium exilifolium</i>	<i>Gnaphalium uliginosum</i>	slender cudweed	Native	Pres	Jul–Oct			X		
Compositae (Asteraceae)	<i>Gnaphalium palustre</i>	<i>Gnaphalium palustre</i>	lowland cudweed	Native	Pres	May–Oct		X			
Compositae (Asteraceae)	<i>Gnaphalium stramineum</i>	<i>Pseudognaphalium stramineum</i>	cottonbatting cudweed	Native	Hist	Jun–Oct			X		
Compositae (Asteraceae)	<i>Helianthus annuus</i> ssp. <i>lenticularis</i>	<i>Helianthus annuus</i>	common sunflower	Native	Pres	Jun–Sep	X	X	X		Disturbed areas
Compositae (Asteraceae)	<i>Helianthus petiolaris</i> ssp. <i>fallax</i>	<i>Helianthus petiolaris</i>	prairie sunflower	Native	Pres	Jun–Sep	X	X	X		
Compositae (Asteraceae)	<i>Lactuca serriola</i>	<i>Lactuca serriola</i>	prickly lettuce	Intro	Pres	Jul–Sep	X	X			Disturbed areas
Compositae (Asteraceae)	<i>Malacothrix sonchoides</i>	<i>Malacothrix sonchoides</i>	sowthistle desert- dandelion	Native	Hist	Apr–Jun	X	X			
Compositae (Asteraceae)	<i>Malacothrix torreyi</i>	<i>Malacothrix torreyi</i>	Torrey's desert- dandelion	Native	Hist	Apr–Jul	X				
Compositae (Asteraceae)	<i>Stephanomeria exigua</i>	<i>Stephanomeria exigua</i>	white-plume wire-lettuce	Native	Hist	May–Sep	X	X			
Compositae (Asteraceae)	<i>Xanthium strumarium</i> var. <i>canadense</i>	<i>Xanthium strumarium</i>	rough cocklebur	Native	Pres	Apr–Oct			X		
Cruciferae (Brassicaceae)	<i>Alyssum desertorum</i>	<i>Alyssum desertorum</i>	desert madwort	Intro	Pres	Apr–Jul	X	X	X		
Cruciferae (Brassicaceae)	<i>Camelina microcarpa</i>	<i>Camelina microcarpa</i>	little-pod false flax	Intro	Pres	Apr–Jul					Disturbed areas
Cruciferae (Brassicaceae)	<i>Capsella bursa-pastoris</i>	<i>Capsella bursa-pastoris</i>	shepherd's- purse	Intro	Hist	Apr–Sep					Disturbed areas
Cruciferae (Brassicaceae)	<i>Chorispora tenella</i>	<i>Chorispora tenella</i>	blue mustard	Intro	Pres	Apr–Jun					Disturbed areas
Cruciferae (Brassicaceae)	<i>Descurainia incana</i> var. <i>sonnei</i>	<i>Descurainia incisa</i> ssp. <i>incisa</i>	mountain tansy-mustard	Native	Pres	Apr–Jul	X		X		

Appendix D. Confirmed, historical, and reported taxa of Dinosaur National Monument, organized by life form with ecological notes, cont.

Family	Species name		Common name	Nativity	Park status	Flower time	Des Shr	PJ	Mt Con	Wet	Comments
	Utah	Colorado									
<i>Annual Forbs, cont.</i>											
Cruciferae (Brassicaceae)	<i>Descurainia pinnata</i> var. <i>intermedia</i>	<i>Descurainia pinnata</i> ssp. <i>intermedia</i>	western tansy-mustard	Native	Hist	Mar–Aug	X	X	X		
Cruciferae (Brassicaceae)	<i>Descurainia pinnata</i> var. <i>osmiarium</i>	<i>Descurainia pinnata</i> ssp. <i>halictorum</i>	western tansy-mustard	Native	Pres	Mar–Aug	X	X	X		
Cruciferae (Brassicaceae)	<i>Descurainia sophia</i>	<i>Descurainia sophia</i>	flixweed	Intro	Pres	Mar–Aug	X	X			Disturbed areas
Cruciferae (Brassicaceae)	<i>Draba nemorosa</i>	<i>Draba nemorosa</i>	woods draba	Intro	Pres	Apr–Jun	X	X	X		
Cruciferae (Brassicaceae)	<i>Draba reptans</i>	<i>Draba reptans</i>	dwarf draba	Native	Pres	Apr–Jul	X	X	X		
Cruciferae (Brassicaceae)	<i>Hutchinsia procumbens</i>	<i>Hymenolobus procumbens</i>	ovalpurse	Native	Hist	Apr–Jun				X	
Cruciferae (Brassicaceae)	<i>Lepidium densiflorum</i> var. <i>ramosum</i>	<i>Lepidium densiflorum</i> var. <i>ramosum</i>	prairie pepperwort	Native	Hist	May–Jul	X	X	X		
Cruciferae (Brassicaceae)	<i>Lepidium lasiocarpum</i> var. <i>georginum</i>	<i>Lepidium lasiocarpum</i> var. <i>georginum</i>	St. George pepperwort	Native	Hist	Mar–Jun	X	X			
Cruciferae (Brassicaceae)	<i>Lepidium perfoliatum</i>	<i>Lepidium perfoliatum</i>	clasping pepperwort	Intro	Pres	May–Jul	X	X			Disturbed areas
Cruciferae (Brassicaceae)	<i>Malcolmia africana</i>	<i>Malcolmia africana</i>	African mustard	Intro	Pres	Apr–Jul					Disturbed areas
Cruciferae (Brassicaceae)	<i>Sisymbrium altissimum</i>	<i>Sisymbrium altissimum</i>	tumble mustard	Intro	Pres	May–Aug					Disturbed areas
Cruciferae (Brassicaceae)	<i>Streptanthella longirostris</i>	<i>Streptanthella longirostris</i>	long-beak fiddle-mustard	Native	Pres	Mar–Jun	X	X			Sandy or clayey soils
Euphorbiaceae	<i>Chamaesyce glyptosperma</i>	<i>Chamaesyce glyptosperma</i>	ridge-seeded spurge	Native	Pres	Jun–Aug	X	X	X		
Euphorbiaceae	<i>Chamaesyce serpyllifolia</i>	<i>Chamaesyce serpyllifolia</i>	thyme-leaved spurge	Native	Pres	May–Sep	X	X	X		
Hydrophyllaceae	<i>Nama densum</i> var. <i>parviflorum</i>	<i>Nama densum</i>	leafy fiddleleaf	Native	Hist	May–Aug	X	X			
Hydrophyllaceae	<i>Phacelia crenulata</i> var. <i>corrugata</i>	<i>Phacelia crenulata</i>	corrugate phacelia	Native	Pres	May–Jun	X	X	X		
Hydrophyllaceae	<i>Phacelia demissa</i> var. <i>minor</i>	<i>Phacelia demissa</i> var. <i>minor</i>	brittle phacelia	Native	Pres	May–Jun	X	X			Morrison, Duchesne River, Mancos F.

