



Annotated Checklist of Vascular Flora

Hovenweep National Monument

Natural Resource Technical Report NPS/NCPN/NRTR—2009/207



ON THE COVER

Hackberry (*Celtis reticulata*) from Hackberry Unit, Hovenweep National Monument, Colorado.
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 Hovenweep National Monument. This entailed a thorough review of existing literature, re-examination of specimens from the Hovenweep 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, 340 vascular plant taxa have been confirmed or reliably reported as occurring in the monument (273 are known from validated herbarium specimens and 67 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 Hovenweep National Monument contains 218 species (6% of the state flora) and the Colorado segments contain 268 species (8.5% of the entire Colorado flora). At least 16 of these species are tracked as species of concern by state natural heritage programs, but none are federally listed as threatened, endangered, or sensitive. Introduced plants make up 16.7% of the monument flora (57 species), of which 12 species are considered noxious weeds by the states of Utah and Colorado. Further surveys in Hovenweep National Monument are likely to find additional new species (about 270 are known from similar habitats outside the monument boundary), especially among late-flowering, weedy, or wetland taxa.

Acknowledgements

I would like to thank the following individuals for their assistance with this project: Dr. Angela Evenden, botanist and former leader of the NCPN program in Moab, was an active proponent of this project and helped secure funding for field work and herbarium studies in 2006. Vicki Webster, curator of museum collections for the National Park Service Southeast Utah Group (SEUG), provided access to all mounted and unmounted herbarium specimens from Hovenweep National Monument (HOVE), as well as workspace within the museum vaults. Charlie Schelz, biologist with SEUG, provided research permits for work in 2005–2006 and shared his unmounted plant collections. 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 (BRY). 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 who 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 Hovenweep National Monument, in southeast Utah and southwest 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 NPS 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 Hovenweep National Monument based on a review of herbarium collections and past literature.
2. Develop an annotated checklist of the flora of Hovenweep 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

In 1854, Mormon settlers exploring southeastern Utah found the unusual stone towers and other archeological remains of the Hovenweep area. These structures were apparently constructed by small communities of Puebloan farmers between 1235 and 1240 A.D. The towers were likely occupied for no more than 70 years and then abandoned as the Puebloans migrated to southern Arizona and New Mexico, following a prolonged drought. Pioneer western photographer William Henry Jackson visited the area in 1874, and popularized the name Hovenweep (a Ute word meaning “deserted valley”) for the area. Archeologists from the Smithsonian Institution surveyed the Hovenweep area in 1918, and recommended that the structures be protected by the federal government. President

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

Warren G. Harding established Hovenweep National Monument by Presidential Proclamation in March 1923 (Evenden et al. 2002).

Hovenweep National Monument (NM) currently consists of six separate units totaling 318 hectares (785 acres) in southeastern San Juan County, Utah, and adjacent southwestern Montezuma County, Colorado (Figure 1.3.1). The Cajon, Square Tower, Holly, Hackberry (or Horseshoe), and Cutthroat Castle units are located on Cajon Mesa along both sides of the state line, about 30 miles north of Four Corners. The Goodman Point unit is located about 20 km to the east in the Montezuma Valley, northwest of Cortez, Colorado. The four Colorado units (Holly, Hackberry, Cutthroat Castle, and Goodman Point) are embedded within or border the U.S. Bureau of Land Management's Canyon of the Ancients National Monument, established by President William Clinton in 2000.

Within Hovenweep NM, elevation ranges from 1,585 meters (5,200 feet) at the Cajon Unit to 2,060 meters (6,760 feet) at Goodman Point (Evenden et al. 2002). The area averages 12 inches (305 mm) of annual precipitation. Mean annual temperature is 52° F, but ranges from lows of -10° F in winter to over 100° F in summer (Evenden et al. 2002).

1.3.2 Geology

The scattered units of Hovenweep NM are located on a relatively flat, sedimentary tableland that is irregularly dissected by small canyons draining into the San Juan River basin. The canyon bottoms and lower slopes consist of light gray-to-maroon mudstones and shales of the late-Jurassic Morrison Formation. These sediments were deposited on a broad floodplain by a meandering river draining higher mountains to the west and south more than 140 million years ago (Chronic and Chronic 2004). The Morrison layers are topped by 1–2 ledges of massive gray-to-brownish sandstone of the Cretaceous-age Dakota Formation (deposited 92–96 million years ago). The Dakota Sandstone is derived from beach or strand line deposits along the shore of an inland sea. Seeps and springs are often associated with the relatively porous Dakota Formation (Chronic and Chronic 2004). Younger Cretaceous shales and sandstones of the Mancos Shale and Mesa Verde group eroded off the Cajon Plateau during regional uplift in the Tertiary. Today, the mesa tops are often covered by Quaternary, wind-blown silts, which formed the fertile farmlands used by the Puebloan culture in the thirteenth and fourteenth centuries.

1.3.3 Vegetation

Rocky mesa rims and slopes in the Square Tower, Holly, Hackberry, and Cutthroat Castle units contain woodlands dominated by Utah juniper (*Juniperus osteosperma*)/two-needle pinyon (*Pinus edulis*) and cliffrose (*Purshia mexicana* var. *stansburyana*), with an understory of basin big sagebrush (*Artemisia tridentata* var. *tridentata*), muttongrass (*Poa fendleriana*), broom snakeweed (*Gutierrezia sarothrae*), and slenderleaf rabbitbrush (*Chrysothamnus viscidiflorus* var. *stenophyllus*). Open areas on mesa tops consist mostly of basin big sagebrush or Wyoming big sagebrush (*A. tridentata* var. *wyomingensis*) and broom snakeweed with occasional Utah juniper. Snakeweed is especially abundant in areas of high sheep grazing during the first half of the twentieth century (Evenden et al. 2002). At Square Tower, shadscale (*Atriplex confertifolia*) and cheatgrass (*Bromus tectorum*) co-dominate with sagebrush and rabbitbrush on dry lower slopes. Seeps below the canyon rim contain stands of Fremont cottonwood (*Populus fremontii*) and netleaf hackberry (*Celtis reticulata*).

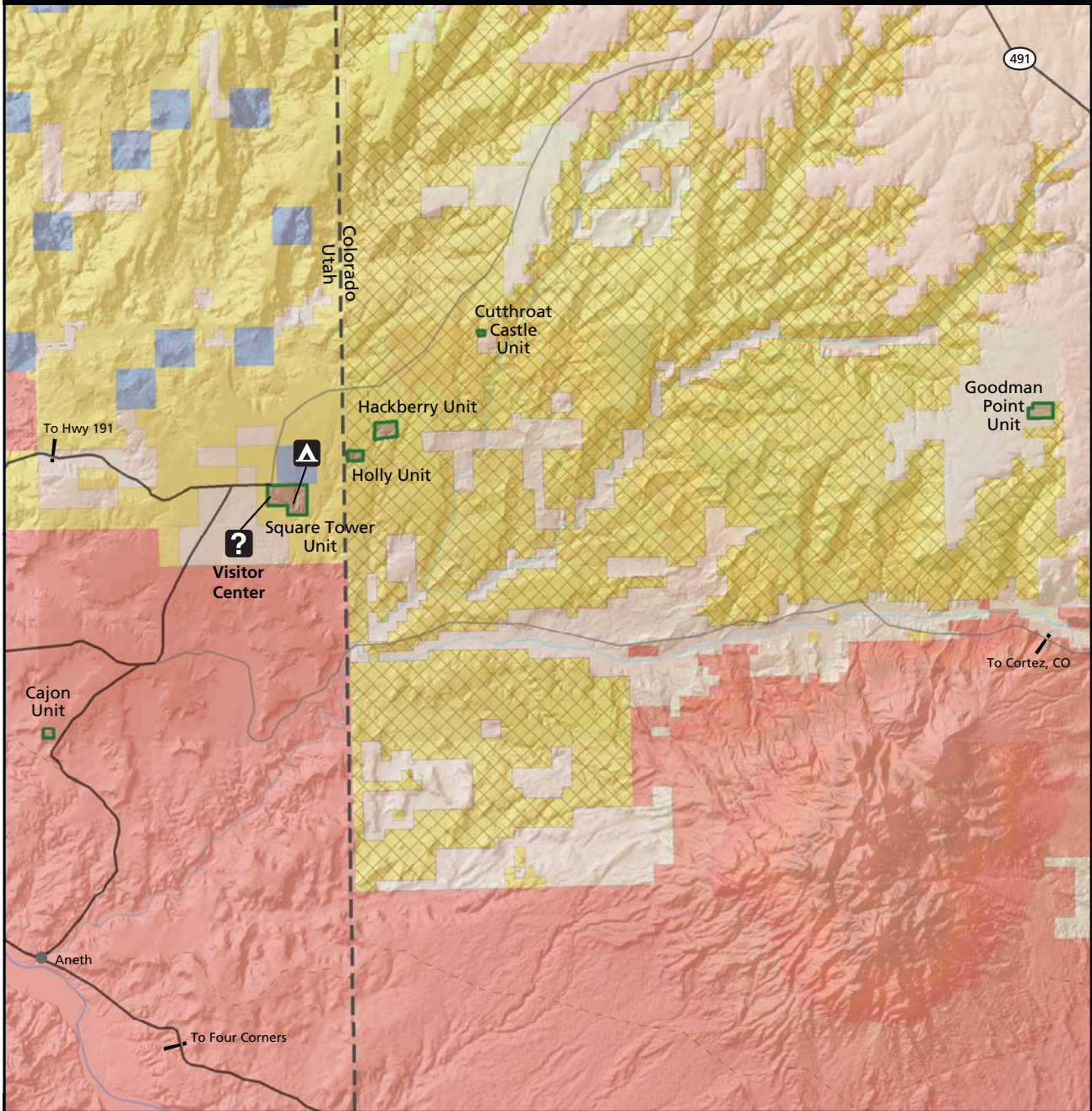
The Cajon unit is the driest area of Hovenweep and consists mostly of black sagebrush (*Artemisia nova*)-broom snakeweed-shadscale-galleta (*Hilaria jamesii*) vegetation. Colorado's Goodman Point unit consists of extensive Utah juniper/two-needle pinyon pine woods interspersed by basin big sagebrush and meadows of smooth brome (*Bromus inermis*), squirreltail (*Elymus elymoides*), and western wheatgrass (*Elymus smithii*). A Fremont cottonwood-golden currant (*Ribes aureum*) forest borders a small riparian corridor.

1.3.4 Previous botanical studies

The Four Corners region received much attention from early botanical explorers, but the oldest confirmed floristic study of the Hovenweep area dates to Richart (1941), an NPS employee who catalogued the flora and fauna of several southwestern parks. The earliest collections in the Hovenweep National Monument herbarium (HOVE) were made in 1972, by Dale Schmidt and colleagues conducting botanical surveys in association with archeological research (Table 1.3.4, Figure 1.3.4). Over the next three years, Dale and Marilyn Schmidt, "Redfield," and William Litzinger documented 151 vascular plant taxa for Hovenweep NM (Litzinger and Winter 1976). Another 31 species reported for Hovenweep during this time period (Schelz and Moran 2003) were based on Litzinger collections made at other archeological sites outside of the monument.

Hovenweep National Monument

Utah



0 1 2 4
Kilometers

0 1 2 4
Miles

Established March 2, 1923
1,585–2,060 m elevation
(5,200–6,760 ft elevation)
318 ha (785 ac)



Legend:

- Intermittent streams
- Perennial streams
- Rivers
- Paved roads
- Unpaved roads
- Unimproved/4WD roads
- Park boundary (NPS)
- Canyons of the Ancients (BLM)
- Bureau of Land Management (BLM)
- Navajo & Ute Mtn. Reservations (IR)
- Private
- State

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

Figure 1.3.1. Location of Hovenweep National Monument, San Juan County, Utah, and Montezuma County, Colorado.

Over the next 25 years, no floristic research occurred at Hovenweep NM except for a period of brief collecting and rare plant surveys by Marilyn Colyer, of Mesa Verde National Park, during 1992–1994. From 2001 to 2003, Charles Schelz of the NPS Southeast Utah Group conducted a comprehensive literature and herbarium review and floristic inventory to fill gaps in the monument’s species list. Over this period, Schelz added more than 300 specimens to the HOVE herbarium and vouchered 104 new plant species (Schelz 2002; 2003). Schelz and Moran (2003) compiled a checklist of the monument flora recognizing another 62 species as reported (but not vouchered) (Appendix A).

Since 2003, vegetation mappers have added three new species reports for the Hovenweep NM flora (Von Loh et al. 2008). Kim Andersen added one new species during a noxious weed inventory of the monument (Dewey and Andersen 2005). Rebecca Harms collected one new species for the flora during the NCPN springs and seeps survey (Springer et al. 2006). In 2006, I added 13 additional species during surveys of each of the monument’s six subunits.

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

Year	Collector(s)	# of new taxa	Comments
1941	R. S. Richart	?	Roland Richart (1941) compiled the earliest checklist of the flora of Hovenweep and Yucca House national monuments.
1972	D. Schmidt & Redfield	16	Dale Schmidt made the earliest collections for the HOVE herbarium.
1973	D. Schmidt, M. Schmidt, & Redfield	59	Dale and Marilyn Schmidt and “Redfield” (first name unknown) added 59 new taxa to the monument species list.
1974–1976	W. J. Litzinger & M. Schmidt	76	William Litzinger added 70 new species to the monument flora during a three-year project, collecting plant species associated with archeological sites in Hovenweep NM and surrounding areas of Cajon Mesa (now within the Canyon of the Ancients National Monument). Marilyn Schmidt contributed 6 additional species in 1974.
1992–1994	M. Colyer & Oppelt	3	Marilyn Colyer, biologist from Mesa Verde National Park, documented three new species during rare plant surveys of the monument.
2001–2002	C. Schelz	91	Charles Schelz, of the NPS Southeast Utah Group, initiated a multi-year floristic survey of the monument and added 91 new taxa to the Hovenweep flora.
2003	C. Schelz, K. Andersen, & NCPN vegetation mapping crew	14 (+5 reported)	Kim Andersen collected one new species and reported one additional taxon for the Hovenweep NM flora during a survey of noxious weeds (Dewey and Andersen 2005). Three new species were reported (but not vouchered) by Von Loh et al. (2008). Schelz (2002, 2003) concluded his floristic survey with 14 new species records.
2005	R. Harms	1	One new species confirmed during seeps and springs inventory of Springer et al. (2006).
2006	W. Fertig	13	Walter Fertig collected vouchers for 13 new species in 2006.

The earliest collection date is not known for an additional 62 unvouchered reports cited by Schelz and Moran (2003).

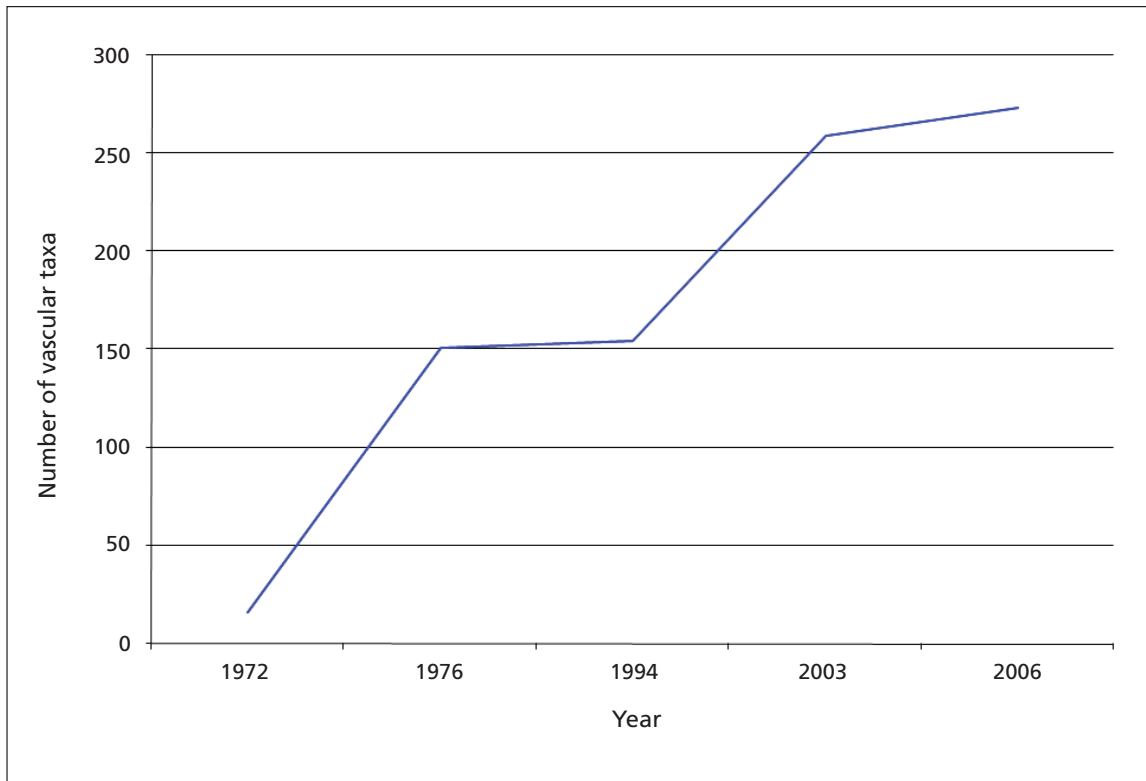


Figure 1.3.4. Increase in the number of plant taxa confirmed as present in Hovenweep National Monument by decade, 1972–2006.