Appendix D. Confirmed, historical, and reported taxa of Dinosaur National Monument, organized by life form with ecological notes, cont.

Family	Species name		Common name	Nativity	Park status	Flower time	Des Shr	PJ	Mt Con	Wet	Comments
	Utah	Colorado									
<i>Annual Forbs, cont.</i>											
Hydrophyllaceae	<i>Phacelia ivesiana</i>	<i>Phacelia ivesiana</i>	Ives' phacelia	Native	Pres	Apr–Jun	X	X	X		
Leguminosae (Fabaceae)	<i>Astragalus geyeri</i>	<i>Astragalus geyeri</i>	Geyer's milkvetch	Native	Hist	Apr–Jul	X				
Leguminosae (Fabaceae)	<i>Lupinus pusillus</i> var. <i>intermontanus</i>	<i>Lupinus pusillus</i> var. <i>intermontanus</i>	Great Basin lupine	Native	Pres	Apr–Jul	X	X			
Leguminosae (Fabaceae)	<i>Lupinus pusillus</i> var. <i>pusillus</i>	<i>Lupinus pusillus</i> var. <i>pusillus</i>	dwarf lupine	Native	Hist	Apr–Jul	X	X	X		Sandy soils
Leguminosae (Fabaceae)	<i>Medicago lupulina</i>	<i>Medicago lupulina</i>	black medick	Intro	Pres	May–Oct			X		
Leguminosae (Fabaceae)	<i>Melilotus alba</i>	<i>Melilotus albus</i>	white sweet-clover	Intro	Pres	May–Oct			X		Disturbed areas
Loasaceae	<i>Mentzelia albicaulis</i>	<i>Acroclasia albicaulis</i>	white-stem blazingstar	Native	Pres	Apr–Aug	X	X	X		
Loasaceae	<i>Mentzelia thompsonii</i>	<i>Acroclasia humilis</i>	Thompson's stickleaf	Native	Hist	Apr–Jun	X				Mancos Shale
Nyctaginaceae	<i>Tripterocalyx micranthus</i>	<i>Tripterocalyx micranthus</i>	small-flower sandpuffs	Native	Pres	Apr–Sep	X				
Onagraceae	<i>Camissonia minor</i>	<i>Camissonia minor</i>	lesser camissonia	Native	Hist	May–Jun	X				
Onagraceae	<i>Camissonia parvula</i>	<i>Camissonia parvula</i>	tiny camissonia	Native	Hist	May–Jun	X	X			
Onagraceae	<i>Camissonia scapoidea</i> var. <i>scapoidea</i>	<i>Camissonia scapoidea</i>	Paiute suncup	Native	Pres	May–Jun	X	X			
Onagraceae	<i>Camissonia walkeri</i>	<i>Camissonia walkeri</i>	Walker's camissonia	Native	Hist	Apr–Jun	X	X			
Onagraceae	<i>Epilobium brachycarpum</i>	<i>Epilobium brachycarpum</i>	autumn willow-herb	Native	Pres	Jul–Sep	X	X	X		
Onagraceae	<i>Gayophytum decipiens</i>	<i>Gayophytum decipiens</i>	deceptive groundsmoke	Native	Pres	Jun–Aug	X	X	X		
Onagraceae	<i>Gayophytum ramosissimum</i>	<i>Gayophytum ramosissimum</i>	branching groundsmoke	Native	Hist	May–Aug	X	X	X		
Onagraceae	<i>Oenothera albicaulis</i>	<i>Oenothera albicaulis</i>	white-stem evening-primrose	Native	Hist	Mar–Jun	X	X			
Plantaginaceae	<i>Plantago patagonica</i>	<i>Plantago patagonica</i>	woolly plantain	Native	Pres	Mar–Aug	X	X	X		

Appendix D. Confirmed, historical, and reported taxa of Dinosaur National Monument, organized by life form with ecological notes, cont.

Family	Utah	Species name	Common name	Nativity	Park status	Flower time	Des Shr	PJ	Mt Con	Wet	Comments
<i>Annual Forbs, cont.</i>											
Polemoniaceae	<i>Collomia linearis</i>	<i>Collomia linearis</i>	small collomia	Native	Pres	May–Aug	X		X		
Polemoniaceae	<i>Gilia inconspicua</i>	<i>Gilia sinuata</i>	shy gilia	Native	Pres	Apr–Jul	X	X	X		
Polemoniaceae	<i>Gymnosteris parvula</i>	<i>Gymnosteris parvula</i>	gymnosteris	Native	Hist	May–Aug	X		X		
Polemoniaceae	<i>Ipomopsis polycladon</i>	<i>Ipomopsis polycladon</i>	spreading gilia	Native	Pres	Apr–Jun	X	X			
Polemoniaceae	<i>Ipomopsis pumila</i>	<i>Ipomopsis pumila</i>	dwarf gilia	Native	Pres	Apr–Jun	X	X			
Polemoniaceae	<i>Microsteris gracilis</i> var. <i>humilior</i>	<i>Microsteris gracilis</i>	slender phlox	Native	Pres	Mar–Jun	X	X	X		
Polemoniaceae	<i>Navarretia breweri</i>	<i>Navarretia breweri</i>	yellow navarretia	Native	Hist	May–Jul		X	X		
Polygonaceae	<i>Eriogonum cernuum</i> var. <i>cernuum</i>	<i>Eriogonum cernuum</i>	nodding wild buckwheat	Native	Pres	Apr–Oct	X	X	X		
Polygonaceae	<i>Eriogonum flexum</i>	<i>Stenogonum flexum</i>	bent wild buckwheat	Native	Hist	Apr–Sep	X	X			
Polygonaceae	<i>Eriogonum gordonii</i>	<i>Eriogonum gordonii</i>	Gordon's wild buckwheat	Native	Pres	May–Oct	X	X			
Polygonaceae	<i>Eriogonum hookeri</i>	<i>Eriogonum hookeri</i>	Hooker's wild buckwheat	Native	Hist	Jun–Oct	X	X	X		
Polygonaceae	<i>Eriogonum inflatum</i> var. <i>fusifforme</i>	<i>Eriogonum inflatum</i> var. <i>fusifforme</i>	Grand Valley desert trumpet	Native	Pres	Apr–Jul	X				Clay soils
Polygonaceae	<i>Eriogonum salsuginosum</i>	<i>Stenogonum salsuginosum</i>	smooth wild buckwheat	Native	Hist	Apr–Sep	X	X			
Polygonaceae	<i>Polygonum aviculare</i>	<i>Polygonum arenastrum</i>	yard knotweed	Intro	Pres	May–Oct					Disturbed areas
Polygonaceae	<i>Polygonum douglasii</i> var. <i>douglasii</i>	<i>Polygonum douglasii</i>	Douglas' knotweed	Native	Pres	Jun–Oct	X	X	X		
Polygonaceae	<i>Polygonum douglasii</i> var. <i>johnstonii</i>	<i>Polygonum douglasii</i> var. <i>johnstonii</i>	Sawatch knotweed	Native	Pres	Jun–Aug	X	X	X		
Polygonaceae	<i>Polygonum kelloggii</i>	<i>Polygonum kelloggii</i>	Kellogg's knotweed	Native	Rep	Jun–Sep	X		X		
Polygonaceae	<i>Polygonum lapathifolium</i>	<i>Persicaria lapathifolia</i>	willow-weed	Intro	Pres	Jul–Nov				X	
Polygonaceae	<i>Rumex maritimus</i> var. <i>fueginus</i>	<i>Rumex maritimus</i> var. <i>fueginus</i>	golden dock	Native	Hist	May–Sep				X	

Appendix D. Confirmed, historical, and reported taxa of Dinosaur National Monument, organized by life form with ecological notes, cont.

Family	Utah	Species name	Common name	Nativity	Park status	Flower time	Des Shr	PJ	Mt Con	Wet	Comments
<i>Annual Forbs, cont.</i>											
Portulacaceae	<i>Montia perfoliata</i> var. <i>perfoliata</i>	<i>Claytonia rubra</i>	miner's lettuce	Native	Pres	Apr–Jun	X	X	X	X	
Portulacaceae	<i>Portulaca oleracea</i>	<i>Portulaca oleracea</i>	common purslane	Intro	Hist	Jun–Sep					Disturbed areas
Primulaceae	<i>Androsace filiformis</i>	<i>Androsace filiformis</i>	slender-stem rock-jasmine	Native	Pres	Jun–Aug		X	X		
Primulaceae	<i>Androsace occidentalis</i>	<i>Androsace occidentalis</i>	western rock-jasmine	Native	Pres	Apr–Jun		X	X		
Primulaceae	<i>Androsace septentrionalis</i>	<i>Androsace septentrionalis</i>	pygmy-flower rock-jasmine	Native	Pres	May–Aug	X	X	X		
Ranunculaceae	<i>Ranunculus sceleratus</i> var. <i>multifidus</i>	<i>Hecatonia scelerata</i>	blister buttercup	Native	Pres	May–Sep				X	
Ranunculaceae	<i>Ranunculus testiculatus</i>	<i>Ceratocophala orthoceras</i>	bur buttercup	Intro	Pres	Mar–Jun	X	X			Disturbed areas
Rosaceae	<i>Potentilla biennis</i>	<i>Potentilla biennis</i>	biennial cinquefoil	Native	Pres	May–Aug				X	
Rubiaceae	<i>Galium aparine</i> var. <i>echinospermum</i>	<i>Galium spurium</i>	cleavers	Native	Pres	Apr–Jun	X	X	X	X	
Rubiaceae	<i>Galium bifolium</i>	<i>Galium bifolium</i>	twin-leaf bedstraw	Native	Pres	May–Aug	X		X		
Scrophulariaceae	<i>Castilleja exilis</i>	<i>Castilleja minor</i>	annual paintbrush	Native	Pres	Jun–Aug				X	
Scrophulariaceae	<i>Collinsia parviflora</i>	<i>Collinsia parviflora</i>	blue-eyed Mary	Native	Pres	Apr–Jun	X	X	X		
Scrophulariaceae	<i>Cordylanthus ramosus</i>	<i>Cordylanthus ramosus</i>	bushy bird's-beak	Native	Pres	Jun–Aug	X	X	X		
Scrophulariaceae	<i>Mimulus floribundus</i>	<i>Mimulus floribundus</i>	seep monkeyflower	Native	Rep	May–Jul				X	
Scrophulariaceae	<i>Mimulus rubellus</i>	<i>Mimulus rubellus</i>	reddish monkeyflower	Native	Pres	Apr–Jun	X	X	X		
Scrophulariaceae	<i>Mimulus suksdorfii</i>	<i>Mimulus suksdorfii</i>	Suksdorf's monkeyflower	Native	Hist	May–Jun	X	X	X		
Scrophulariaceae	<i>Orthocarpus luteus</i>	<i>Orthocarpus luteus</i>	yellow owl-clover	Native	Pres	Jul–Aug	X		X	X	
Scrophulariaceae	<i>Veronica peregrina</i> var. <i>xalapensis</i>	<i>Veronica peregrina</i> var. <i>xalapensis</i>	purslane speedwell	Native	Hist	Jun–Aug				X	