2 Methods

In July 2005, I reviewed all mounted specimens in the Hovenweep NM herbarium (housed in the NPS Southeast Utah Group office in Moab, Utah) to determine whether each was correctly identified to species, subspecies, or variety following the nomenclature of Welsh et al. (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 (Dewey and Andersen 2005; Schelz and Moran 2003; Springer et al. 2006), I developed four lists:

1. A revised checklist of species that were present in the park (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 Hovenweep National Monument using an unpublished list generated by Dr. N. Duane Atwood of Brigham Young University and Albee et al. (1988) (included in Appendix B); 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 Von Loh et al. 2008, 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 HOVE 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 field surveys and review of collections from state and regional herbaria. I made one collecting trip to Hovenweep NM, in June 2006, to target missing species, emphasizing under-sampled wetland and weedy taxa. 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 unmounted collections by NPS Southeast Utah Group and NCPN researchers and by reviewing plot data from recent vegetation mapping and wetland inventories (Von Loh et al. 2008; Springer et al. 2006).

3 Results

3.1 Summary of the flora of Hovenweep National Monument

Of the 606 vascular plant vouchers in the HOVE herbarium that I examined in 2005 (excluding 142 specimens collected from outside the monument), 141 were misidentified (23.2%), 63 were revised to a more current name (10.4%), 70 had variety or subspecies names added (11.6%), and 332 were found to be correctly determined (54.8%). Based solely on these collections, the confirmed flora of Hovenweep National Monument stood at 259 taxa (Fertig 2006). From 2005 to 2007, I reviewed herbarium collections at Brigham Young University, Utah State University,

the University of Wyoming, and the New York Botanical Garden Virtual Herbarium but found no additional species reports for Hovenweep NM. Field surveys in 2006 netted 13 new species and a review of collections from the NCPN seeps and springs inventory project (Springer et al. 2006) added one additional taxon. Overall, the documented flora of Hovenweep National Monument has increased by 5.1% since 2005, bringing the total number of taxa to 273 (Tables 3.1-1, 3.1-2, Appendices A, D).

Currently, 67 additional taxa have been reported for Hovenweep NM but have yet to be corroborated with a voucher specimen (Table 3.1-1, Appendix A). Of these, 63 were reported by Schelz and Moran (2003) and the remainder by Dewey and Andersen (2005) and Von Loh et al. (2008).

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

Category	Number confirmed in park	Number additionally reported for park	Total
Taxonomic diversity			
Total taxa (including varieties and subspecies)	273	67	340
Full species (excluding varieties and subspecies)	265	64	329
Families	52	8	60
Life form diversity			
Tree taxa	4	0	4
Shrub taxa	51	8	59
Perennial forb taxa	121	28	149
Annual forb taxa	55	20	75
Perennial graminoid taxa	33	8	41
Annual graminoid taxa	9	3	12
Fern taxa	0	0	0
Biogeographic diversity			
Introduced taxa	45	12	57
Native taxa			
Locally endemic taxa	1	0	1
Regionally endemic taxa	24	6	30
Disjunct taxa	0	0	0
Peripheral taxa	19	5	24
Sparse taxa	4	1	5
Widespread taxa	180	43	223
Total native taxa	228	55	283

The number of taxa and families is based on taxonomic concepts of Welsh et al. (2003). See Appendices for an explanation of the various categories.

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

Category	Present in park		Reported for park			Total	
	UT	CO	UT	CO	NA*	UT	CO
Taxonomic diversity							
Total taxa (including varieties and subspecies)	189	236	29	32	22	218	268
Full species (excluding varieties and subspecies)	184	230	26	31	22	210	261
Families	47	56**	3	1	5	50	57**
Life form diversity							
Tree taxa	4	4	0	0	0	4	4
Shrub taxa	41	43	7	1	2	48	44
Perennial forb taxa	67	112	15	16	6	82	128
Annual forb taxa	45	42	6	10	9	51	52
Perennial graminoid taxa	23	31	1	4	4	24	35
Annual graminoid taxa	9	4	0	2	1	9	6
Fern taxa	0	0	0	0	0	0	0
Biogeographic diversity							
Introduced taxa	28	38	2	7	4	30	45
Native taxa							
Locally endemic taxa	0	1	0	0	0	0	1
Regionally endemic taxa	15	15	5	4	0	20	19
Disjunct taxa	0	0	0	0	0	0	0
Peripheral taxa	2	17	0	1	3	2	18
Sparse taxa	0	4	0	0	1	0	4
Widespread taxa	144	161	22	20	14	166	181
<i>Total native taxa</i>	<i>161</i>	<i>198</i>	<i>27</i>	<i>25</i>	<i>18</i>	<i>188</i>	<i>223</i>

The number of taxa and families is based on taxonomic concepts of Welsh et al. (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 Hovenweep by Schelz & Moran (2003) without a state or subunit affiliation (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, or for the total area, because of the recognition of several segregate families within Caryophyllaceae, Liliaceae, and Ranunculaceae by Weber and Wittmann (2001). The number of families for Utah and the total area follow the criteria of Welsh et al. (2003).

Taken together, the number of confirmed and reported vascular plant taxa in Hovenweep National Monument stands at 340 taxa (Table 3.1-1, Appendix A).

Entering the 2006 field season, I recognized 322 taxa as potentially occurring in Hovenweep NM, based on the proximity of the monument to known populations (Albee et al. 1988; Fertig

2006). At least 12 of these species were found to occur in the monument based on field collections or relocated herbarium specimens in 2006. Another 40 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 Abajo Range or the San Juan River drainage. The current number of potential species that I am

recognizing for Hovenweep National Monument is 270 (Appendix B).

Of the original pool of species documented or reported for Hovenweep NM, I found that 113 taxa were falsely reported based on misidentified voucher specimens in the HOVE herbarium. I consider an additional 10 species cited (but not vouchered) by Schelz and Moran (2003) and the NCPN vegetation mapping team (Von Loh et al. 2008) to be questionable based on the absence of suitable habitat or the distance of Hovenweep NM to the known or expected range of each species (Appendix C).

The confirmed and reported flora of the Utah portion of Hovenweep NM consists of 218 taxa. These species represent 6.1% of the 3,594 native and naturalized taxa documented within the state of Utah by Welsh et al. (2003) and 33.1% of the state's 151 plant families (Table 3.1-2). Within San Juan County, the monument flora captures 15.9% of the 1,370 taxa reported by Welsh et al. (2003). At the ecoregional scale, the Utah units of Hovenweep NM contain 12.9% of the 1,694 species reported for the Utah portion of the Colorado Plateau (Shultz et al. 2006).

Species richness is higher within the Colorado units of Hovenweep NM. In all, 268 taxa are confirmed or reported from the state, representing 8.5% of the 3,145 species in the flora of Colorado (Weber and Wittmann 2001) and 35.6% of the 160 recognized plant families (Table 3.1-2). The monument contains 25.9% of the 1,033 plant taxa reported for Montezuma County (Kartesz 2003). The Colorado segment of the monument contains 14.1% 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 18.5% of the confirmed and reported plant taxa of Hovenweep NM (Table 3.1-1). Perennial forbs are the most species-rich life form in the monument's flora, with 149 known and reported taxa (43.8% of the total flora). Annual forbs and grass-like plants comprise about 26% of the flora. Like trees and shrubs, perennial graminoids are ecologically important but relatively species-poor, representing only 12% of the total flora. No ferns and fern-allies have been documented in the monument (Table 3.1-1).

Hovenweep NM contains 283 native plant species. Of these, 188 occur in the Utah units of the monument and 223 in the Colorado portions. More than half (65.6%) of the monument's species (223 species in all) are widespread across Utah, Colorado, or western North America (Tables 3.1-1, 3.1-2). Thompson's indigo-bush (*Psoralea thompsoniae* var. *thompsoniae*) is the only local endemic currently known from Hovenweep NM. Thirty additional species (8.8% of the total flora) are regional endemics restricted to the Colorado Plateau. Twenty-nine species (8.5%) are either sparsely distributed or at the very edge of their contiguous range in Utah or Colorado (Tables 3.1-1, 3.1-2).

3.3 Plants of special concern

Hovenweep NM has no plants listed as threatened or endangered under the U.S. Endangered Species Act (Table 3.3) and none are currently considered official NPS species of concern (Schelz and Moran 2007). One species, Thompson's indigo-bush, was formerly a candidate (3C) for potential listing, but currently has no formal protective status. This species was not previously known from Colorado, but was discovered by Schelz in the Cutthroat Unit in 2001 (Schelz and Moran 2003). It is not currently tracked by the Colorado Natural Heritage Program. Two other Colorado species are considered sensitive by the U.S. Bureau of Land Management in Colorado (*Cryptantha* [*Oreocarya*] *osterhoutii* and *Swertia utahensis* [*Frasera paniculata*]), and a third (*Calochortus flexuosus*) is listed as sensitive by the U.S. Forest Service (Table 3.3). In all, eight Hovenweep NM species are tracked as species of concern by the Colorado Natural Heritage Program (2007). The Utah Division of Wildlife Resources Conservation Data Center (UDWR 1998) monitors seven additional taxa from the Utah portion of the monument (Table 3.3).

3.4 Non-native species and noxious weeds

Introduced plant species (not historically native to Utah, Colorado, or North America) make up 16.8% of the confirmed and reported flora of Hovenweep NM (Table 3.1-1). This figure is higher 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 57 introduced taxa, 12 are listed as noxious by the states of Utah (USDA-NRCS 2009) or Colorado (CDA 2009) (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, seven species from Hovenweep NM are on List B and five are on List C; none are on List A (Table 3.4).

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

Family	Species	Common name	TNC global rank	Legal status	State heritage status
Asteraceae (Compositae)	<i>Haplopappus spinulosus</i> var. <i>paradoxus</i>	spiny goldenweed	G5T3?		UTCDC: Watch, S2
Boraginaceae	<i>Cryptantha osterhoutii</i> (<i>Oreocarya osterhoutii</i>)	Osterhout's cryptanth	G2G3	CO BLM: Sensitive	CNHP: SOC, S2
Boraginaceae	<i>Cryptantha pterocarya</i> var. <i>cycloptera</i>	wing-nut cryptanth	G5T5		UTCDC: Peripheral, S2
Cactaceae	<i>Opuntia phaeacantha</i> var. <i>major</i> *	large pricklypear	G5T5		UTCDC: Peripheral, S2S3
Cucurbitaceae	<i>Cucurbita foetidissima</i> *	buffalo gourd	G5		UTCDC: Peripheral, S3?
Fabaceae (Leguminosae)	<i>Astragalus coltonii</i> var. <i>moabensis</i>	Moab milkvetch	G4T3?		CNHP: SOC, S2
Fabaceae (Leguminosae)	<i>Psoralea thompsoniae</i> var. <i>thompsoniae</i>	Thompson's indigo-bush	G3?T3?	USFWS: 3C	UTCDC: Watch, S3?
Gentianaceae	<i>Swertia utahensis</i> (<i>Frasera paniculata</i>)	Utah swertia	G4	CO BLM: Sensitive	CNHP: SOC, S1
Liliaceae (Calochortaceae)	<i>Calochortus flexuosus</i>	sinuous mariposa	G4	USFS Region 2: Sensitive	CNHP: SOC, S2
Linaceae	<i>Linum aristatum</i> (<i>Mesynium aristatum</i>)*	broom-flax	G5		CNHP: SOC, SH
Polygonaceae	<i>Eriogonum palmerianum</i>	Palmer's wild buckwheat	G4		CNHP: SOC, S1
Portulacaceae	<i>Portulaca halimoides</i>	dwarf purslane	G5		CNHP: SOC, S1
Scrophulariaceae	<i>Penstemon breviculus</i>	shortest penstemon	G3		UTCDC: Watch, S1?
Scrophulariaceae	<i>Penstemon lentus</i> var. <i>lentus</i>	Abajo penstemon	G4T3T4		UTCDC: Watch, S2?
Scrophulariaceae	<i>Penstemon utahensis</i> *	Utah penstemon	G4		CNHP: SOC, S2
Solanaceae	<i>Chamaesaracha coronopus</i>	false nightshade	G5		UTCDC: Peripheral, S1
Zygophyllaceae	<i>Kallstroemia parviflora</i> *	orange kallstroemia	G5		UTCDC: Peripheral, S1

This list is derived from the Colorado Natural Heritage Program (2007) and Utah Division of Wildlife Resources (1998).

Species with an * are reported from the monument; all others are confirmed as present with a voucher specimen.

Codes: **TNC (The Nature Conservancy) global rank** assesses abundance and conservation priority on a scale of 1–5 (1 being extremely vulnerable and 5 being 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. 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. CO BLM = U.S. Bureau of Land Management, Colorado Office. Under the column **State heritage status**, a comparable scoring system to that used in the “TNC global rank” column is used to measure state abundance (S) in Colorado and Utah. UTCDC = Utah Conservation Data Center (Utah Division of Wildlife Resources); these listings include conservation categories adopted by the state natural heritage program to prioritize endemic and rare plant taxa (UDWR 1998). Those categories are: 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). CNHP = Colorado Natural Heritage Program; in these listings, 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 (Colorado Natural Heritage Program 2007).

Table 3.4. Noxious weed species of Hovenweep National Monument.

Family	Species	Common name	Park status	State weed list
Asteraceae	<i>Carduus nutans</i>	musk thistle	Present in CO	Colo List B, UT Noxious
Asteraceae	<i>Centaurea repens</i> (<i>Acroptilon repens</i>)	Russian knapweed	Present in CO	Colo List B, UT Noxious
Asteraceae	<i>Arctium minus</i>	burdock	Present in CO	Colo List C
Asteraceae	<i>Cirsium arvense</i> (<i>Breea arvense</i>)	Canada thistle	Present in CO	Colo List B, UT Noxious
Chenopodiaceae	<i>Halogeton glomeratus</i>	halogeton	Reported in UT, CO	Colo List C
Convolvulaceae	<i>Convolvulus arvensis</i>	field bindweed	Present in CO	Colo List C, UT Noxious
Geraniaceae	<i>Erodium cicutarium</i>	stork's-bill	Present in UT, Observed in CO	Colo List B
Poaceae	<i>Aegilops cylindrica</i> (<i>Cylindropyrum cylindricum</i>)	jointed goatgrass	Reported in CO	Colo List B
Poaceae	<i>Bromus tectorum</i> (<i>Anisantha tectorum</i>)	cheatgrass	Present in UT, Observed in CO	Colo List C
Scrophulariaceae	<i>Linaria dalmatica</i> (<i>L. genistifolia</i> ssp. <i>dalmatica</i>)	Dalmatian toadflax	Present in CO	Colo List B
Scrophulariaceae	<i>Verbascum thapsus</i>	woolly mullein	Present in CO	Colo List C
Tamaricaceae	<i>Tamarix chinensis</i> (<i>T. ramosissima</i>)	five-stamen tamarisk	Present in UT, Observed in CO	Colo List B

List derived from the Colorado Department of Agriculture (2009) and U.S. Department of Agriculture Natural Resources Conservation Service (2009).

4 Discussion

Studies of the flora of Hovenweep National Monument date to Richart's 1941 checklist. Field work was most intensive in the early 1970s, in association with archeological studies, and in the first few years of the twenty-first century, following initiation of the NCPN inventory and monitoring program. Presently, the monument flora consists of 340 vascular plant species confirmed by voucher specimens (273) or reported in the literature (67) (Appendix A). Based on available habitats and proximity to other populations, an-

other 270 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 44%. 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. 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.
- Chronic, H., and L. Chronic. 2004. Pages of stone: Geology of the Grand Canyon and plateau country national parks and monuments. Second edition. Seattle, Wa.: The Mountaineers. 173 pp.
- Colorado Department of Agriculture (CDA). 2009. Colorado noxious weed list. http://wsprod.colostate.edu/cwis79/Noxious_weeds/noxious_weeds.cfm.
- Colorado Natural Heritage Program. 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. Bronx, N.Y.: New York Botanical Garden. 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. Bronx, N.Y.: New York Botanical Garden. 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. Bronx, N.Y.: New York Botanical Garden. 584 pp.
- . 1984. Volume 4, Subclass Asteridae (except Asteraceae). Intermountain flora: Vascular plants of the Intermountain West, U.S.A. Bronx, N.Y.: New York Botanical Garden. 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. 2005. An inventory of invasive non-native plants in Hovenweep National Monument (2003): Final report. Utah State University, Logan Ut. Weed Science Research Project Report # SD0518a.
- Dorn, R. D. 2001. Vascular plants of Wyoming. Third edition. Cheyenne, Wy.: Mountain West Publishing. 412 pp.
- 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, 2002 [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 HOVE for National Park Service Inventory and Monitoring program. Investigator's Annual Report, National Park Service. 2 pp.
- Fertig, W. 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.
- 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.
- Litzinger, W. J., and J. C. Winter. 1976. Annotated checklist of the vascular plants of Cajon Mesa, Colorado–Utah. *Hovenweep 1975: Archeological Report No. 2*. Archeological Report. San Jose State University, San Jose, Ca.
- Margules, C. R., and R. L. Pressey. 2000. Systematic conservation planning. *Nature* 405:243–253.
- National Park Service. 2000. *Management policies*. Washington, D.C.: U.S. Department of Interior, National Park Service. Publication #NPS D1416. 137 pp.
- 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.
- Richart, R. S. 1941. *Fauna and flora of Hovenweep and Yucca House National Monument*. Southwest National Monuments Supplement for June 1941.
- Schelz, C. 2002. *General floristic survey of Hovenweep National Monument: Annual report, 2002*. National Park Service Southeast Utah Group, Moab, Ut. 77 pp.
- Schelz, C. 2003. *General floristic survey of Hovenweep National Monument: Annual report, 2003*. National Park Service Southeast Utah Group, Moab, Ut. 77 pp.
- Schelz, C., and M. Moran. 2003. *Plants, Hovenweep National Monument*. National Park Service, Southeast Utah Group, Moab, Ut. 8 pp.
- . 2007. *Southeast Utah Group threatened, endangered and species of concern*. National Park Service, Moab, Ut. 3 pp.
- 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.
- U.S. Department of Agriculture Natural Resources Conservation Service (USDA-NRCS). 2009. *Utah state-listed noxious weeds*. <http://plants.usda.gov/java/noxious?rptType=State&statefips=49>.
- 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.
- Von Loh, J., G. Wakefield, A. Wight, A. Evenden, and J. Coles. 2008. Vegetation classification and mapping project report, Hovenweep National Monument. Natural Resource Technical Report NPS/NCPN/NRTR—2008/092. National Park Service, Fort Collins, Co.
- Weber, W. A., and R. C. Wittmann. 2001. Colorado flora: Western Slope. Third edition. Boulder, Co.: University Press of Colorado. 488 pp.
- 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 Hovenweep 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; Schelz and Moran 2003; Springer et al. 2006; Von Loh et al. 2008). Vouchers were examined from the HOVE herbarium (housed in the National Park Service's Southeast Utah Group office in Moab, Utah), 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 Hovenweep 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 Hovenweep 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 Hovenweep 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; Welsh et al. 2003). Scientific names are listed in alphabetical rather than phylogenetic order and according to the Utah names of Welsh et al. (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 et al. (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 contig-

uous 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 Hovenweep 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 (Dewey and Andersen 2005; Schelz and Moran 2003; Springer et al. 2006; Von Loh et al. 2008), but have not been corroborated with a voucher specimen. Species that may potentially occur in the monument 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 monument 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 Hovenweep NM. Abundance data are derived from Dewey and Andersen (2005), Von Loh et al. (2008), 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 Hovenweep NM with a voucher (**X**) or by an observation (**O**). 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 Hovenweep NM with a voucher (**X**) or by an observation (**O**). Species that are reported for the monument without the state indicated are marked by a ?.

Source (Appendix A)

Sources provide 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 Hovenweep NM herbarium (HOVE), 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 Hovenweep 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 and 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 Hovenweep NM is indicated by an “x” in the columns PinJun through Wet and is derived from the Hovenweep NM vegetation classification (Von Loh et al. 2008; Welsh et al. 2003). **PinJun** = Pinyon-Juniper woodlands/rimrock (including pockets of sandy soils and sagebrush). **PonP-DF** = Ponderosa Pine-Douglas Fir woodlands. **Wet** = Wetlands (including hanging gardens). Additional comments are included for species that are restricted to a particular soil/geologic type or are found mostly in disturbed sites.

Appendix A. Confirmed, historical, and reported vascular plant taxa of Hovenweep 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											
Agavaceae	<i>Yucca angustissima</i>	<i>Yucca angustissima</i>	<i>Y. angustissima</i> var. <i>angustissima</i>	narrowleaved yucca	Shrub	RegEn/ RegEn	Pres	X	X	Unc	Schelz 2124 (HOVE)	1975	State record for Colorado?
Agavaceae	<i>Yucca baccata</i>	<i>Yucca baccata</i>	<i>Y. baccata</i> var. <i>baccata</i>	datil yucca	Shrub	Wide/ Wide	Pres	X	X	Unc	Litzinger 631 (HOVE)	1975	
Agavaceae	<i>Yucca harrimaniae</i> var. <i>harrimaniae</i>	<i>Yucca harrimaniae</i>		Harriman's yucca	Shrub	Wide/ Wide	Rep	O		?	Schelz and Moran (2003)	NA	Type locality is Helper, Carbon Co., UT (Trelease s.n. MO)
Amaranthaceae	<i>Amaranthus blitoides</i>	<i>Amaranthus blitoides</i>	<i>A. graecizans</i>	prostrate pigweed	AnnF	Wide/ Wide	Rep	O		?	Schelz and Moran (2003)	NA	
Amaranthaceae	<i>Amaranthus cruentus</i>	<i>Amaranthus cruentus</i>		blood amaranth	AnnF	Intro/ Intro	Rep	?	?	?	Schelz and Moran (2003)	NA	Native to Central America
Amaranthaceae	<i>Amaranthus retroflexus</i>	<i>Amaranthus retroflexus</i>		redroot pigweed	AnnF	Intro/ Intro	Pres	X	X	Unc	Schelz 20010907b (HOVE)	1975	Native to Central America
Anacardiaceae	<i>Rhus aromatica</i> var. <i>simplicifolia</i>	<i>Rhus aromatica</i> ssp. <i>trilobata</i> forma <i>simplicifolia</i>	<i>R. trilobata</i> var. <i>simplicifolia</i>	squawbush	Shrub	Wide/ Periph	Pres	X	O	Unc	Schelz 2103 (HOVE)	2001	
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	Schelz 20020912.17 (HOVE)	1972	
Anacardiaceae	<i>Toxicodendron rydbergii</i>	<i>Toxicodendron rydbergii</i>	<i>Rhus radicans</i> , <i>T. radicans</i>	western poison ivy	Shrub	Wide/ Wide	Rep	O		?	Schelz and Moran (2003)	NA	
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	Unc	Schelz 20030611.02 (HOVE)	1973	
Asclepiadaceae	<i>Asclepias cryptoceras</i> var. <i>cryptoceras</i>	<i>Asclepias cryptoceras</i>		pallid milkweed	PerF	Wide/ Wide	Pres		X	Rare	Schelz 20010501 T (HOVE)	2001	
Berberidaceae	<i>Berberis fendleri</i>	<i>Berberis fendleri</i>		Fendler's barberry	Shrub	RegEn/ RegEn	Pres	X		Rare	Schelz 20020403.02 (HOVE)	2002	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Hovenweep 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	Schelz 2085 (HOVE)	1975	
Boraginaceae	<i>Cryptantha crassispala</i> var. <i>elachantha</i>	<i>Cryptantha crassispala</i> var. <i>elachantha</i>		thick-sepaled cryptanth	AnnF	Wide/ Wide	Pres	X	X	Unc	Litzinger 608 (HOVE)	1973	
Boraginaceae	<i>Cryptantha fendleri</i>	<i>Cryptantha fendleri</i>		sand dune cryptanth	AnnF	Wide/ Wide	Rep	?	?	?	Schelz and Moran (2003)	NA	
Boraginaceae	<i>Cryptantha flava</i>	<i>Oreocarya flava</i>		plateau yellow cryptanth	PerF	Wide/ Wide	Rep	O	O	?	Schelz and Moran (2003)	NA	
Boraginaceae	<i>Cryptantha flavocolata</i>	<i>Oreocarya flavocolata</i>		yellow-eye cryptanth	PerF	Wide/ Wide	Pres	X	X	Unc	Schelz 1962 (HOVE)	1975	
Boraginaceae	<i>Cryptantha fulvocanescens</i>	<i>Oreocarya fulvocanescens</i>	Includes vars. <i>fulvocanescens</i> & <i>echinoides</i>	plateau cryptanth	PerF	RegEn/ RegEn	Pres	X	X	Unc	Colyer & Oppelt 1047 (HOVE)	1972	Type locality of var. <i>echinoides</i> is Paria Canyon, Garfield Co., UT (Jones 5297p POM)
Boraginaceae	<i>Cryptantha gracilis</i>	<i>Cryptantha gracilis</i>		slender cryptanth	AnnF	Wide/ Wide	Pres	X	X	Rare	Schelz 2133 (HOVE)	2001	
Boraginaceae	<i>Cryptantha osterhoutii</i>	<i>Oreocarya osterhoutii</i>		Osterhout's cryptanth	PerF	RegEn/ RegEn	Pres	X	X	Unc	Schelz 20011005 J (HOVE)	2001	Type locality is Monument Park [Colorado National Monument], near Grand Junction, Mesa Co., CO (Osterhout 6138 RM). CO BLM: Sensitive
Boraginaceae	<i>Cryptantha pterocarya</i> var. <i>cycloptera</i>	<i>Cryptantha pterocarya</i>		wing-nut cryptanth	AnnF	Periph/ Periph	Pres	X		Unc	Schelz 20020503.15 (HOVE)	1973	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Hovenweep 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>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	Com	Schmidt 59 (HOVE)	1973	
Boraginaceae	<i>Lithospermum incisum</i>	<i>Lithospermum incisum</i>		showy stoneseed	PerF	Wide/ Wide	Pres	X	X	Unc	Schmidt 65 (HOVE)	1974	
Boraginaceae	<i>Lithospermum ruderale</i>	<i>Lithospermum ruderale</i>		western stoneseed	PerF	Wide/ Wide	Pres	X	X	Rare	Schelz 20011005 G (HOVE)	2001	
Boraginaceae	<i>Mertensia fusiformis</i>	<i>Mertensia oblongifolia</i>		spindle-rooted bluebell	PerF	RegEn/ RegEn	Pres	X	X	Rare	Schelz 2109 (HOVE)	2003	
Cactaceae	<i>Coryphantha vivipara</i> var. <i>arizonica</i>	<i>Coryphantha vivipara</i>	<i>Escobaria vivipara</i> var. <i>arizonica</i> . Vars. not recognized in <i>Flora of North America</i> (2003)	Arizona pincushion	PerF	Wide/ Wide	Pres	X	X	Unc	Fertig 22618 (HOVE)	2006	
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	O	Unc	Fertig 22613 (HOVE)	2006	
Cactaceae	<i>Opuntia erinacea</i> var. <i>erinacea</i>	<i>Opuntia erinacea</i>	<i>O. polyacantha</i> var. <i>erinacea</i>	common pricklypear	PerF	Wide/ Wide	Pres	O	X	Unc	Litzinger 656 (HOVE)	1975	
Cactaceae	<i>Opuntia erinacea</i> var. <i>utahensis</i>		Vars. not recognized in <i>Flora of North America</i> (2003) - considered a few-spined variant of <i>O. polyacantha</i> .	Utah pricklypear	PerF	Wide/ NA	Rep	O		?	Schelz and Moran (2003)	NA	
Cactaceae	<i>Opuntia fragilis</i>	<i>Opuntia fragilis</i> var. <i>brachyartha</i>		brittle pricklypear	PerF	Wide/ Wide	Pres	X	X	Unc	Schelz 20020912.21 (HOVE)	2002	
Cactaceae	<i>Opuntia phaeacantha</i> var. <i>major</i>		Vars. not recognized in <i>Flora of North America</i> (2003)	large pricklypear	PerF	Wide/ NA	Rep	O		?	Schelz and Moran (2003)	NA	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Hovenweep 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>Opuntia phaeacantha</i> var. <i>phaeacantha</i>	<i>Opuntia phaeacantha</i>	Vars. not recognized in <i>Flora of North America</i> (2003)	berry pricklypear	PerF	Periph/ Wide	Pres	X	X	Com	Fertig 22614 (HOVE)	2006	
Cactaceae	<i>Opuntia polyacantha</i> var. <i>polyacantha</i>	<i>Opuntia polyacantha</i>	<i>Flora of North America</i> (2003) includes vars. <i>rufispina</i> & <i>trichophora</i>	plains pricklypear	PerF	Wide/ Wide	Pres	O	X	Com	Litzinger 656 (HOVE)	1975	
Cactaceae	<i>Opuntia whipplei</i>	<i>Cylindropuntia whipplei</i>		Whipple's cholla	Shrub	RegEn/ RegEn	Rep	O		?	Schelz and Moran (2003)	NA	
Cactaceae	<i>Sclerocactus whipplei</i> var. <i>roseus</i>	<i>Sclerocactus whipplei</i> var. <i>intermedius</i>	<i>S. parviflorus</i> . Includes <i>S. contortus</i> & <i>S. terrae-canyonae</i>	small-flower fishhook cactus	PerF	Wide/ Wide	Rep	O	O	Unc	Von Loh et al. (2008) & Schelz & Moran (2003)	2003	
Caryophyllaceae (Asteraceae)	<i>Arenaria fendleri</i> var. <i>eastwoodiae</i>	<i>Eremogone fendleri</i>	<i>Eremogone eastwoodiae</i> var. <i>eastwoodiae</i> , <i>A. eastwoodiae</i>	Eastwood's sandwort	PerF	Wide/ Wide	Pres	X	X	Unc	Schelz 20010503.14 (HOVE)	1973	
Caryophyllaceae	<i>Silene antirrhina</i>	<i>Silene antirrhina</i>		sleepy catchfly	AnnF	Wide/ Wide	Pres	X	X	Unc	Colyer 1049/1050 (HOVE)	1974	
Chenopodiaceae	<i>Atriplex canescens</i> var. <i>canescens</i>	<i>Atriplex canescens</i>	<i>A. canescens</i> var. <i>occidentalis</i>	four-wing saltbush	Shrub	Wide/ Wide	Pres	X	X	Com	Redfield 77 (HOVE)	1972	
Chenopodiaceae	<i>Atriplex confertifolia</i>	<i>Atriplex confertifolia</i>		shadscale	Shrub	Wide/ Wide	Pres	X	X	Com	Litzinger 752 (HOVE)	1972	
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		Rare	Litzinger 679 (HOVE)	1975	Type locality is near Emery, Emery Co., UT (Jones 5443 RM)
Chenopodiaceae	<i>Atriplex gardneri</i> var. <i>utahensis</i>		<i>A. tridentata</i> var. <i>robusta</i>	basin saltbush	Shrub	Wide/ NA	Pres	X		Unc	Schelz 2115 (HOVE)	2002	
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	Pres	X		Rare	Litzinger 678 (HOVE)	1975	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Hovenweep 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>Bassia scoparia</i>	<i>Bassia sieversiana</i>	<i>Kochia scoparia</i>	summer-cypress	AnnF	Intro/ Intro	Pres	X	X	Unc	Schelz 20010824 G (HOVE)	2001	Native to Eurasia
Chenopodiaceae	<i>Chenopodium album</i> var. <i>album</i>	<i>Chenopodium album</i>		lambquarter	AnnF	Intro/ Intro	Pres	X	X	Unc	Schelz 20010824 VA (HOVE)	2001	Native to Eurasia
Chenopodiaceae	<i>Chenopodium album</i> var. <i>berlandieri</i>	<i>Chenopodium berlandieri</i>	<i>C. berlandieri</i> var. <i>zschackei</i>	pitseed goosefoot	AnnF	Wide/ Wide	Pres	X	X	Unc	Schelz 20020912.14 (HOVE)	2001	
Chenopodiaceae	<i>Chenopodium desiccatum</i>	<i>Chenopodium desiccatum</i>	<i>C. pratericola</i>	desert goosefoot	AnnF	Sparse/ Wide	Rep	O	O	?	Schelz and Moran (2003)	NA	
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	X	Unc	Schelz 2122 (HOVE)	2003	
Chenopodiaceae	<i>Chenopodium glaucum</i> var. <i>salinum</i>	<i>Chenopodium glaucum</i>	<i>C. salinum</i>	oakleaf goosefoot	AnnF	Wide/ Wide	Pres	X	O	Rare	Litzinger 754 (HOVE)	1975	
Chenopodiaceae	<i>Chenopodium leptophyllum</i>	<i>Chenopodium leptophyllum</i>		narrow-leaf goosefoot	AnnF	Wide/ Wide	Pres	X	X	Unc	Schelz 2118 (HOVE)	2001	
Chenopodiaceae	<i>Grayia spinosa</i>	<i>Atriplex grayi</i>	<i>A. spinosa</i>	spiny hopsage	Shrub	Wide/ Wide	Pres	X	X	Unc	Litzinger 508 (HOVE)	1973	
Chenopodiaceae	<i>Halogeton glomeratus</i>	<i>Halogeton glomeratus</i>		halogeton	AnnF	Intro/ Intro	Rep	?	?	?	Schelz and Moran (2003)	NA	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	O	X	Rare	Litzinger 650 (HOVE)	1975	
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	O	Unc	Litzinger 800 (HOVE)	1975	Native to Asia
Chenopodiaceae (Sarcobataceae)	<i>Sarcobatus vermiculatus</i>	<i>Sarcobatus vermiculatus</i>		greasewood	Shrub	Wide/ Wide	Pres	X	O	Com	Schmidt 81 (HOVE)	1974	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Hovenweep 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>Spinacia oleracea</i>	<i>Spinacia oleracea</i>		spinach	AnnF	Intro / Intro	Pres	X		Rare	Litzinger s.n. (HOVE)	1974	Native to Eurasia
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	Pres	X		Unc	Litzinger 755 (HOVE)	1975	
Commelinaceae	<i>Tradescantia occidentalis</i>	<i>Tradescantia occidentalis</i>	Includes vars. <i>occidentalis</i> & <i>scopulorum</i>	western spiderwort	PerF	Wide / Wide	Rep		O	Unc	Von Loh et al. (2008)	2003	
Compositae (Asteraceae)	<i>Achillea millefolium</i> var. <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	Unc	Schelz 20010911 A (HOVE)	2001	
Compositae (Asteraceae)	<i>Ambrosia acanthicarpa</i>	<i>Ambrosia acanthicarpa</i>	<i>Franseria acanthicarpa</i>	bur ragweed	AnnF	Wide / Wide	Rep	?	?	?	Schelz and Moran (2003)	NA	
Compositae (Asteraceae)	<i>Antennaria parvifolia</i>	<i>Antennaria parvifolia</i>		common pussytoes	PerF	Wide / Wide	Rep	?	?	?	Schelz and Moran (2003)	NA	
Compositae (Asteraceae)	<i>Arctium minus</i>	<i>Arctium minus</i>		burdock	PerF	Intro / Intro	Pres	X	X	Unc	Schelz 20020912.25 (HOVE)	2002	CO state noxious weed (List C). Native to Eurasia
Compositae (Asteraceae)	<i>Artemisia bigelovii</i>	<i>Artemisia bigelovii</i>		Bigelow's sagebrush	Shrub	Wide / Wide	Pres	X	X	Unc	Litzinger 799 (HOVE)	1975	
Compositae (Asteraceae)	<i>Artemisia filifolia</i>	<i>Oligosporus filifolius</i>		sand sagebrush	Shrub	Wide / Wide	Rep	?	?	?	Schelz and Moran (2003)	NA	
Compositae (Asteraceae)	<i>Artemisia frigida</i>	<i>Artemisia frigida</i>		fringed sagebrush	Shrub	Wide / Wide	Pres	O	X	Unc	Schelz 20020912.18 (HOVE)	2002	
Compositae (Asteraceae)	<i>Artemisia ludoviciana</i> var. <i>albula</i>	<i>Artemisia ludoviciana</i> ssp. <i>albula</i>		Louisiana wormwood	PerF	Wide / Wide	Pres	X	X	Com	Litzinger 811 (HOVE)	1975	
Compositae (Asteraceae)	<i>Artemisia ludoviciana</i> var. <i>mexicana</i>	<i>Artemisia ludoviciana</i> ssp. <i>mexicana</i>		Louisiana wormwood	PerF	Wide / NA	Pres	X		Rare	Litzinger 810 (HOVE)	1975	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Hovenweep 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 nova</i> var. <i>nova</i>	<i>Seriphidium novum</i>	<i>A. arbuscula</i> var. <i>nova</i> ; vars. not recognized in <i>Flora of North America</i> (2006)	black sagebrush	Shrub	Wide	Pres	O	X	Unc	Schelz 20020607.06 (HOVE)	2002	
Compositae (Asteraceae)	<i>Artemisia spinescens</i>	<i>Picrothamnus desertorum</i>		budsage	Shrub	Wide/ Wide	Pres	X	O	Unc	Schelz 20010403 H (HOVE)	1975	
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	O	Com	Redfield 5 (HOVE)	1972	
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	Litzinger 829 (HOVE)	1975	
Compositae (Asteraceae)	<i>Balsamorhiza sagittata</i>	<i>Balsamorhiza sagittata</i>		arrowleaf balsamroot	PerF	Wide/ Wide	Pres	X	X	Unc	Schelz 20020607.16 (HOVE)	2002	
Compositae (Asteraceae)	<i>Brickellia californica</i>	<i>Brickellia californica</i>		California brickellbush	Shrub	Wide/ Wide	Pres	X	X	Unc	Schelz 20020924.3 (HOVE)	1975	
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	Schelz 2132 (HOVE)	2001	
Compositae (Asteraceae)	<i>Brickellia oblongifolia</i> var. <i>linifolia</i>	<i>Brickellia oblongifolia</i>		Mohave brickellbush	Shrub	Wide/ Wide	Pres	X	X	Unc	Schmidt 33 (HOVE)	1973	
Compositae (Asteraceae)	<i>Carduus nutans</i>	<i>Carduus nutans</i> var. <i>macrolepis</i>		musk thistle	PerF	Intro/ Intro	Pres	X	X	Unc	Fertig 22622 (HOVE)	2003	Utah state noxious weed. CO state noxious weed (List B). Native to Eurasia