Appendix D. Confirmed, historical, and reported taxa of Dinosaur National Monument, organized by life form with ecological notes, cont.

Family	Utah	Species name	Common name	Nativity	Park status	Flower time	Des Shr	PJ	Mt Con	Wet	Comments
<i>Annual Forbs, cont.</i>											
Solanaceae	<i>Hyoscyamus niger</i>	<i>Hyoscyamus niger</i>	black henbane	Intro	Rep	Jun-Aug	X		X		Disturbed areas
Solanaceae	<i>Nicotiana attenuata</i>	<i>Nicotiana attenuata</i>	coyote tobacco	Native	Pres	Jun-Sep	X	X			Disturbed areas
Solanaceae	<i>Solanum triflorum</i>	<i>Solanum triflorum</i>	cut-leaf nightshade	Native	Pres	May-Sep	X	X	X		
Perennial Graminoids											
Cyperaceae	<i>Carex aquatilis</i>	<i>Carex aquatilis</i>	water sedge	Native	Rep	Jun-Aug				X	
Cyperaceae	<i>Carex athrostachya</i>	<i>Carex athrostachya</i>	slender-beaked sedge	Native	Hist	May-Aug			X	X	
Cyperaceae	<i>Carex aurea</i>	<i>Carex aurea</i>	golden sedge	Native	Pres	Apr-Aug				X	
Cyperaceae	<i>Carex curatorum</i>	<i>Carex curatorum</i>	Canyonlands sedge	Native	Pres	May-Aug				X	
Cyperaceae	<i>Carex duriuscula</i>	<i>Carex stenophylla</i> ssp. <i>eleocharis</i>	narrowleaf sedge	Native	Pres	Jun-Jul	X	X	X		
Cyperaceae	<i>Carex geyeri</i>	<i>Carex geyeri</i>	elk sedge	Native	Pres	Apr-Jul			X		
Cyperaceae	<i>Carex hoodii</i>	<i>Carex hoodii</i>	Hood's sedge	Native	Pres	May-Jul	X		X		
Cyperaceae	<i>Carex hystericina</i>	<i>Carex hystericina</i>	bottlebrush sedge	Native	Pres	May-Jun				X	
Cyperaceae	<i>Carex illota</i>	<i>Carex illota</i>	sheep sedge	Native	Pres	Jun-Aug				X	
Cyperaceae	<i>Carex microptera</i>	<i>Carex microptera</i>	small-wing sedge	Native	Pres	Jun-Aug				X	
Cyperaceae	<i>Carex nebrascensis</i>	<i>Carex nebrascensis</i>	Nebraska sedge	Native	Pres	May-Jul				X	
Cyperaceae	<i>Carex occidentalis</i>	<i>Carex occidentalis</i>	western sedge	Native	Pres	Jun-Aug			X		
Cyperaceae	<i>Carex parryana</i>	<i>Carex parryana</i>	Parry's sedge	Native	Pres	May-Jul				X	
Cyperaceae	<i>Carex pellita</i>	<i>Carex lanuginosa</i>	woolly sedge	Native	Pres	May-Sep				X	
Cyperaceae	<i>Carex praegracilis</i>	<i>Carex praegracilis</i>	black Creeper sedge	Native	Pres	May-Aug				X	
Cyperaceae	<i>Carex rossii</i>	<i>Carex rossii</i>	Ross' sedge	Native	Pres	May-Aug	X	X	X		
Cyperaceae	<i>Carex tahoensis</i>	<i>Carex xerantica</i>	dryland sedge	Native	Pres	Jul-Aug			X		
Cyperaceae	<i>Carex vallicola</i>	<i>Carex vallicola</i>	valley sedge	Native	Pres	May-Jul	X		X		
Cyperaceae	<i>Eleocharis palustris</i>	<i>Eleocharis macrostachya</i>	common spikerush	Native	Pres	May-Aug				X	

Appendix D. Confirmed, historical, and reported taxa of Dinosaur National Monument, organized by life form with ecological notes, cont.