Appendix A. Confirmed, historical, and reported vascular plant taxa of Hovenweep 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	Schelz 20010824 C (HOVE)	2001	UT state noxious weed. CO state noxious weed (List B). Native to Eurasia
Compositae (Asteraceae)	<i>Chaenactis steviooides</i>	<i>Chaenactis steviooides</i>		stevia dusty- maiden	AnnF	Wide/ Wide	Pres	X	Unc	Litzinger 550 (HOVE)	1973	
Compositae (Asteraceae)	<i>Chaetopappa ericoides</i>	<i>Leucelene ericoides</i>	<i>Aster arenosus</i>	rose-heath	PerF	Wide/ Wide	Pres	X	Com	Schmidt 41 (HOVE)	1973	
Compositae (Asteraceae)	<i>Chrysopsis villosa var. minor</i>	<i>Heterotheca villosa var. minor</i>	<i>C. villosa var. hispid</i> , <i>H. villosa var. hispida</i>	hispid golden- aster	PerF	Wide/ Wide	Pres	X	Unc	Schelz 20020607.2 (HOVE)	1972	
Compositae (Asteraceae)	<i>Chrysopsis villosa var. villosa</i>	<i>Heterotheca villosa var. villosa</i>	<i>hairy golden- aster</i>		PerF	Sparse/ Wide	Pres	X	Rare	Fertig 22617 (HOVE)	2006	
Compositae (Asteraceae)	<i>Chrysothamnus depressus</i>	<i>Chrysothamnus depressus</i>	<i>dwarf rabbitbrush</i>		Shrub	Wide/ Wide	Pres	O X	Unc	Schelz 2002912.31 (HOVE)	2002	
Compositae (Asteraceae)	<i>Chrysothamnus greenei</i>	<i>Chrysothamnus greenei</i>	<i>Greene's rabbitbrush</i>		Shrub	Wide/ Periph	Pres	X	Rare	Schelz 20010830 B (HOVE)	2001	HOVE specimens tend towards <i>C. viscidiflorus</i>
Compositae (Asteraceae)	<i>Chrysothamnus nauseosus var. gnaphalodes</i>	<i>Chrysothamnus nauseosus var. gnaphalodes</i>	<i>C. nauseosus var. hololeucus, Ericameria nauseosa var. hololeuca</i>	<i>graystem rabbitbrush</i>	Shrub	Wide/ Wide	Pres	X X	Unc	Schelz 20010824 S (HOVE)	1975	
Compositae (Asteraceae)	<i>Chrysothamnus nauseosus var. graveolens</i>	<i>Chrysothamnus nauseosus var. graveolens</i>	<i>Ericameria nauseosa var. graveolens, E. nauseosa var. glabrata; includes C. nauseosus var. oreophilus</i>	<i>glabrate rabbitbrush</i>	Shrub	Wide/ Wide	Pres	X X	Unc	Redfield 25 (HOVE)	1972	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Hovenweep 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>Chrysothamnus nauseosus</i> var. <i>junceus</i>	<i>Chrysothamnus nauseosus</i> var. <i>junceus</i>	<i>Ericameria nauseosa</i> var. <i>juncea</i>	rush rabbitbrush	Shrub	RegEn/ RegEn	Rep	O	O	?	Schelz and Moran (2003)	NA	
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	Pres		X	Rare	Schelz 20020912.16 (HOVE)	2002	
Compositae (Asteraceae)	<i>Chrysothamnus viscidiflorus</i> var. <i>stenophyllus</i>	<i>Chrysothamnus viscidiflorus</i> var. <i>stenophyllus</i>	Included in var. <i>viscidiflorus</i> by some authors	slenderleaf rabbitbrush	Shrub	Wide/ Wide	Pres	X		Com	Litzinger 327 (HOVE)	1973	
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	Schelz 20020912.41 (HOVE)	2001	Utah state noxious weed. CO state noxious weed (List B). Native to Eurasia
Compositae (Asteraceae)	<i>Cirsium calcareum</i> var. <i>calcareum</i>	<i>Cirsium calcareum</i>	<i>C. arizonicum</i> var. <i>bipinnatum</i>	Caineville thistle	PerF	RegEn/ RegEn	Pres		X	Unc	Schelz 20020912.29 (HOVE)	2002	Type locality is Bromide Pass, Henry Mtns, Garfield Co., UT (Jones 5695bh US)
Compositae (Asteraceae)	<i>Cirsium neomexicanum</i> var. <i>neomexicanum</i>	<i>Cirsium neomexicanum</i>	Vars. not recognized in <i>Flora of North America</i> (2006)	New Mexico thistle	PerF	Wide/ Wide	Rep	O	O	?	Schelz and Moran (2003)	NA	
Compositae (Asteraceae)	<i>Cirsium undulatum</i> var. <i>undulatum</i>	<i>Cirsium undulatum</i>		wavy-leaved thistle	PerF	Wide/ Wide	Rep		O	?	Schelz and Moran (2003)	NA	
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	Rep	O	O	?	Schelz and Moran (2003)	NA	
Compositae (Asteraceae)	<i>Crepis intermedia</i>	<i>Psilochenia intermedia</i>		gray hawksbeard	PerF	Wide/ Wide	Pres		X	Unc	Schelz 2087 (HOVE)	2003	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Hovenweep 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 occidentalis</i> var. <i>occidentalis</i>	<i>Psilochenia</i> <i>occidentalis</i>		western hawksbeard	PerF	Wide/ Wide	Pres	X	X	Unc	Schelz 20011005 K (HOVE)	2001	
Compositae (Asteraceae)	<i>Erigeron</i> <i>bellidiastrum</i>	<i>Erigeron</i> <i>bellidiastrum</i>	<i>E. bellidiastrum</i> var. <i>bellidiastrum</i>	pretty daisy	AnnF	Wide/ Wide	Pres	X	O	Unc	Schmidt 15 (HOVE)	1973	
Compositae (Asteraceae)	<i>Erigeron</i> <i>divergens</i> var. <i>divergens</i>	<i>Erigeron</i> <i>divergens</i>		spreading daisy	PerF	Wide/ Wide	Pres	X	X	Unc	Schelz 295 (HOVE)	2001	
Compositae (Asteraceae)	<i>Erigeron pumilus</i> var. <i>concinnus</i>	<i>Erigeron</i> <i>concinnus</i>	<i>E. concinnus</i> var. <i>concinnus</i> ; includes var. <i>subglaber</i>	Navajo fleabane	PerF	Wide/ Wide	Pres	X	X	Unc	Litzinger 594 (HOVE)	1975	
Compositae (Asteraceae)	<i>Erigeron</i> <i>utahensis</i> var. <i>utahensis</i>	<i>Erigeron</i> <i>utahensis</i>		Utah daisy	PerF	RegEn/ RegEn	Rep	O	O	?	Schelz and Moran (2003)	NA	Type locality is Kanab, Kane Co., UT (Thompson s.n. GH)
Compositae (Asteraceae)	<i>Gaillardia</i> <i>pinnatifida</i>	<i>Gaillardia</i> <i>pinnatifida</i>		Hopi blanketflower	PerF	Wide/ Wide	Pres	X	X	Unc	Schelz 2119 (HOVE)	2003	
Compositae (Asteraceae)	<i>Gutierrezia</i> <i>sarothrae</i>	<i>Gutierrezia</i> <i>sarothrae</i>		broom snakeweed	Shrub	Wide/ Wide	Pres	X	X	Abun	Schelz 20010824 T (HOVE)	1972	
Compositae (Asteraceae)	<i>Haplopappus</i> <i>armerioides</i> var. <i>armerioides</i>	<i>Stenotus</i> <i>armerioides</i>	<i>S. armerioides</i> var. <i>armerioides</i>	thrift goldenweed	PerF	Wide/ Wide	Pres	O	X	Unc	Schelz 20020503.19 (HOVE)	2002	
Compositae (Asteraceae)	<i>Haplopappus</i> <i>spinulosus</i> var. <i>paradoxus</i>	<i>Machaeranthera</i> <i>pinnatifida</i> var. <i>paradoxa</i>	<i>Xanthisma</i> <i>spinulosum</i> var. <i>paradoxum</i>	spiny goldenweed	PerF	RegEn/ RegEn	Pres	X		Unc	Schelz 20010430 K (HOVE)	1973	
Compositae (Asteraceae)	<i>Helianthus</i> <i>annuus</i> var. <i>lenticularis</i>	<i>Helianthus</i> <i>annuus</i>	Vars. not recognized in <i>Flora of North</i> <i>America</i> (2006)	common sunflower	AnnF	Wide/ Wide	Pres	X	X	Unc	Litzinger 823 (HOVE)	1975	
Compositae (Asteraceae)	<i>Helianthus</i> <i>petiolaris</i> ssp. <i>fallax</i>	<i>Helianthus</i> <i>petiolaris</i>	Includes var. <i>petiolaris</i>	prairie sunflower	AnnF	Wide/ Wide	Pres	X		Unc	Litzinger 324 (HOVE)	1975	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Hovenweep 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	O	X	Unc	Fertig 22623 (HOVE)	2006	
Compositae (Asteraceae)	<i>Hymenoxys acaulis</i> var. <i>ivesiana</i>	<i>Tetrameuris acaulis</i>	<i>H. argentea</i> var. <i>ivesiana</i> , <i>Tetrameuris ivesiana</i>	Canyonlands hymenoxys	PerF	Wide/ Wide	Pres	X	X	Unc	Schelz 2130 (HOVE)	1972	
Compositae (Asteraceae)	<i>Hymenoxys richardsonii</i> var. <i>floribunda</i>	<i>Picradenia richardsonii</i> var. <i>floribunda</i>		Colorado rubber-plant	PerF	Wide/ Sparse	Pres	X	X	Unc	Schelz 2078 (HOVE)	2002	
Compositae (Asteraceae)	<i>Iva xanthifolia</i>	<i>Cyclachaena xanthifolia</i>		marsh-elder	AnnF	Wide/ Wide	Rep		O	?	Schelz and Moran (2003)	NA	
Compositae (Asteraceae)	<i>Lactuca serriola</i>	<i>Lactuca serriola</i>		prickly lettuce	AnnF	Intro/ Intro	Pres	X	X	Unc	Litzinger 802 (HOVE)	1973	Native to Europe
Compositae (Asteraceae)	<i>Lygodesmia grandiflora</i> var. <i>grandiflora</i>	<i>Lygodesmia grandiflora</i>		showy rush-pink	PerF	Wide/ Wide	Rep	?	?	?	Schelz and Moran (2003)	NA	
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	Schelz 20010824 U (HOVE)	2001	
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	Rep		O	?	Schelz and Moran (2003)	NA	
Compositae (Asteraceae)	<i>Malacothrix sonchoides</i>	<i>Malacothrix sonchoides</i>		sowthistle desert-dandelion	AnnF	Wide/ Wide	Pres	X	X	Unc	Litzinger 633 (HOVE)	1973	
Compositae (Asteraceae)	<i>Petrorhiza pumila</i> var. <i>pumila</i>	<i>Petrorhiza pumila</i>	<i>Solidago petradoria</i>	rock-goldenrod	PerF	Wide/ Wide	Pres	X	X	Unc	Schelz 2077 (HOVE)	2002	
Compositae (Asteraceae)	<i>Senecio douglasii</i> var. <i>longilobus</i>	<i>Senecio flaccidus</i> var. <i>douglasii</i>	<i>S. longilobus</i> , <i>S. flaccidus</i> var. <i>flaccidus</i>	Douglas' groundsel	PerF	Wide/ Wide	Pres	X	X	Unc	Litzinger 743 (HOVE)	1975	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Hovenweep 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	Unc	Schelz 20010430 A (HOVE)	1973	
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		Rare	Schmidt s.n. (HOVE)	1973	
Compositae (Asteraceae)	<i>Taraxacum officinale</i>	<i>Taraxacum officinale</i>		common dandelion	PerF	Intro/ Intro	Pres	O	X	Unc	Schelz 20030611.03 (HOVE)	2003	Native to Eurasia
Compositae (Asteraceae)	<i>Tetradymia canescens</i>	<i>Tetradymia canescens</i>		spineless horsebrush	Shrub	Wide/ Wide	Pres	O	X	Unc	Schelz 2101 (HOVE)	2003	
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	Schelz 20010501 B (HOVE)	2001	
Compositae (Asteraceae)	<i>Townsendia incana</i>	<i>Townsendia incana</i>		hoaty townsendia	PerF	Wide/ Wide	Pres	X	X	Unc	Litzinger 595 (HOVE)	1973	
Compositae (Asteraceae)	<i>Tragopogon dubius</i>	<i>Tragopogon dubius</i> var. <i>major</i>		yellow salsify	PerF	Intro/ Intro	Pres	X	O	Unc	Schmidt 37 (HOVE)	1973	Native to Europe
Compositae (Asteraceae)	<i>Viguiera multiflora</i> var. <i>multiflora</i>	<i>Helioeris multiflora</i> var. <i>multiflora</i>		showy goldeneye	PerF	Wide/ Wide	Pres		X	Unc	Schelz s.n. (HOVE)	2002	
Convulvaceae	<i>Convolvulus arvensis</i>	<i>Convolvulus arvensis</i>		field bindweed	PerF	Intro/ Intro	Pres	X	X	Unc	Schelz 2096 (HOVE)	1973	Utah state noxious weed. CO state noxious weed (List C). Native to Eurasia
Crassulaceae	<i>Sedum lanceolatum</i>	<i>Amerosdeum lanceolatum</i>	Includes ssp. <i>lanceolatum</i> & <i>subalpinum</i>	lance-leaved stoncrop	PerF	Wide/ Wide	Rep	?	?	?	Schelz and Moran (2003)	NA	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Hovenweep 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 (Celastraceae)	<i>Glossopetalon spinescens</i> var. <i>microphyllum</i>	<i>Forsellesia meionandra</i>		small-leaved greasebush	Shrub	RegEn/ RegEn	Pres	X		Rare	Colyer s.n. (HOVE)	1992	Type locality is Left Fork Sawtooth Canyon, House Range, Millard Co., UT (Holmgren & Holmgren 11292 NY)
Cruciferae (Brassicaceae)	<i>Alyssum minus</i> var. <i>micranthum</i>	<i>Alyssum parviflorum</i>	<i>A. parviflorum</i> var. <i>micranthum</i> , <i>A. simplex</i>	European madwort	AnnF	Intro/ Intro	Pres	X	X	Unc	Schelz 20010430 G (HOVE)	2001	Native to Eurasia
Cruciferae (Brassicaceae)	<i>Arabis holboellii</i> var. <i>pinetorum</i>	<i>Boechea holboellii</i> var. <i>pinetorum</i>	Name may be misapplied (Holmgren et al. 2005)	Holboell's rockcross	PerF	Wide/ Wide	Rep	O	O	?	Schelz and Moran (2003)	NA	
Cruciferae (Brassicaceae)	<i>Arabis perennans</i> var. <i>perennans</i>	<i>Boechea perennans</i>		perennial rockcross	PerF	Wide/ Wide	Pres	X		Rare	Schelz 20010403 J (HOVE)	2001	
Cruciferae (Brassicaceae)	<i>Arabis pulchra</i> var. <i>pallens</i>	<i>Boechea pulchra</i> var. <i>pallens</i>		desert rockcross	PerF	Wide/ Wide	Pres	X	X	Unc	Litzinger 480 (HOVE)	1975	Type locality is Westwater, Grand Co., UT (Jones s.n. US)
Cruciferae (Brassicaceae)	<i>Camelina microcarpa</i>	<i>Camelina microcarpa</i>		little-pod false flax	AnnF	Intro/ Intro	Pres	X		Unc	Schelz 20011005 R (HOVE)	2001	Native to Asia
Cruciferae (Brassicaceae)	<i>Chorispora tenella</i>	<i>Chorispora tenella</i>		blue mustard	AnnF	Intro/ Intro	Pres	X		Unc	Schelz 20010403 M (HOVE)	2001	Native to Asia
Cruciferae (Brassicaceae)	<i>Descurainia pinnata</i> var. <i>osmiarum</i>	<i>Descurainia pinnata</i> ssp. <i>halictorum</i>		western tansy- mustard	AnnF	Wide/ Sparse	Pres	X	X	Com	Litzinger 482 (HOVE)	1973	
Cruciferae (Brassicaceae)	<i>Descurainia sophia</i>	<i>Descurainia sophia</i>		flixweed	AnnF	Intro/ Intro	Pres	X	O	Unc	Litzinger 606 (HOVE)	1975	Native to Europe

Appendix A. Confirmed, historical, and reported vascular plant taxa of Hovenweep 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>Dithyrea wislizenii</i>	<i>Dimorphocarpa wislizenii</i>		spectacle-pod	AnnF	Wide/ Periph	Pres	X		Rare	Schelz 20010403 G (HOVE)	2001	
Cruciferae (Brassicaceae)	<i>Draba cuneifolia</i> var. <i>cuneifolia</i>	<i>Draba cuneifolia</i>		wedgeleaf draba	AnnF	Wide/ Wide	Pres	X	O	Unc	Litzinger 481 (HOVE)	1975	
Cruciferae (Brassicaceae)	<i>Lepidium densiflorum</i> var. <i>densiflorum</i>	<i>Lepidium densiflorum</i>	Welsh et al. (2003) include var. <i>macrocarpum</i>	prairie pepperwort	AnnF	Wide/ Wide	Pres	X	O	Unc	Litzinger 485 (HOVE)	1975	
Cruciferae (Brassicaceae)	<i>Lepidium lasiocarpum</i> var. <i>lasiocarpum</i>	<i>Lepidium lasiocarpum</i>		hairy-pod pepperwort	AnnF	Wide/ Periph	Pres	X	X	Unc	Schelz 2141 (HOVE)	2001	
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	Litzinger 325 (HOVE)	1974	Type locality is St. George, Washington Co., UT (Jones 1636 NY)
Cruciferae (Brassicaceae)	<i>Lepidium perfoliatum</i>	<i>Lepidium perfoliatum</i>		clasping pepperwort	AnnF	Intro/ Intro	Pres	X		Unc	Schelz 20010430 N (HOVE)	1975	Native to Europe
Cruciferae (Brassicaceae)	<i>Malcolmia africana</i>	<i>Malcolmia africana</i>		African mustard	AnnF	Intro/ Intro	Rep	O	O	?	Schelz and Moran (2003)	NA	Native to Africa
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	Unc	Schmidt 69 (HOVE)	1973	
Cruciferae (Brassicaceae)	<i>Physaria rectipes</i>	<i>Lesquerella rectipes</i>		Colorado Plateau bladderpod	PerF	RegEn/ RegEn	Pres		X	Unc	Schelz 20011005 I (HOVE)	2001	
Cruciferae (Brassicaceae)	<i>Schoenocrambe linifolia</i>	<i>Schoenocrambe linifolia</i>	<i>Sisymbrium linifolium</i>	flax-leaved plainsmustard	PerF	Wide/ Wide	Pres		X	Unc	Schelz 20011005 F (HOVE)	2001	
Cruciferae (Brassicaceae)	<i>Sisymbrium altissimum</i>	<i>Sisymbrium altissimum</i>		tumble mustard	AnnF	Intro/ Intro	Pres	X	O	Unc	Litzinger 484 (HOVE)	1973	Native to Europe
Cruciferae (Brassicaceae)	<i>Stanleya pinnata</i>	<i>Stanleya pinnata</i> var. <i>pinnata</i>		prince's-plume	PerF	Wide/ Wide	Pres	X	O	Unc	Schmidt 73 (HOVE)	1973	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Hovenweep 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)	Streptanthella longirostris	Streptanthella longirostris		long-beak fiddle- mustard	AnnF	Wide/ Periph	Pres	X	O	Unc	Schelz 20010403 D (HOVE)	1973	
Cruciferae (Brassicaceae)	Streptanthus cordatus	Streptanthus cordatus	<i>S. cordatus</i> var. <i>cordatus</i>	heart-leaf jewelflower	PerF	Wide/ Wide	Pres	X	X	Unc	Litzinger 484 (HOVE)	1973	
Cruciferae (Brassicaceae)	<i>Thlaspi montanum</i> var. <i>montanum</i>	<i>Noccaea montana</i>	<i>N. montana</i> var. <i>montana</i>	alpine pennycress	PerF	Wide/ Wide	Rep	O	O	?	Schelz and Moran (2003)	NA	
Cucurbitaceae	<i>Cucurbita foetidissima</i>	<i>Cucurbita foetidissima</i>		buffalo gourd	PerF	Wide/ Wide	Rep	?	?	?	Schelz and Moran (2003)	NA	
Cupressaceae	<i>Juniperus osteosperma</i>	<i>Sabina osteosperma</i>		Utah juniper	Shrub	Wide/ Wide	Pres	X	X	Abun	Schelz 2116 (HOVE)	1972	
Cuscutaceae (Convolvulaceae)	<i>Cuscuta pentagona</i>	<i>Grammica campestris</i>		field dodder	AnnF	Wide/ Wide	Rep	?	?	?	Schelz and Moran (2003)	NA	
Cyperaceae	<i>Carex geyeri</i>	<i>Carex geyeri</i>		elk sedge	PerG	Wide/ Wide	Rep		O	?	Schelz and Moran (2003)	NA	
Cyperaceae	<i>Carex occidentalis</i>	<i>Carex occidentalis</i>		western sedge	PerG	Wide/ Wide	Pres	X	X	Rare	Schelz 20010824 K (HOVE)	2001	
Cyperaceae	<i>Carex praeegracilis</i>	<i>Carex praeegracilis</i>		blackcreeper sedge	PerG	Wide/ Wide	Pres	X	X	Rare	Schelz 2134 (HOVE)	2002	
Cyperaceae	<i>Carex rossii</i>	<i>Carex rossii</i>	<i>C. deflexa</i> var. <i>bootlii</i> , <i>C. brevipes</i> , <i>C.</i> <i>pityophila</i>	Ross' sedge	PerG	Wide/ Wide	Pres	X	X	Unc	Fertig 22619 (HOVE)	2006	
Cyperaceae	<i>Scirpus maritimus</i>	<i>Bolboschoenus maritimus</i> ssp. <i>paludosus</i>	<i>Scirpus maritimus</i> var. <i>paludosus</i> , <i>Schoenoplectus</i> <i>maritimus</i>	alkali bulrush	PerG	Wide/ Wide	Pres	X		Rare	Schelz 2092 (HOVE)	2001	
Ephedraceae	<i>Ephedra torreyana</i>	<i>Ephedra torreyana</i>		Torrey's ephedra	Shrub	Wide/ Wide	Pres	X	O	Unc	Schelz 2062 (HOVE)	2002	
Ephedraceae	<i>Ephedra viridis</i> var. <i>viridis</i>	<i>Ephedra viridis</i> var. <i>viridis</i>		green ephedra	Shrub	Wide/ Wide	Pres	X	X	Com	Schmidt 89 (HOVE)	1972	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Hovenweep 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											
Euphorbiaceae	<i>Chamaesyce fendleri</i>	<i>Chamaesyce fendleri</i>	<i>Euphorbia fendleri</i>	Fendler's spurge	PerF	Wide/ Wide	Pres	X	O	Unc	Litzinger 326 (HOVE)	1973	
Euphorbiaceae	<i>Chamaesyce glyptosperma</i>	<i>Chamaesyce glyptosperma</i>	<i>Euphorbia glyptosperma</i>	ridge-seeded spurge	AnnF	Wide/ Wide	Rep	?	?	?	Schelz and Moran (2003)	NA	
Fagaceae	<i>Quercus gambelii</i> var. <i>gambelii</i>	<i>Quercus gambelii</i>		Gambel's oak	Tree	Wide/ Wide	Pres	X	O	Unc	Litzinger 830 (HOVE)	1975	
Fagaceae	<i>Quercus welshii</i>	<i>Quercus havardii</i> var. <i>tuckeri</i>	<i>Q. undulata</i>	shinnery oak	Shrub	RegEn/ RegEn	Pres	X		Unc	Schmidt 97 (HOVE)	1973	Type locality of <i>Q. havardii</i> var. <i>tuckeri</i> is Low Pass E of Kens Lake, San Juan Co., UT (Welsh & Higgins 23630 BRY)
Fagaceae	<i>Quercus x eastwoodiae</i>	<i>Quercus x eastwoodiae</i>	Hybrid between <i>Q. gambelii</i> x <i>Q. welshii</i>	Eastwood's oak	Shrub	RegEn/ RegEn	Pres	X	X	Rare	Schelz 20020912.6 (HOVE)	2002	Type locality is Butler Wash, San Juan Co., UT (Eastwood 141 NY)
Fumariaceae	<i>Corydalis aurea</i> var. <i>occidentalis</i>	<i>Corydalis curvisiliqua</i> ssp. <i>occidentalis</i>		golden corydalis	PerF	Wide/ Wide	Pres	X	X	Unc	Schelz 2170 (HOVE)	1975	
Gentianaceae	<i>Swertia utahensis</i>	<i>Frasera paniculata</i>		Utah swertia	PerF	RegEn/ RegEn	Pres	X	X	Unc	Schmidt 56 (HOVE)	1973	Type locality is Buckskin Mts, Kaibab Plateau "on the so. edge of Utah", Kane Co., UT (Jones s.n. POM). CO BLM Sensitive

Appendix A. Confirmed, historical, and reported vascular plant taxa of Hovenweep 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											
Geraniaceae	<i>Erodium cicutarium</i>	<i>Erodium cicutarium</i>		stork's-bill	AnnF	Intro/ Intro	Pres	X	O	Unc	Schelz 2071 (HOVE)	1973	CO state noxious weed (List B). Native to Europe
Gramineae (Poaceae)	<i>Aegilops cylindrica</i>	<i>Cylindropyrum cylindricum</i>		jointed goatgrass	AnnG	Intro/ Intro	Rep	O	O	?	Schelz and Moran (2003)	NA	CO state noxious weed (List C). Native to Eurasia
Gramineae (Poaceae)	<i>Agropyron cristatum</i>	<i>Agropyron desertorum</i>	<i>A. cristatum</i> var. <i>cristatum</i> , <i>A. cristatum</i> ssp. <i>pectinatum</i> , <i>A. sibiricum</i> , <i>A. mongolicum</i>	crested wheatgrass	PerG	Intro/ Intro	Pres	O	X	Unc	Fertig 22616 (HOVE)	2006	Native to Eurasia.
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	Schelz 1959 (HOVE)	2002	Native to Eurasia and Africa
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	O	Unc	Litzinger 322 (HOVE)	1975	
Gramineae (Poaceae)	<i>Avena fatua</i> var. <i>sativa</i>	<i>Avena fatua</i> var. <i>sativa</i>	<i>A. sativa</i>	oats	AnnG	Intro/ Intro	Pres	X		Rare	Litzinger 824 (HOVE)	1975	Native to Eurasia
Gramineae (Poaceae)	<i>Bouteloua gracilis</i>	<i>Chondrosum gracile</i>		blue grama	PerG	Wide/ Wide	Pres	O	X	Unc	Schelz 2117 (HOVE)	2001	
Gramineae (Poaceae)	<i>Bromus inermis</i> var. <i>inermis</i>	<i>Bromopsis inermis</i>		smooth brome	PerG	Intro/ Intro	Pres	X	X	Unc	Schelz 20020607.01 (HOVE)	2002	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	Schelz 2064 (HOVE)	1975	Native to Eurasia.
Gramineae (Poaceae)	<i>Bromus rubens</i>	<i>Anisantha rubens</i>		red brome	AnnG	Intro/ Intro	Pres	X	X	Unc	Litzinger 575 (HOVE)	1975	Native to Eurasia