Family	Utah	Species name	Common name	Nativity	Park status	Flower time	Des Shr	PJ	Mt Con	Wet	Comments
<i>Perennial Graminoids, cont.</i>											
Cyperaceae	<i>Eleocharis quinqueflora</i>	<i>Eleocharis quinqueflora</i>	few-flower spikerush	Native	Pres	Jun-Aug				X	
Cyperaceae	<i>Scirpus acutus</i>	<i>Schoenoplectus lacustris</i> ssp. <i>acutus</i>	hardstem bulrush	Native	Pres	Jun-Aug				X	
Cyperaceae	<i>Scirpus maritimus</i>	<i>Bolboschoenus maritimus</i> ssp. <i>paludosus</i>	alkali bulrush	Native	Pres	Jun-Sep				X	
Cyperaceae	<i>Scirpus pallidus</i>	<i>Scirpus pallidus</i>	pale bulrush	Native	Pres	Jun-Aug				X	
Cyperaceae	<i>Scirpus pungens</i> var. <i>longispicatus</i>	<i>Schoenoplectus pungens</i>	three-square bulrush	Native	Pres	May-Aug				X	
Cyperaceae	<i>Scirpus validus</i>	<i>Schoenoplectus lacustris</i> ssp. <i>validus</i>	soft-stem bulrush	Native	Pres	Jun-Aug				X	
Gramineae (Poaceae)	<i>Agropyron cristatum</i>	<i>Agropyron cristatum</i> ssp. <i>cristatum</i>	crested wheatgrass	Intro	Pres	Jun-Aug	X	X	X		
Gramineae (Poaceae)	<i>Agrostis exarata</i>	<i>Agrostis exarata</i>	spike bentgrass	Native	Hist	Jul-Aug				X	
Gramineae (Poaceae)	<i>Agrostis scabra</i>	<i>Agrostis scabra</i>	ticklegrass	Native	Rep	Jul-Aug			X	X	
Gramineae (Poaceae)	<i>Agrostis stolonifera</i>	<i>Agrostis stolonifera</i>	redtop	Intro	Pres	Jun-Sep				X	
Gramineae (Poaceae)	<i>Agrostis variabilis</i>	<i>Agrostis variabilis</i>	mountain bentgrass		Rep	Jul-Aug			X		
Gramineae (Poaceae)	<i>Alopecurus aequalis</i>	<i>Alopecurus aequalis</i>	shortawn foxtail	Native	Pres	Jun-Aug				X	
Gramineae (Poaceae)	<i>Alopecurus pratensis</i>	<i>Alopecurus pratensis</i>	meadow foxtail	Intro	Pres	Jun-Jul			X	X	
Gramineae (Poaceae)	<i>Andropogon gerardii</i> var. <i>gerardii</i>	<i>Andropogon gerardii</i>	big bluestem	Native	Pres	Jul-Sep	X	X	X		
Gramineae (Poaceae)	<i>Aristida purpurea</i>	<i>Aristida purpurea</i> var. <i>longiseta</i>	purple three-awn	Native	Pres	Mar-Sep	X	X	X		
Gramineae (Poaceae)	<i>Bouteloua gracilis</i>	<i>Chondrosium gracile</i>	blue grama	Native	Rep	Jul-Sep	X	X	X		
Gramineae (Poaceae)	<i>Bromus anomalus</i>	<i>Bromopsis porteri</i>	nodding brome	Native	Pres	Jun-Aug	X	X	X		

Appendix D. Confirmed, historical, and reported taxa of Dinosaur National Monument, organized by life form with ecological notes, cont.

Family	Utah	Species name	Common name	Nativity	Park status	Flower time	Des Shr	PJ	Mt Con	Wet	Comments
<i>Perennial Graminoids, cont.</i>											
Gramineae (Poaceae)	<i>Bromus carinatus</i>	<i>Ceratochloa carinata</i>	mountain brome	Native	Pres	May–Aug		X	X		
Gramineae (Poaceae)	<i>Bromus inermis</i>	<i>Bromopsis inermis</i>	smooth brome	Intro	Pres	Jun–Aug			X		
Gramineae (Poaceae)	<i>Calamagrostis scopolorum</i>	<i>Calamagrostis scopolorum</i>	Jones' reedgrass	Native	Pres	Jul–Aug		X	X		
Gramineae (Poaceae)	<i>Calamagrostis stricta</i>	<i>Calamagrostis stricta</i>	slimstem reedgrass	Native	Hist	Jul–Aug				X	
Gramineae (Poaceae)	<i>Catabrosa aquatica</i>	<i>Catabrosa aquatica</i>	brookgrass	Native	Pres	Jun–Sep				X	
Gramineae (Poaceae)	<i>Dactylis glomerata</i>	<i>Dactylis glomerata</i>	orchard grass	Intro	Pres	Jun–Aug	X		X		Disturbed areas
Gramineae (Poaceae)	<i>Danthonia californica</i>	<i>Danthonia californica</i>	California oatgrass	Native	Pres	Jun–Aug		X	X		
Gramineae (Poaceae)	<i>Danthonia unispicata</i>	<i>Danthonia unispicata</i>	oneside oatgrass	Native	Pres	Jun–Aug			X		
Gramineae (Poaceae)	<i>Distichlis spicata</i>	<i>Distichlis stricta</i>	desert saltgrass	Native	Pres	Jun–Sep	X			X	
Gramineae (Poaceae)	<i>Elymus canadensis</i>	<i>Elymus canadensis</i>	Canada wildrye	Native	Pres	Jul–Aug				X	
Gramineae (Poaceae)	<i>Elymus cinereus</i>	<i>Leymus cinereus</i>	Great Basin wildrye	Native	Pres	Jun–Aug	X	X	X	X	
Gramineae (Poaceae)	<i>Elymus elymoides</i>	<i>Elymus elymoides</i>	squirreltail	Native	Pres	May–Aug	X	X	X	X	
Gramineae (Poaceae)	<i>Elymus glaucus</i>	<i>Elymus glaucus</i>	blue wildrye	Native	Pres	Jul–Aug			X		
Gramineae (Poaceae)	<i>Elymus lanceolatus</i>	<i>Elymus lanceolatus</i>	thickspike wheatgrass	Native	Pres	Jun–Aug	X	X	X		
Gramineae (Poaceae)	<i>Elymus repens</i>	<i>Elytrigia repens</i>	quackgrass	Intro	Pres	Jun–Aug			X	X	Disturbed areas
Gramineae (Poaceae)	<i>Elymus salinus</i>	<i>Leymus salina</i>	Salina wildrye	Native	Pres	Jun–Jul	X	X			
Gramineae (Poaceae)	<i>Elymus smithii</i>	<i>Pascopyrum smithii</i>	western wheatgrass	Native	Pres	Jun–Aug	X	X	X		