Appendix A. Confirmed, historical, and reported vascular plant taxa of Hovenweep 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 tectorum</i>	<i>Anisantha tectorum</i>		cheatgrass	AnnG	Intro/ Intro	Pres	X	O	Abun	Litzinger 305 (HOVE)	1973	CO state noxious weed (List C). Native to Eurasia
Gramineae (Poaceae)	<i>Bromus trinii</i>	<i>Bromus trinii</i>	<i>B. berteruanus</i>	Chilean chess	AnnG	Intro/ Intro	Rep		O	?	Schelz and Moran (2003)	NA	Native to South America
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	Rep	?	?	?	Schelz and Moran (2003)	NA	Native to Eurasia.
Gramineae (Poaceae)	<i>Elymus elongatus</i>	<i>Thinopyrum ponticum</i>	<i>E. elongatus</i> var. <i>ponticus</i> , <i>Agropyron elongatum</i>	tall wheatgrass	PerG	Intro/ Intro	Rep		O	?	Schelz and Moran (2003)	NA	Native to Eurasia
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	O	Unc	Litzinger 310 (HOVE)	1973	
Gramineae (Poaceae)	<i>Elymus hispidus</i>	<i>Thinopyrum intermedium</i> ssp. <i>barbulatum</i>	<i>E. hispidus</i> var. <i>hispidus</i> , <i>Agropyron intermedium</i> , <i>Elytrigia intermedia</i>	intermediate wheatgrass	PerG	Intro/ Intro	Pres		X	Unc	Schelz 20010824 N (HOVE)	2001	Native to Eurasia
Gramineae (Poaceae)	<i>Elymus salinus</i>	<i>Leymus salina</i>	<i>E. salina</i> , <i>L. ambiguus</i>	Salina wildrye	PerG	Wide/ Wide	Pres	X	X	Unc	Schelz 2137 (HOVE)	1973	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	O	X	Unc	Schelz 2112 (HOVE)	2003	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Hovenweep 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>A. caninum</i> , <i>A.</i> <i>subsecundum</i> , <i>A.</i> <i>trachycaulum</i> , <i>A.</i> <i>latiglume</i>	slender wheatgrass	PerG	Wide/ Wide	Pres	X	X	Unc	Schelz 1958 (HOVE)	2001	
Gramineae (Poaceae)	<i>Erioneuron pilosum</i>	<i>Erioneuron pilosum</i>		hairy tridens	PerG	Wide/ Wide	Pres	X		Rare	Schelz 20010430 F (HOVE)	2001	
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	O	Unc	Litzinger 477 (HOVE)	1975	
Gramineae (Poaceae)	<i>Festuca pratensis</i>	<i>Festuca pratensis</i>	<i>Lolium pratense</i> , <i>Schedonorus</i> <i>pratensis</i>	meadow fescue	PerG	Intro/ Intro	Rep	?	?	?	Schelz and Moran (2003)	NA	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	X	Unc	Fertig 22627 (HOVE)	2006	
Gramineae (Poaceae)	<i>Hilaria jamesii</i>	<i>Hilaria jamesii</i>	<i>Pleuraphis jamesii</i>	galleta	PerG	Wide/ Wide	Pres	X	X	Com	Litzinger 312 (HOVE)	1974	
Gramineae (Poaceae)	<i>Hordeum jubatum</i>	<i>Critesion jubatum</i>		foxtail barley	PerG	Wide/ Wide	Pres	O	X	Unc	Schelz 20020607.03 (HOVE)	2002	
Gramineae (Poaceae)	<i>Hordeum murinum</i>	<i>Critesion glaucum</i>	<i>H. murinum</i> ssp. <i>leporinum</i> , <i>H.</i> <i>leporinum</i>	rabbit barley	AnnG	Intro/ Intro	Pres	X		Unc	Schelz 20010430 B (HOVE)	1975	Native to Europe.
Gramineae (Poaceae)	<i>Koeleria macrantha</i>	<i>Koeleria macrantha</i>	<i>K. cristata</i> , <i>K.</i> <i>pyramidata</i> , <i>K.</i> <i>nitida</i>	junegrass	PerG	Wide/ Wide	Pres	O	X	Unc	Schelz 2111 (HOVE)	2001	
Gramineae (Poaceae)	<i>Muhlenbergia andina</i>	<i>Muhlenbergia andina</i>		foxtail muhly	PerG	Wide/ Wide	Rep	?	?	?	Schelz and Moran (2003)	NA	
Gramineae (Poaceae)	<i>Muhlenbergia pungens</i>	<i>Muhlenbergia pungens</i>		sandhill muhly	PerG	Wide/ Wide	Rep	O	O	?	Schelz and Moran (2003)	NA	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Hovenweep 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>Munroa squarrosa</i>	<i>Monroa squarrosa</i>		false buffalograss	AnnG	Wide/ Wide	Pres	X		Rare	Schelz 20010830 D (HOVE)	2001	
Gramineae (Poaceae)	<i>Oryzopsis micrantha</i>	<i>Piptatherum micranthum</i>		littleseed ricegrass	PerG	Wide/ Wide	Rep	?	?	?	Schelz and Moran (2003)	NA	
Gramineae (Poaceae)	<i>Phragmites australis</i>	<i>Phragmites australis</i>	<i>P. communis</i>	common reed	PerG	Wide/ Wide	Rep		O	?	Schelz and Moran (2003)	NA	
Gramineae (Poaceae)	<i>Poa bigelovii</i>	<i>Poa bigelovii</i>		Bigelow's bluegrass	AnnG	Wide/ Periph	Pres	X	X	Unc	Schelz 2139 (HOVE)	2003	
Gramineae (Poaceae)	<i>Poa bulbosa</i>	<i>Poa bulbosa</i>		bulbous bluegrass	PerG	Intro/ Intro	Pres	X	X	Unc	Schelz 20011005 S (HOVE)	2001	Native to Eurasia and Africa
Gramineae (Poaceae)	<i>Poa compressa</i>	<i>Poa compressa</i>		Canada bluegrass	PerG	Intro/ Intro	Pres		X	Unc	Schelz 2102 (HOVE)	2001	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> ; includes reports of <i>P. cusickii</i> & <i>P. epilis</i>	muttongrass	PerG	Wide/ Wide	Pres	X	X	Com	Schelz 1966 (HOVE)	1975	
Gramineae (Poaceae)	<i>Poa pratensis</i>	<i>Poa pratensis</i>	<i>P. agassizensis</i>	Kentucky bluegrass	PerG	Intro/ Intro	Pres	X	X	Unc	Schelz 2110 (HOVE)	2001	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	Unc	Schelz 1950 (HOVE)	1975	
Gramineae (Poaceae)	<i>Polygonon monspeliensis</i>	<i>Polygonon monspeliensis</i>		rabbitfoot-grass	AnnG	Intro/ Intro	Pres	X		Unc	Schelz 20010830 J (HOVE)	1973	Native to Eurasia and Africa

Appendix A. Confirmed, historical, and reported vascular plant taxa of Hovenweep 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>Sporobolus airoides</i> var. <i>airoides</i>	<i>Sporobolus airoides</i>		alkali sacaton	PerG	Wide/ Wide	Pres	X	X	Unc	Litzinger 682 (HOVE)	1975	
Gramineae (Poaceae)	<i>Sporobolus contractus</i>	<i>Sporobolus contractus</i>		spike dropseed	PerG	Wide/ Sparse	Rep	?	?	?	Schelz and Moran (2003)	NA	
Gramineae (Poaceae)	<i>Sporobolus cryptandrus</i>	<i>Sporobolus cryptandrus</i>		sand dropseed	PerG	Wide/ Wide	Pres	O	X	Unc	Schelz 20010824 E (HOVE)	2001	
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	O	Unc	Litzinger 576 (HOVE)	1975	
Gramineae (Poaceae)	<i>Stipa hymenoides</i>	<i>Achnatherum hymenoides</i>	<i>Oryzopsis hymenoides</i>	Indian ricegrass	PerG	Wide/ Wide	Pres	X	O	Unc	Litzinger 302 (HOVE)	1975	
Gramineae (Poaceae)	<i>Stipa speciosa</i>	<i>Achnatherum speciosum</i>	<i>Jarava speciosa</i>	desert needlegrass	PerG	Wide/ Periph	Pres	X	X	Unc	Schelz 2099 (HOVE)	2002	
Hydrophyllaceae	<i>Phacelia crenulata</i> var. <i>corrugata</i>	<i>Phacelia crenulata</i>	Var. not recognized in Cronquist et al. (1984)	corrugate phacelia	AnnF	Wide/ Wide	Pres	X	X	Unc	Schmidt 65 (HOVE)	1973	
Hydrophyllaceae	<i>Phacelia ivesiana</i>	<i>Phacelia ivesiana</i>		ives' phacelia	AnnF	Wide/ Wide	Pres	X	X	Unc	Schelz 20010501 J (HOVE)	2001	
Iridaceae	<i>Iris germanica</i>	<i>Iris germanica</i>		German iris	PerF	Intro/ Intro	Rep	O		?	Schelz and Moran (2003)	NA	Native to Europe
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	O	X	Unc	Schelz 2063 (HOVE)	2003	
Juncaceae	<i>Juncus longistylus</i>	<i>Juncus longistylus</i>		longstyle rush	PerG	Wide/ Wide	Pres	X	X	Rare	Litzinger 336 (HOVE)	1974	
Juncaceae	<i>Juncus torreyi</i>	<i>Juncus torreyi</i>		Torrey's rush	PerG	Wide/ Wide	Pres	X	X	Unc	Schelz 2090 (HOVE)	2001	
Labiatae (Lamiaceae)	<i>Dracocephalum parviflorum</i>	<i>Dracocephalum parviflorum</i>	<i>Moldavica parviflora</i>	smallflower dragonhead	PerF	Wide/ Wide	Pres	X	X	Rare	Fertig 22620 (HOVE)	2006	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Hovenweep 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											
Labiatae (Lamiaceae)	<i>Hedeoma drummondii</i>	<i>Hedeoma drummondii</i>		mock pennyroyal	PerF	Wide/ Wide	Pres	X	O	Unc	Litzinger 757 (HOVE)	1975	
Labiatae (Lamiaceae)	<i>Marrubium vulgare</i>	<i>Marrubium vulgare</i>		common horehound	PerF	Intro/ Intro	Pres	X	X	Unc	Litzinger 337 (HOVE)	1973	Native to Eurasia
Labiatae (Lamiaceae)	<i>Nepeta cataria</i>	<i>Nepeta cataria</i>		catnip	PerF	Intro/ Intro	Pres		X	Unc	Harms, R. s.n. (HOVE)	2005	Native to Europe
Leguminosae (Fabaceae)	<i>Astragalus amphioxys</i> var. <i>amphioxys</i>	<i>Astragalus amphioxys</i>		crescent milkvetch	PerF	Wide/ Periph	Pres	O	X	Unc	Schelz 20011005 W (HOVE)	2001	
Leguminosae (Fabaceae)	<i>Astragalus calycosus</i> var. <i>calycosus</i>	<i>Astragalus calycosus</i>		Torrey's milkvetch	PerF	Wide/ Periph	Pres		X	Rare	Colyer & Oppelt 1046 (HOVE)	1994	
Leguminosae (Fabaceae)	<i>Astragalus ceramicus</i> var. <i>ceramicus</i>	<i>Astragalus ceramicus</i> var. <i>ceramicus</i>		painted milkvetch	PerF	Wide/ Periph	Rep		O	?	Schelz and Moran (2003)	NA	
Leguminosae (Fabaceae)	<i>Astragalus coltonii</i> var. <i>moabensis</i>	<i>Astragalus coltonii</i> var. <i>moabensis</i>		Moab milkvetch	PerF	RegEn/ RegEn	Pres	X	X	Rare	Schelz 20010811 A (HOVE)	2001	Type locality is near Monticello, San Juan Co., UT (Eastwood 9 POM)
Leguminosae (Fabaceae)	<i>Astragalus desperatus</i> var. <i>desperatus</i>	<i>Astragalus desperatus</i>		rimrock milkvetch	PerF	RegEn/ RegEn	Rep		O	?	Schelz and Moran (2003)	NA	Type locality is near CisCo., Grand Co., UT (Jones s.n. POM)
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	Schmidt 74 (HOVE)	1973	Type locality is Kanab, Kane Co., UT (Thompson s.n. GH)
Leguminosae (Fabaceae)	<i>Astragalus nuttallianus</i> var. <i>micranthiformis</i>	<i>Astragalus nuttallianus</i> var. <i>micranthiformis</i>		small-flowered milkvetch	AnnF	RegEn/ RegEn	Pres	X	X	Com	Schelz 20010430 P (HOVE)	1973	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Hovenweep 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 scopulorum</i>	<i>Astragalus scopulorum</i>	Includes reports of <i>A. adanus</i> for UT	Rocky Mountain milkvetch	PerF	Wide/ Wide	Pres	O	X	Unc	Schelz 20011005 U (HOVE)	2001	
Leguminosae (Fabaceae)	<i>Astragalus wingatanus</i>	<i>Astragalus wingatanus</i>		Fort Wingate milkvetch	PerF	RegEn/ RegEn	Pres		X	Unc	Fertig 22621 (HOVE)	2006	
Leguminosae (Fabaceae)	<i>Hedysarum boreale</i> var. <i>boreale</i>	<i>Hedysarum boreale</i>	Includes var. <i>pabulare</i>	northern sweetvetch	PerF	Wide/ Wide	Pres		X	Rare	Schelz 20010503.21 (HOVE)	2001	
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	Unc	Schelz 20020912.28 (HOVE)	2002	Includes reports of <i>L. argenteus</i> from Von Loh et al. (2008)
Leguminosae (Fabaceae)	<i>Lupinus polyphyllus</i> var. <i>ammophilus</i>	<i>Lupinus ammphilus</i>		sand lupine	PerF	RegEn/ RegEn	Pres		X	Rare	Schelz 2135 (HOVE)	2001	
Leguminosae (Fabaceae)	<i>Lupinus pusillus</i> var. <i>pusillus</i>	<i>Lupinus pusillus</i>		dwarf lupine	AnnF	Wide/ Wide	Rep	O	O	?	Schelz and Moran (2003)	NA	
Leguminosae (Fabaceae)	<i>Medicago sativa</i>	<i>Medicago sativa</i>	<i>M. sativa</i> var. <i>sativa</i>	alfalfa	PerF	Intro/ Intro	Pres		X	Unc	Schelz 20010824 B (HOVE)	2001	Native to Europe
Leguminosae (Fabaceae)	<i>Melilotus alba</i>	<i>Melilotus albus</i>	<i>M. albus</i> ; included in <i>M. officinalis</i> by some authors	white sweet-clover	AnnF	Intro/ ntro	Pres	X	O	Unc	Schmidt s.n. (HOVE)	1973	Native to Europe
Leguminosae (Fabaceae)	<i>Melilotus officinalis</i>	<i>Melilotus officinale</i>		yellow sweet-clover	PerF	Intro/ Intro	Pres	O	X	Unc	Schelz 20020607.07 (HOVE)	2002	Native to Europe
Leguminosae (Fabaceae)		<i>Peteria scoparia</i>		rush peteria	PerF	NA/ Periph	Pres		X	Rare	Litzinger 653 (HOVE)	1975	State record for Colorado (Weber & Wittmann 2001 consider previous reports erroneous)

Appendix A. Confirmed, historical, and reported vascular plant taxa of Hovenweep 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>Psoorothamnus thompsoniae</i> var. <i>thompsoniae</i>	<i>Psoorothamnus thompsoniae</i> var. <i>thompsoniae</i>		Thompson's indigo-bush	Shrub	LocEn/ LocEn	Pres	X	X	Rare	Schelz 20010503 A (HOVE)	2001	Type locality in N AZ, near Kanab, or along the Colorado River in SE UT or AZ (Thompson s.n. US). USFWS: 3C
Leguminosae (Fabaceae)	<i>Trifolium pratense</i>	<i>Trifolium pratense</i>		red clover	PerF	Intro/ Intro	Rep	O	O	Unc	Von Loh et al. (2008) & Schelz & Moran (2003)	2003	Native to Europe
Liliaceae (Alliaceae, Themidaceae)	<i>Androstephium breviflorum</i>	<i>Androstephium breviflorum</i>	<i>Brodiaea paysonii</i>	pink funnel-ily	PerF	Wide/ Wide	Pres	X	O	Unc	Schelz 20010403 A (HOVE)	1975	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	Rare	Schelz 20020607.04	2002	Native to Eurasia
Liliaceae (Calochortaceae)	<i>Calochortus flexuosus</i>	<i>Calochortus flexuosus</i>		sinuous mariposa	PerF	Wide/ Periph	Pres	X	X	Unc	Schmidt 82 (HOVE)	1973	Type locality is near Kanab, Kane Co., UT (Thompson s.n. GH). USFS R2 Sensitive.
Liliaceae (Calochortaceae)	<i>Calochortus nuttallii</i>	<i>Calochortus nuttallii</i>		sego-ily	PerF	Wide/ Wide	Pres	X	X	Unc	Fertig 22625 (HOVE)	2006	State flower of Utah
Liliaceae (Convallariaceae or Ruscaceae)	<i>Smilacina racemosa</i>	<i>Maianthemum amplexicaule</i>	<i>M. racemosum</i> var. <i>amplexicaule</i>	false Solomon's-seal	PerF	Wide/ Wide	Rep	?	?	?	Schelz and Moran (2003)	NA	
Liliaceae (Melanthiaceae)	<i>Zigadenus paniculatus</i>	<i>Toxicoscordion paniculatum</i>		foothills death camas	PerF	Wide/ Wide	Pres	X	X	Unc	Litzinger 510 (HOVE)	1976	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Hovenweep 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											
Linaceae	<i>Linum aristatum</i>	<i>Mesynium aristatum</i>		broom-flax	AnnF	Wide/ Periph	Rep	?	?	?	Schelz and Moran (2003)	NA	
Linaceae	<i>Linum perenne</i> ssp. <i>lewisii</i>	<i>Adenolinum lewisii</i>	<i>L. lewisii</i> var. <i>lewisii</i>	blue flax	PerF	Wide/ Wide	Pres	X	X	Unc	Schelz 20020425.01 (HOVE)	1974	
Loasaceae	<i>Mentzelia albicaulis</i>	<i>Acrolasia albicaulis</i>	<i>M. obscura</i> , A. <i>gracilis</i>	white-stem blazingstar	AnnF	Wide/ Wide	Pres	X		Unc	Litzinger 894 (HOVE)	1976	
Loasaceae	<i>Mentzelia marginata</i>	<i>Nuttallia marginata</i>	<i>M. marginata</i> var. <i>cronquistii</i> , <i>M. cronquistii</i> , N. <i>cronquistii</i>	Colorado stickleaf	PerF	RegEn/ RegEn	Pres	X		Rare	Litzinger 332 (HOVE)	1974	HOVE material is var. <i>cronquistii</i> . Type locality is 75 miles W of Blanding and 10 miles E of Hite, San Juan Co., UT (Cronquist 9030 NY)
Malvaceae	<i>Malva neglecta</i>	<i>Malva neglecta</i>		common mallow	AnnF	Intro/ Intro	Rep		O	?	Schelz and Moran (2003)	NA	Native to Eurasia
Malvaceae	<i>Sphaeralcea coccinea</i>	<i>Sphaeralcea coccinea</i> ssp. <i>dissecta</i>	Includes ssp. <i>coccinea</i> & <i>elata</i>	scarlet globe- mallow	PerF	Wide/ Wide	Pres	X	X	Unc	Schelz 20010403 Q (HOVE)	1973	
Malvaceae	<i>Sphaeralcea leptophylla</i>	<i>Sphaeralcea leptophylla</i>		slenderleaf globemallow	PerF	Wide/ Periph	Pres	X		Rare	Litzinger 370 (HOVE)	1974	
Malvaceae	<i>Sphaeralcea parvifolia</i>	<i>Sphaeralcea parvifolia</i>		small-leaf globemallow	PerF	Wide/ Wide	Pres	X	O	Unc	Schmidt 92 (HOVE)	1973	
Nyctaginaceae	<i>Abronia fragrans</i>	<i>Abronia elliptica</i>	<i>A. fragrans</i> var. <i>elliptica</i> , A. <i>nana</i> var. <i>harrisii</i>	fragrant sand- verbena	PerF	Wide/ Wide	Pres	X		Unc	Litzinger 573 (HOVE)	1973	
Nyctaginaceae	<i>Allionia incarnata</i>	<i>Allionia incarnata</i>	<i>A. incarnata</i> var. <i>incarnata</i>	trailing four- o'clock	PerF	Wide/ Periph	Rep	?	?	?	Schelz and Moran (2003)	NA	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Hovenweep 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>O. decumbens</i> , <i>M. glabra</i>	narrow-leaf four-o'clock	PerF	Wide/ Wide	Rep	O	O	?	Schelz and Moran (2003)	NA	
Nyctaginaceae	<i>Mirabilis multiflora</i>	<i>Mirabilis multiflora</i>	Includes vars. <i>multiflora</i> , <i>pubescens</i> , & <i>glandulosa</i>	showy four-o'clock	PerF	Wide/ Wide	Pres	X	O	Unc	Schmidt 98 (HOVE)	1973	HOVE material is var. <i>glandulosa</i>
Oleaceae	<i>Forestiera pubescens</i>	<i>Forestiera pubescens</i>	<i>F. neomexicana</i>	desert olive	Shrub	Wide/ Wide	Rep	O		?	Schelz and Moran (2003)	NA	
Oleaceae	<i>Fraxinus anomala</i>	<i>Fraxinus anomala</i>		singleleaf ash	Shrub	Wide/ Wide	Pres	X	O	Unc	Schmidt 100 (HOVE)	1973	Type locality is Labyrinth Canyon, San Juan Co., UT (Newberry s.n. NY)
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	Rep	O		?	Schelz and Moran (2003)	NA	
Onagraceae	<i>Oenothera albicaulis</i>	<i>Oenothera albicaulis</i>		white-stem evening-primrose	AnnF	Wide/ Wide	Pres	X	X	Unc	Schelz 2079 (HOVE)	2001	
Onagraceae	<i>Oenothera caespitosa</i> var. <i>marginata</i>	<i>Oenothera caespitosa</i> sp. <i>marginata</i>		long-tube evening-primrose	PerF	Wide/ Wide	Pres	O	X	Unc	Schelz 2073 (HOVE)	2003	
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	Rep	O		Unc	Schelz and Moran (2003)	NA	
Orchidaceae	<i>Corallorhiza maculata</i>	<i>Corallorhiza maculata</i>	<i>C. maculata</i> var. <i>maculata</i>	spotted coral-root	PerF	Wide/ Wide	Rep	O		?	Schelz and Moran (2003)	NA	
Orobanchaceae	<i>Orobanche ludoviciana</i> var. <i>cooperi</i>	<i>Orobanche ludoviciana</i>	Includes <i>O. multiflora</i> from UT Flora (1993), <i>O. cooperi</i>	Cooper's broomrape	PerF	Wide/ Wide	Pres	X	X	Unc	Litzinger 350 (HOVE)	1973	
Pinaceae	<i>Pinus edulis</i>	<i>Pinus edulis</i>		two-needle pinyon	Tree	Wide/ Wide	Pres	O	X	Abun	Litzinger 375 (HOVE)	1974	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Hovenweep 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 patagonica</i>	<i>Plantago patagonica</i>	Includes vars. <i>patagonica</i> , <i>gnaphaloides</i> , <i>spinulosa</i> , & <i>breviscapa</i>	woolly plantain	AnnF	Wide/ Wide	Pres	X	O	Unc	Schmidt 2 (HOVE)	1973	
Polemoniaceae	<i>Eriastrum diffusum</i>	<i>Eriastrum diffusum</i>		spreading eriastrum	AnnF	Wide/ Periph	Pres	O	X	Unc	Colyer 1049/1050 (HOVE)	1994	
Polemoniaceae	<i>Gilia inconspicua</i>	<i>Gilia sinuata</i>	Includes vars. <i>inconspicua</i> & <i>sinuata</i> , <i>G. ophthalmoides</i> , <i>G. clokeyi</i> , <i>G. transmontana</i>	shy gilia	AnnF	Wide/ Periph	Pres	X	X	Unc	Schelz 20011005 Q (HOVE)	1973	
Polemoniaceae	<i>Gilia leptomeria</i> var. <i>leptomeria</i>	<i>Gilia leptomeria</i>	<i>Aliciella leptomeria</i>	common gilia	AnnF	Wide/ Periph	Rep	O	O	?	Schelz and Moran (2003)	NA	
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	Rare	Schelz 20011005 A (HOVE)	2001	
Polemoniaceae	<i>Ipomopsis polycladon</i>	<i>Ipomopsis polycladon</i>	<i>Gilia polycladon</i>	spreading gilia	AnnF	Wide/ Wide	Pres	O	X	Unc	Schelz 20010501 M (HOVE)	2001	
Polemoniaceae	<i>Ipomopsis pumila</i>	<i>Ipomopsis pumila</i>	<i>Gilia pumila</i>	dwarf gilia	AnnF	Wide/ Wide	Pres	X	X	Unc	Litzinger 530 (HOVE)	1973	
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	O	Unc	Litzinger 557 (HOVE)	1973	
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	Rep	O	O	Unc	Schelz and Moran (2003)	NA	
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	Schelz 2061 (HOVE)	1973	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Hovenweep 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 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	Rep	O		?	Schelz and Moran (2003)	NA	
Polygonaceae	<i>Eriogonum divaricatum</i>	<i>Eriogonum divaricatum</i>		spreading wild buckwheat	AnnF	Wide/ Periph	Rep	?	?	?	Schelz and Moran (2003)	NA	
Polygonaceae	<i>Eriogonum inflatum</i> var. <i>inflatum</i>	<i>Eriogonum inflatum</i>		desert trumpet	PerF	Wide/ Wide	Pres	X		Rare	Litzinger 684 (HOVE)	1975	
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	Pres	X	X	Rare	Fertig 22626 (HOVE)	2006	Type locality is Aquarius Plateau, Wayne Co., UT (Ward 722 GH)
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>	slender wild buckwheat	PerF	Wide/ Wide	Pres	X	O	Com	Schelz 20020916.5 (HOVE)	1975	
Polygonaceae	<i>Eriogonum ovalifolium</i>	<i>Eriogonum ovalifolium</i> var. <i>ovalifolium</i>	<i>E. ovalifolium</i> var. <i>purpureum</i>	cushion wild buckwheat	PerF	Wide/ Wide	Pres	X	X	Unc	Schelz 20010430 M (HOVE)	1973	
Polygonaceae	<i>Eriogonum palmerianum</i>	<i>Eriogonum palmerianum</i>		Palmer's wild buckwheat	AnnF	Wide/ Periph	Pres	X	X	Unc	Schmidt 22 (HOVE)	1973	
Polygonaceae	<i>Eriogonum racemosum</i> var. <i>racemosum</i>	<i>Eriogonum racemosum</i>		redroot wild buckwheat	PerF	Wide/ Wide	Pres		X	Unc	Schelz 20010907 C (HOVE)	2001	
Polygonaceae	<i>Eriogonum umbellatum</i> var. <i>subaridum</i>	<i>Eriogonum umbellatum</i> var. <i>subaridum</i>		arid wild buckwheat	PerF	Wide/ Periph	Pres		X	Unc	Schelz 20020607.09	2002	Var. needs to be confirmed for HOVE material
Polygonaceae	<i>Polygonum aviculare</i>	<i>Polygonum arenastrum</i>	<i>P. aviculare</i> ssp. <i>aviculare</i>	yard knotweed	AnnF	Intro/ Intro	Pres	O	X	Unc	Schelz 20010824 F (HOVE)	2001	Native to Eurasia.
Polygonaceae	<i>Rumex crispus</i>	<i>Rumex crispus</i>		curly dock	PerF	Intro/ Intro	Pres	X	X	Unc	Litzinger 479 (HOVE)	1975	Native to Eurasia
Polygonaceae	<i>Rumex hymenosepalus</i>	<i>Rumex hymenosepalus</i>		canaigre dock	PerF	Wide/ Wide	Pres	X	O	Unc	Schmidt 18 (HOVE)	1973	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Hovenweep 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											
Portulacaceae	<i>Portulaca halimoides</i>	<i>Portulaca halimoides</i>	<i>P. parvula</i>	dwarf purslane	AnnF	Periph/ Periph	Pres	X	X	Rare	Schelz 20010501 W (HOVE)	2001	
Portulacaceae	<i>Portulaca oleracea</i>	<i>Portulaca oleracea</i>		common purslane	AnnF	Intro/ Intro	Rep	O	O	?	Schelz and Moran (2003)	NA	Native to E North America
Primulaceae	<i>Androsace occidentalis</i>	<i>Androsace occidentalis</i>		western rock-jasmine	AnnF	Wide/ Wide	Pres	X	X	Rare	Schelz 2169 (HOVE)	2003	
Primulaceae	<i>Androsace septentrionalis</i>	<i>Androsace septentrionalis</i>	Includes ssp. <i>puberulenta</i> , <i>subumbellata</i> , & var. <i>subbilifera</i>	pygmy-flower rock-jasmine	AnnF	Wide/ Wide	Pres	X	X	Unc	Schelz s.n. (HOVE)	2001	
Ranunculaceae	<i>Clematis ligusticifolia</i>	<i>Clematis ligusticifolia</i>		white virgin's-bower	PerF	Wide/ Wide	Pres	X	X	Unc	Schelz 20010824 R (HOVE)	2001	
Ranunculaceae (Helleboraceae)	<i>Delphinium andersonii</i> var. <i>scaposum</i>	<i>Delphinium andersonii</i> var. <i>scaposum</i>	<i>D. scaposum</i>	pale larkspur	PerF	Wide/ Wide	Pres	X	O	Unc	Litzinger 614 (HOVE)	1975	
Ranunculaceae (Helleboraceae)	<i>Delphinium nuttallianum</i>	<i>Delphinium nuttallianum</i>	<i>D. nelsonii</i>	Nuttall's larkspur	PerF	Wide/ Wide	Pres	O	X	Unc	Schelz 20010501 S (HOVE)	2001	
Ranunculaceae	<i>Ranunculus testiculatus</i>	<i>Ceratocephala orthoceras</i>	<i>C. testiculata</i>	bur buttercup	AnnF	Intro/ Intro	Pres	X	O	Unc	Schelz 20010403 K (HOVE)	1975	Native to Eurasia
Rosaceae	<i>Amelanchier utahensis</i>	<i>Amelanchier utahensis</i>		Utah serviceberry	Shrub	Wide/ Wide	Pres	O	X	Com	Litzinger 490 (HOVE)	1975	Type locality is Toquerville, Washington Co., UT (Jones 1716 GH)
Rosaceae	<i>Cercocarpus montanus</i>	<i>Cercocarpus montanus</i>		alder-leaf mountain mahogany	Shrub	Wide/ Wide	Pres	X	X	Unc	Litzinger 599 (HOVE)	1975	
Rosaceae	<i>Peraphyllum ramosissimum</i>	<i>Peraphyllum ramosissimum</i>		squaw-apple	Shrub	Wide/ Wide	Pres	X	X	Unc	Schelz 20011005 N (HOVE)	2001	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Hovenweep 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>Prunus virginiana</i> var. <i>melanocarpa</i>	<i>Padus virginiana</i> ssp. <i>melanocarpa</i>		western chokecherry	Shrub	Wide/ Wide	Pres	X	O	Unc	Litzinger 531 (HOVE)	1973	
Rosaceae	<i>Purshia mexicana</i> var. <i>stansburyana</i>	<i>Purshia</i> <i>stansburyana</i>	<i>Cowania mexicana</i>	cliff-rose	Shrub	Wide/ Wide	Pres	X	O	Com	Redfield 30 (HOVE)	1972	
Rosaceae	<i>Purshia tridentata</i>	<i>Purshia tridentata</i>		antelope bitterbrush	Shrub	Wide/ Wide	Pres		X	Unc	Litzinger 600 (HOVE)	1975	
Rosaceae	<i>Rosa woodsii</i>	<i>Rosa woodsii</i>	<i>R. woodsii</i> var. <i>ultramontana</i> , <i>R.</i> <i>manca</i>	Woods' rose	Shrub	Wide/ Wide	Pres		X	Unc	Schelz 2083 (HOVE)	2003	
Salicaceae	<i>Populus fremontii</i> var. <i>fremontii</i>	<i>Populus deltoides</i> ssp. <i>wislizenii</i>	<i>P. deltoides</i> var. <i>fremontii</i>	Fremont cottonwood	Tree	Wide/ Wide	Pres	X	X	Com	Schelz 2084 (HOVE)	1975	
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	Unc	Litzinger 335 (HOVE)	1972	
Santalaceae	<i>Comandra umbellata</i> var. <i>pallida</i>	<i>Comandra umbellata</i>	<i>C. pallida</i>	bastard toadflax	Perf	Wide/ Wide	Pres	X	O	Unc	Litzinger 307 (HOVE)	1972	
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	Redfield 62 (HOVE)	1972	
Saxifragaceae (Grossulariaceae)	<i>Ribes leptanthum</i>	<i>Ribes leptanthum</i>		trumpet gooseberry	Shrub	Wide/ Wide	Rep	?	?	?	Schelz and Moran (2003)	NA	
Scrophulariaceae	<i>Castilleja chromosa</i>	<i>Castilleja chromosa</i>	<i>C. angustifolia</i> var. <i>dubia</i> , <i>C.</i> <i>aplegatei</i> ssp. <i>martinii</i>	desert paintbrush	Perf	Wide/ Wide	Pres	X	X	Unc	Schelz 20011005.22 (HOVE)	1974	
Scrophulariaceae	<i>Castilleja linariifolia</i>	<i>Castilleja linariifolia</i>	<i>C. linariaefolia</i>	Wyoming paintbrush	Perf	Wide/ Wide	Pres	O	X	Unc	Schelz 20010824 V (HOVE)	2001	
Scrophulariaceae	<i>Castilleja scabrida</i> var. <i>scabrida</i>	<i>Castilleja scabrida</i>		Eastwood's paintbrush	Perf	RegEn/ RegEn	Pres	X		Rare	Schmidt 44 (HOVE)	1974	
Scrophulariaceae	<i>Collinsia parviflora</i>	<i>Collinsia parviflora</i>		blue-eyed Mary	AnnF	Wide/ Wide	Pres		X	Unc	Schelz 2168 (HOVE)	2001	
Scrophulariaceae	<i>Cordylanthus wrightii</i>	<i>Cordylanthus wrightii</i>		Wright's bird's-beak	AnnF	Wide/ Wide	Pres	O	X	Unc	Litzinger 372 (HOVE)	1975	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Hovenweep 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>Linaria dalmatica</i>	<i>Linaria genistifolia</i> ssp. <i>dalmatica</i>		Dalmatian toadflax	PerF	Intro/ Intro	Pres	X	X	Rare	Andersen HOVE V-1 (HOVE)	2003	CO state noxious weed (List B). Native to Europe
Scrophulariaceae	<i>Penstemon breviculus</i>	<i>Penstemon breviculus</i>		shortest penstemon	PerF	RegEn/ RegEn	Pres	X		Rare	Schmidt 38 (HOVE)	1973	
Scrophulariaceae	<i>Penstemon eatonii</i> var. <i>undosus</i>	<i>Penstemon eatonii</i> var. <i>undosus</i>		undulate penstemon	PerF	Wide/ Periph	Pres	X	X	Unc	Schelz 20010501 Q (HOVE)	2001	Type locality is St. George, Washington Co., UT (Jones 5110h US)
Scrophulariaceae	<i>Penstemon lentus</i> var. <i>lentus</i>	<i>Penstemon lentus</i> var. <i>lentus</i>		Abajo penstemon	PerF	RegEn/ RegEn	Pres	X	X	Unc	Litzinger 301 (HOVE)	1974	
Scrophulariaceae		<i>Penstemon linarioides</i> ssp. <i>coloradoensis</i>	<i>P. coloradoensis</i>	Colorado penstemon	PerF	NA/ RegEn	Pres	X	X	Unc	Schelz 20010824 J (HOVE)	2001	Type locality is Mancos, Montezuma Co., CO (Baker, Earle, & Tracy s.n. RM)
Scrophulariaceae	<i>Penstemon palmeri</i> var. <i>eglandulosus</i>	<i>Penstemon palmeri</i> var. <i>eglandulosus</i>		Palmer's penstemon	PerF	RegEn/ RegEn	Rep		O	?	Schelz and Moran (2003)	NA	Type locality is 2.5 miles N of Kanab, Kane Co., UT (Maguire, Maguire, & Piranian 12279 UTC)
Scrophulariaceae	<i>Penstemon utahensis</i>	<i>Penstemon utahensis</i>		Utah penstemon	PerF	Wide/ Periph	Pres	X	O	Unc	Schelz 20010503.04 (HOVE)	2001	Type locality is between Hatch's Wash & Monticello, San Juan Co., UT (Eastwood s.n. CAS)