Appendix D. Confirmed, historical, and reported taxa of Dinosaur National Monument, organized by life form with ecological notes, cont.

Family	Utah	Species name	Common name	Nativity	Park status	Flower time	Des Shr	PJ	Mt Con	Wet	Comments
<i>Perennial Graminoids, cont.</i>											
Gramineae (Poaceae)	<i>Elymus spicatus</i>	<i>Pseudoroegneria spicata</i>	bluebunch wheatgrass	Native	Pres	Jun–Aug	X	X	X		
Gramineae (Poaceae)	<i>Elymus trachycaulus</i>	<i>Elymus trachycaulus</i>	slender wheatgrass	Native	Pres	Jun–Aug	X		X	X	
Gramineae (Poaceae)	<i>Erioneuron pilosum</i>	<i>Erioneuron pilosum</i>	hairy tridens	Native	Pres	May–Jul	X	X			
Gramineae (Poaceae)	<i>Festuca arundinacea</i>	<i>Festuca arundinacea</i>	tall fescue	Intro	Pres	May–Jul	X				
Gramineae (Poaceae)	<i>Festuca ovina</i> var. <i>ingrata</i>	<i>Festuca idahoensis</i>	Idaho fescue	Native	Pres	May–Aug	X		X		
Gramineae (Poaceae)	<i>Festuca ovina</i> var. <i>saximontana</i>	<i>Festuca saximontana</i>	Rocky Mountain fescue	Native	Pres	Jul–Aug		X	X		
Gramineae (Poaceae)	<i>Festuca pratensis</i>	<i>Festuca pratensis</i>	meadow fescue	Intro	Pres	Jun–Aug			X	X	
Gramineae (Poaceae)	<i>Glyceria striata</i>	<i>Glyceria striata</i>	fowl mannagrass	Native	Pres	Jul–Aug				X	
Gramineae (Poaceae)	<i>Hilaria jamesii</i>	<i>Hilaria jamesii</i>	galleta	Native	Pres	May–Aug	X	X			
Gramineae (Poaceae)	<i>Hordeum brachyantherum</i>	<i>Critesion brachyantherum</i>	meadow barley	Native	Pres	Jun–Aug			X	X	
Gramineae (Poaceae)	<i>Hordeum jubatum</i>	<i>Critesion jubatum</i>	foxtail barley	Native	Pres	Jun–Aug	X	X	X	X	
Gramineae (Poaceae)	<i>Koeleria macrantha</i>	<i>Koeleria macrantha</i>	Junegrass	Native	Pres	Jun–Aug	X	X	X		
Gramineae (Poaceae)	<i>Leucopoa kingii</i>	<i>Leucopoa kingii</i>	spike fescue	Native	Pres	Jun–Aug	X	X	X		
Gramineae (Poaceae)	<i>Melica bulbosa</i>	<i>Bromelia bulbosa</i>	oniongrass	Native	Pres	May–Aug	X	X	X		
Gramineae (Poaceae)	<i>Muhlenbergia andina</i>	<i>Muhlenbergia andina</i>	foxtail muhly	Native	Pres	Jul–Sep				X	
Gramineae (Poaceae)	<i>Muhlenbergia asperifolia</i>	<i>Muhlenbergia asperifolia</i>	scratchgrass	Native	Pres	Jul–Aug				X	
Gramineae (Poaceae)	<i>Muhlenbergia pungens</i>	<i>Muhlenbergia pungens</i>	sandhill muhly	Native	Pres	Jul–Sep	X	X			

Appendix D. Confirmed, historical, and reported taxa of Dinosaur National Monument, organized by life form with ecological notes, cont.

Family	Utah	Species name	Common name	Nativity	Park status	Flower time	Des Shr	PJ	Mt Con	Wet	Comments
<i>Perennial Graminoids, cont.</i>											
Gramineae (Poaceae)	<i>Muhlenbergia racemosa</i>	<i>Muhlenbergia racemosa</i>	green muhly	Native	Hist	Jul-Sep				X	
Gramineae (Poaceae)	<i>Muhlenbergia richardsonis</i>	<i>Muhlenbergia richardsonis</i>	mat muhly	Native	Hist	Jul-Sep	X	X	X		
Gramineae (Poaceae)	<i>Muhlenbergia thurberi</i>	<i>Muhlenbergia thurberi</i>	Thurber's muhly	Native	Pres	Jul-Sep	X	X	X	X	
Gramineae (Poaceae)	<i>Onyzopsis micrantha</i>	<i>Piptatherum micranthum</i>	littelseed ricegrass	Native	Pres	Jun-Aug	X	X	X		
Gramineae (Poaceae)	<i>Panicum acuminatum</i>	<i>Dichanthelium acuminatum</i>	bundle panicgrass	Native	Pres	Jul-Sep				X	Sandy soils
Gramineae (Poaceae)	<i>Phleum pratense</i>	<i>Phleum pratense</i>	timothy	Intro	Pres	Jun-Sep	X	X	X	X	
Gramineae (Poaceae)	<i>Phragmites australis</i>	<i>Phragmites australis</i>	common reed	Native	Pres	Jul-Sep				X	
Gramineae (Poaceae)	<i>Poa bulbosa</i>	<i>Poa bulbosa</i>	bulbous bluegrass	Intro	Pres	Apr-Jul	X	X	X	X	
Gramineae (Poaceae)	<i>Poa compressa</i>	<i>Poa compressa</i>	Canada bluegrass	Intro	Pres	Jun-Aug	X	X	X	X	
Gramineae (Poaceae)	<i>Poa fendleriana</i>	<i>Poa fendleriana</i>	muttongrass	Native	Pres	May-Aug	X	X	X		
Gramineae (Poaceae)	<i>Poa glauca</i> var. <i>glauca</i>	<i>Poa nemoralis</i> ssp. <i>interior</i>	interior bluegrass	Native	Hist	Jun-Aug			X		
Gramineae (Poaceae)	<i>Poa nervosa</i> var. <i>wheeleri</i>	<i>Poa nervosa</i>	Wheeler bluegrass	Native	Pres	Apr-Aug			X		
Gramineae (Poaceae)	<i>Poa pratensis</i>	<i>Poa pratensis</i>	Kentucky bluegrass	Intro	Pres	May-Aug	X	X	X	X	
Gramineae (Poaceae)	<i>Poa secunda</i>	<i>Poa secunda</i>	Sandberg's bluegrass	Native	Pres	Apr-Sep	X	X	X	X	
Gramineae (Poaceae)	<i>Puccinellia nuttalliana</i>	<i>Puccinellia airoides</i>	Nuttall's alkaligrass	Native	Hist	May-Aug	X			X	
Gramineae (Poaceae)	<i>Schizachyrium scoparium</i>	<i>Schizachyrium scoparium</i>	little bluestem	Native	Pres	Jul-Sep	X	X	X	X	
Gramineae (Poaceae)	<i>Spartina pectinata</i>	<i>Spartina pectinata</i>	prairie cordgrass	Native	Pres	Jun-Sep				X	

Appendix D. Confirmed, historical, and reported taxa of Dinosaur National Monument, organized by life form with ecological notes, cont.

Family	Utah	Species name	Common name	Nativity	Park status	Flower time	Des Shr	PJ	Mt Con	Wet	Comments
Perennial Graminoids, cont.											
Gramineae (Poaceae)		<i>Sporobolus airoides</i> var. <i>airoides</i>	alkali sacaton	Native	Hist	Jun-Aug	X	X		X	
Gramineae (Poaceae)		<i>Sporobolus contractus</i>	spike dropseed	Native	Pres	Jun-Sep	X	X			
Gramineae (Poaceae)		<i>Sporobolus cryptandrus</i>	sand dropseed	Native	Pres	Jun-Aug	X	X			
Gramineae (Poaceae)		<i>Stipa arida</i>	Mormon needlegrass	Native	Rep	May-Jul	X	X			
Gramineae (Poaceae)		<i>Stipa comata</i> var. <i>comata</i>	needle-and-thread	Native	Pres	May-Jul	X	X	X		
Gramineae (Poaceae)		<i>Stipa hymenoides</i>	Indian ricegrass	Native	Pres	May-Jul	X	X	X		
Gramineae (Poaceae)		<i>Stipa lettermanii</i>	Letterman's needlegrass	Native	Pres	Jul-Sep	X	X	X		
Gramineae (Poaceae)		<i>Stipa nelsonii</i> var. <i>nelsonii</i>	Nelson's needlegrass	Native	Pres	Jun-Sep	X	X	X		
Gramineae (Poaceae)		<i>Stipa viridula</i>	green needlegrass	Native	Pres	Jun-Jul	X				
Gramineae (Poaceae)		<i>Trisetum spicatum</i>	spike trisetum	Native	Pres	Jul-Sep			X	X	
Juncaceae		<i>Juncus arcticus</i>	Baltic rush	Native	Pres	May-Jul				X	
Juncaceae		<i>Juncus compressus</i>	compressed rush	Intro	Pres	Jun-Jul				X	
Juncaceae		<i>Juncus ensifolius</i> var. <i>brunnescens</i>	Tracy's rush	Native	Pres	Jun-Aug				X	
Juncaceae		<i>Juncus ensifolius</i> var. <i>montanus</i>	mountain rush	Native	Pres	Jun-Aug				X	
Juncaceae		<i>Juncus longistylis</i>	longstyle rush	Native	Pres	Jun-Aug				X	
Juncaceae		<i>Juncus tenuis</i>	poverty rush	Native	Pres	Jun-Aug				X	
Juncaceae		<i>Juncus torreyi</i>	Torrey's rush	Native	Hist	Jun-Aug				X	
Juncaginaceae		<i>Triglochin maritima</i>	seaside arrowgrass	Native	Hist	May-Aug				X	

Appendix D. Confirmed, historical, and reported taxa of Dinosaur National Monument, organized by life form with ecological notes, cont.

Family	Utah	Species name	Common name	Nativity	Park status	Flower time	Des Shr	PJ	Mt Con	Wet	Comments
<i>Perennial Graminoids, cont.</i>											
Typhaceae	<i>Typha latifolia</i>	<i>Typha latifolia</i>	broad-leaved cattail	Native	Pres	Jun-Aug				X	
Annual Graminoids											
Cyperaceae	<i>Cyperus squarrosus</i>	<i>Cyperus aristatus</i>	bearded flat-sedge	Native	Pres	Jun-Aug				X	
Gramineae (Poaceae)	<i>Beckmannia syzigachne</i>	<i>Beckmannia syzigachne</i>	American sloughgrass	Native	Pres	Jul-Aug				X	
Gramineae (Poaceae)	<i>Bromus japonicus</i>	<i>Bromus japonicus</i>	Japanese chess	Intro	Pres	Jun-Aug	X	X	X		Disturbed areas
Gramineae (Poaceae)	<i>Bromus tectorum</i>	<i>Anisantha tectorum</i>	cheatgrass	Intro	Pres	May-Jul	X	X			Disturbed areas
Gramineae (Poaceae)	<i>Eragrostis pectinacea</i>	<i>Eragrostis pectinacea</i>	tufted lovegrass	Native	Hist	Jul-Aug					
Gramineae (Poaceae)	<i>Eremopyrum triticeum</i>	<i>Eremopyrum triticeum</i>	annual wheatgrass	Intro	Pres	May-Jul	X	X			Disturbed areas
Gramineae (Poaceae)	<i>Festuca octoflora</i>	<i>Vulpia octoflora</i>	six-weeks fescue	Native	Pres	Apr-Jun	X	X	X	X	
Gramineae (Poaceae)	<i>Panicum capillare</i>	<i>Panicum capillare</i> var. <i>occidentale</i>	witchgrass	Native	Pres	Jun-Sep	X		X	X	
Gramineae (Poaceae)	<i>Polygonon monspeliensis</i>	<i>Polygonon monspeliensis</i>	rabbitfoot-grass	Intro	Pres	Jun-Aug				X	
Juncaceae	<i>Juncus bryoides</i>	<i>Juncus bryoides</i>	minute rush	Native	Rep	Jun-Jul	X		X	X	
Juncaceae	<i>Juncus bufonius</i>	<i>Juncus bufonius</i>	toad rush	Native	Pres	Jun-Aug				X	
Ferns and Allies											
Equisetaceae	<i>Equisetum arvense</i>	<i>Equisetum arvense</i>	field horsetail	Native	Pres	NA	X	X	X	X	
Equisetaceae	<i>Equisetum hyemale</i> var. <i>affine</i>	<i>Hippochaete hyemalis</i> ssp. <i>affinis</i>	tall scouring-rush	Native	Pres	NA				X	
Equisetaceae	<i>Equisetum laevigatum</i>	<i>Hippochaete laevigata</i>	smooth scouring-rush	Native	Pres	NA				X	
Equisetaceae	<i>Equisetum x ferrissii</i>	<i>Hippochaete x ferrissii</i>	Ferris' scouring-rush	Native	Hist	NA				X	
Equisetaceae	<i>Equisetum x trachyodon</i>	<i>Hippochaete x mackaii</i>	hybrid scouring-rush	Native	Hist	NA				X	

Appendix D. Confirmed, historical, and reported taxa of Dinosaur National Monument, organized by life form with ecological notes, cont.

Family	Species name		Common name	Nativity	Park status	Flower time	Des Shr	PJ	Mt Con	Wet	Comments
	Utah	Colorado									
<i>Ferns and Allies, cont.</i>											
Polypodiaceae (Adiantaceae)	<i>Adiantum capillus-veneris</i>	<i>Adiantum capillus-veneris</i>	southern maidenhair fern	Native	Pres	NA				X	Weber F.
Polypodiaceae (Aspleniaceae)	<i>Asplenium septentrionale</i>	<i>Asplenium septentrionale</i>	forked spleenwort	Native	Pres	NA	X	X	X		Rock crevices
Polypodiaceae (Adiantaceae, Sinopteridaceae)	<i>Cheilanthes feei</i>	<i>Cheilanthes feei</i>	slender lip-fern	Native	Pres	NA	X	X	X		Rock crevices
Polypodiaceae (Aspleniaceae)	<i>Cystopteris fragilis</i>	<i>Cystopteris fragilis</i>	brittle bladder fern	Native	Pres	NA			X	X	
Polypodiaceae (Adiantaceae, Sinopteridaceae)	<i>Pellaea breweri</i>	<i>Pellaea breweri</i>	Brewer's cliff-brake	Native	Pres	NA	X		X		Rock crevices
Polypodiaceae (Adiantaceae, Sinopteridaceae)	<i>Pellaea glabella</i> var. <i>occidentalis</i>	<i>Pellaea glabella</i> ssp. <i>simplex</i>	western cliffbrake	Native	Pres	NA				X	Rock crevices
Polypodiaceae (Aspleniaceae, Woodsiaceae)	<i>Woodsia oregana</i>	<i>Woodsia oregana</i> ssp. <i>cathartiana</i>	Oregon woodsia	Native	Pres	NA	X	X	X		
Selaginellaceae	<i>Selaginella densa</i>	<i>Selaginella densa</i>	dense spike-moss	Native	Pres	NA	X	X	X		
Selaginellaceae	<i>Selaginella mutica</i>	<i>Selaginella mutica</i>	blunt-leaf spike-moss	Native	Pres	NA	X	X	X		

The Department of the Interior protects and manages the nation's natural resources and cultural heritage; provides scientific and other information about those resources; and honors its special responsibilities to American Indians, Alaska Natives, and affiliated Island Communities.

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