Appendix A. Confirmed, historical, and reported vascular plant taxa of Hovenweep 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>Verbascum thapsus</i>	<i>Verbascum thapsus</i>		woolly mullein	PerF	Intro/ Intro	Pres	X	X	Unc	Litzinger 744 (HOVE)	1975	CO state noxious weed (List C). Native to Eurasia
Solanaceae	<i>Chamaesaracha coronopus</i>	<i>Chamaesaracha coronopus</i>		false nightshade	PerF	Periph/ Wide	Pres	X	X	Unc	Schelz 2121 (HOVE)	1975	
Solanaceae	<i>Datura wrightii</i>	<i>Datura wrightii</i>	<i>D. meteloides</i>	Angel's trumpet	AnnF	Wide/ Wide	Pres	X		Unc	Schmidt 50 (HOVE)	1973	
Solanaceae	<i>Lycium pallidum</i>	<i>Lycium pallidum</i>		pale wolfberry	Shrub	Wide/ Wide	Pres	X	X	Com	Litzinger 651 (HOVE)	1974	
Solanaceae	<i>Physalis hederifolia</i> var. <i>fendleri</i>	<i>Physalis hederifolia</i> var. <i>cordifolia</i>	<i>P. fendleri</i> , <i>P. hederifolia</i> var. <i>fendleri</i>	Fendler's ground-cherry	PerF	Wide/ Sparse	Pres	X	X	Unc	Schelz 20010824 P (HOVE)	2001	
Solanaceae	<i>Solanum triflorum</i>	<i>Solanum triflorum</i>		cut-leaf nightshade	AnnF	Wide/ Wide	Rep	O	O	?	Dewey & Andersen (2005)	2003	Native to C North America, may be introduced in UT.
Tamaricaceae	<i>Tamarix chinensis</i>	<i>Tamarix ramosissima</i>	<i>T. pentandra</i>	five-stamen tamarisk	Shrub	Intro/ Intro	Pres	X	O	Unc	Litzinger 309 (HOVE)	1973	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	X	Unc	Schelz 2166 (HOVE)	2002	
Ulmaceae (Celtidaceae)	<i>Celtis reticulata</i>	<i>Celtis reticulata</i>	<i>C. laevigata</i> var. <i>reticulata</i>	netleaf hackberry	Tree	Wide/ Wide	Pres	X	X	Unc	Redfield 54 (HOVE)	1972	
Umbelliferae (Apiaceae)	<i>Cymopterus acaulis</i> var. <i>fendleri</i>	<i>Cymopterus fendleri</i>	<i>C. glomeratus</i>	Fendler's cymopterus	PerF	Wide/ Wide	Pres	X	O	Unc	Schmidt 53 (HOVE)	1973	
Umbelliferae (Apiaceae)	<i>Cymopterus bulbosus</i>	<i>Cymopterus bulbosus</i>		onion spring-parsley	PerF	Wide/ Wide	Pres	X	X	Unc	Schelz 2106 (HOVE)	1973	

Appendix A. Confirmed, historical, and reported vascular plant taxa of Hovenweep 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>Cymopterus newberryi</i>	<i>Cymopterus newberryi</i>		sticky spring-parsley	PerF	RegEn/ NA	Rep	O	?	Unc	Schelz and Moran (2003)	2003	Not known from Colorado according to Weber & Wittmann (2001)
Umbelliferae (Apiaceae)	<i>Cymopterus purpurascens</i>	<i>Cymopterus purpurascens</i>		basin white-cup spring-parsley	PerF	Wide/ Periph	Pres	X	X	Rare	Litzinger (HOVE)	1975	New to Colorado
Umbelliferae (Apiaceae)	<i>Cymopterus purpureus var. purpureus</i>	<i>Cymopterus purpureus</i>		Colorado Plateau spring-parsley	PerF	RegEn/ RegEn	Pres	X	X	Com	Schelz 2167 (HOVE)	2001	
Umbelliferae (Apiaceae)	<i>Lomatium triternatum ssp. platycarpum</i>	<i>Lomatium triternatum ssp. platycarpum</i>	<i>L. simplex</i>	flat-seed lomatium	PerF	Wide/ Wide	Pres	X	X	Unc	Litzinger (HOVE)	1975	
Verbenaceae	<i>Verbena bracteata</i>	<i>Verbena bracteata</i>		prostrate vervain	PerF	Wide/ Wide	Rep	O	O	?	Schelz and Moran (2003)	NA	
Viscaceae	<i>Arceuthobium divaricatum</i>	<i>Arceuthobium divaricatum</i>		pinyon dwarf-mistletoe	PerF	Wide/ Wide	Pres	X	X	Unc	Schelz 2164 (HOVE)	2001	Typically parasitic on <i>Pinus edulis</i> and <i>P. monophylla</i>
Viscaceae	<i>Phoradendron juniperinum</i>	<i>Phoradendron juniperinum</i>		juniper mistletoe	PerF	Wide/ Wide	Pres	X	X	Unc	Fertig 22624 (HOVE)	2006	Typically parasitic on <i>Juniperus osteosperma</i>
Zygophyllaceae	<i>Kallstroemia parviflora</i>	<i>Kallstroemia parviflora</i>		orange kallstroemia	AnnF	Periph/ Wide	Rep	?	?	?	Schelz and Moran (2003)	NA	

X = documented with a voucher.

O = documented by an observation.

? = reported for the monument without the state specified (i.e., could be UT or CO).

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

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range (UT/CO)	Comments
	Utah	Colorado					
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	
Agavaceae	<i>Yucca baileyi</i>			Bailey's yucca	Shrub	Periph/ NA	
Aizoaceae	<i>Sesuvium verrucosum</i>	<i>Sesuvium verrucosum</i>		sea purslane	Perf	Wide/ Sparse	
Amaranthaceae	<i>Amaranthus albus</i>	<i>Amaranthus albus</i>		tumble pigweed	AnnF	Intro/Intro	Native to tropical America
Amaranthaceae	<i>Tidestromia lanuginosa</i> var. <i>lanuginosa</i>	<i>Cladanthrix lanuginosa</i>	<i>T. lanuginosa</i>	woolly tidesstromia	AnnF	Periph/ Periph	
Apocynaceae	<i>Amsonia jonesii</i>	<i>Amsonia jonesii</i>		Jones' amsonia	Perf	RegEn/ RegEn	CO BLM Sensitive
Asclepiadaceae	<i>Asclepias cutleri</i>			Cutler's milkweed	Perf	RegEn/ NA	USFWS 3C
Asclepiadaceae	<i>Asclepias involucreta</i>	<i>Asclepias involucreta</i>		dwarf milkweed	Perf	Periph/ Periph	
Asclepiadaceae	<i>Asclepias latifolia</i>	<i>Asclepias latifolia</i>		broadleaf milkweed	Perf	Wide/ Wide	
Asclepiadaceae	<i>Asclepias macrosperma</i>		Included in <i>A. involucreta</i> by some authors	bigseed milkweed	Perf	RegEn/ NA	
Asclepiadaceae	<i>Asclepias tuberosa</i> var. <i>interior</i>	<i>Asclepias tuberosa</i> ssp. <i>terminalis</i>		orange milkweed	Perf	Wide/ Wide	
Asclepiadaceae	<i>Sarcostemma cynanchoides</i> var. <i>hartwegii</i>		<i>Funastrum cynanchoides</i> ssp. <i>heterophyllum</i>	climbing milkweed	Perf	Periph/ NA	
Berberidaceae	<i>Mahonia fremontii</i>	<i>Mahonia fremontii</i>	<i>Berberis fremontii</i>	Fremont's mahonia	Shrub	Wide/ Wide	
Boraginaceae	<i>Cryptantha cinerea</i> var. <i>jamesii</i>	<i>Oreocarya suffruticosa</i>	<i>C. jamesii</i>	James' cryptanth	Perf	Wide/ Wide	
Boraginaceae	<i>Cryptantha cinerea</i> var. <i>pustulosa</i>	<i>Oreocarya pustulosa</i>	<i>C. pustulosa</i>	San Juan cryptanth	Perf	RegEn/ RegEn	Type locality is Elk Mts, San Juan Co., UT (Rydberg & Garrett 9320 NY)

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

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range (UT/CO)	Comments
	Utah	Colorado					
Boraginaceae	<i>Cryptantha pterocarya</i> var. <i>pterocarya</i>	<i>Cryptantha pterocarya</i>		wing-nut cryptanth	AnnF	Wide/ Wide	
Boraginaceae	<i>Cryptantha recurvata</i>	<i>Cryptantha recurvata</i>		recurved cryptanth	AnnF	Wide/ Periph	
Boraginaceae	<i>Heliotropium convolvulaceum</i>	<i>Euploca convolvulacea</i> ssp. <i>californica</i>		bindweed heliotrope	AnnF	Wide/ Periph	
Boraginaceae (Ehretiaceae)	<i>Tiquilia latior</i>		<i>Coldenia hispidissima</i>	matted tiquilia	PerF	RegEn/ NA	
Cactaceae	<i>Opuntia polyacantha</i> var. <i>rufispina</i>		Included with <i>O. polyacantha</i> var. <i>polyacantha</i> in <i>Flora of North America</i> (2003)	rufous-spine pricklypear	PerF	Wide/NA	
Cactaceae	<i>Opuntia polyacantha</i> var. <i>trichophora</i>		Included with <i>Opuntia polyacantha</i> var. <i>polyacantha</i> in <i>Flora of North America</i> (2003)	slenderspine pricklypear	PerF	Periph/ NA	
Cactaceae	<i>Pediocactus simpsonii</i>	<i>Pediocactus simpsonii</i> var. <i>minor</i>		Simpson's hedgehog cactus	PerF	Wide/ Wide	
Caprifoliaceae (Adoxaceae)	<i>Sambucus caerulea</i>	<i>Sambucus caerulea</i>		blue elderberry	Shrub	Wide/ Wide	
Caprifoliaceae	<i>Symphoricarpos longiflorus</i>	<i>Symphoricarpos longiflorus</i>		long-flower snowberry	Shrub	Wide/ Periph	
Chenopodiaceae	<i>Atriplex argentea</i> var. <i>rydbergii</i>	<i>Atriplex pachypoda</i>		Rydberg's orach	AnnF	RegEn/ RegEn	Type locality is S of Moab, Grand Co., UT (Rydberg & Garrett 9110 US)
Chenopodiaceae	<i>Atriplex pleiantha</i>	<i>Proatriplex pleiantha</i>		Four Corners orach	AnnF	RegEn/ RegEn	USFWS: 3C
Chenopodiaceae	<i>Atriplex prostrata</i>	<i>Atriplex patula</i>	<i>A. patula</i> var. <i>triangularis</i>	thinleaf orach	AnnF	Wide/ Wide	
Chenopodiaceae	<i>Bassia americana</i>	<i>Kochia americana</i>		greenmolly	PerF	Wide/ Wide	
Chenopodiaceae	<i>Bassia hyssopifolia</i>	<i>Bassia hyssopifolia</i>		five-horn smotherweed	AnnF	Intro/Intro	Native to Eurasia

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

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range (UT/CO)	Comments
	Utah	Colorado					
Chenopodiaceae	<i>Corispermum americanum</i>	<i>Corispermum americanum</i>	Includes var. <i>americanum</i> & var. <i>rydbergii</i>	American bugseed	AnnF	Widel/ Sparse	
Chenopodiaceae	<i>Cyclolima atriplicifolia</i>	<i>Cyclolima atriplicifolium</i>		winged pigweed	AnnF	Widel/ Wide	
Chenopodiaceae	<i>Monolepis nuttalliana</i>	<i>Monolepis nuttalliana</i>		Nuttall's poverty-weed	AnnF	Widel/ Wide	
Chenopodiaceae	<i>Salsola paulsenii</i>	<i>Salsola paulsenii</i>		barbwire Russian thistle	AnnF	Intro/Intro	Native to Eurasia
Chenopodiaceae	<i>Zuckia brandegeei</i> var. <i>brandegeei</i>	<i>Atriplex brandegeei</i>		Brandegee's siltbush	Shrub	RegEn/ RegEn	Type locality is San Juan River, San Juan Co., UT (Brandegee s.n. GH)
Compositae (Asteraceae)	<i>Ambrosia artemisiifolia</i>	<i>Ambrosia artemisiifolia</i>	<i>A. artemisiifolia</i> var. <i>elatior</i>	common ragweed	AnnF	Widel/ Wide	
Compositae (Asteraceae)	<i>Artemisia campestris</i> var. <i>scouleriana</i>	<i>Oligosporus pacificus</i>	<i>Oligosporus campestris</i> ssp. <i>pacificus</i> , <i>A. campestris</i> ssp. <i>pacifica</i>	sand wormwood	PerF	Widel/ Wide	
Compositae (Asteraceae)	<i>Aster ascendens</i>	<i>Virgulastrer ascendens</i>	<i>A. chilensis</i> ssp. <i>adscendens</i> , <i>A. adscendens</i> , <i>Symphotrichum ascendens</i>	Pacific aster	PerF	Widel/ Wide	
Compositae (Asteraceae)	<i>Aster frondosus</i>	<i>Brachyactis frondosa</i>	<i>Symphotrichum frondosum</i>	leafy aster	AnnF	Widel/ Wide	
Compositae (Asteraceae)	<i>Aster glaucodes</i>	<i>Eucephalus glaucus</i>	<i>Herrickia glauca</i> var. <i>glaucodes</i> , <i>Eurybia glauca</i>	blueleaf aster	PerF	Widel/ Wide	
Compositae (Asteraceae)	<i>Baccharis salicina</i>	<i>Baccharis salicina</i>	Includes <i>B. emoryi</i>	Rio Grande seepwillow	Shrub	Widel/ Wide	
Compositae (Asteraceae)	<i>Baccharis wrightii</i>	<i>Baccharis wrightii</i>		Wright's seepweed	Shrub	Periph/ Wide	
Compositae (Asteraceae)	<i>Brickellia longifolia</i>	<i>Brickellia longifolia</i>	<i>B. longifolia</i> var. <i>longifolia</i>	longleaf brickellbush	Shrub	Widel/ Periph	

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

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range (UT/CO)	Comments
	Utah	Colorado					
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	Utah state noxious weed. CO state noxious weed (List B). Native to Europe
Compositae (Asteraceae)	<i>Chrysothamnus linifolius</i>	<i>Chrysothamnus linifolius</i>	<i>Lorandersonia linifolia</i>	spear-leaf rabbitbrush	Shrub	Wide/Wide	
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	
Compositae (Asteraceae)	<i>Chrysothamnus viscidiflorus</i> var. <i>viscidiflorus</i>	<i>Chrysothamnus viscidiflorus</i> ssp. <i>viscidiflorus</i>		green rabbitbrush	Shrub	Wide/Wide	
Compositae (Asteraceae)	<i>Cirsium arizonicum</i>		Includes vars. <i>arizonicum</i> & <i>nidulum</i>	Arizona thistle	Perf	Wide/NA	Type locality of var. <i>nidulum</i> is Paria, Kane Co., UT (Jones 5290a POM).
Compositae (Asteraceae)	<i>Cirsium calcaicum</i> var. <i>pulchellum</i>	<i>Cirsium calcaicum</i> var. <i>pulchellum</i>	Variety not recognized in <i>Intermountain Flora</i> (1994), included in <i>C. arizonicum</i> var. <i>bipinnatum</i> in <i>Flora of North America</i> (2006)	pretty thistle	Perf	Wide/Wide	
Compositae (Asteraceae)	<i>Cirsium rothrockii</i>		<i>C. arizonicum</i> var. <i>rothrockii</i> . Not recognized for Utah in <i>Flora of North America</i> (2006)	Rothrock's thistle	Perf	RegEn/NA	
Compositae (Asteraceae)	<i>Cirsium vulgare</i>	<i>Cirsium vulgare</i>		bull thistle	Perf	Intro/Intro	CO state noxious weed (List B). Native to Europe

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

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range (UT/CO)	Comments
	Utah	Colorado					
Compositae (Asteraceae)	<i>Dicoria brandegeei</i>	<i>Dicoria brandegeei</i>	<i>D. canescens</i> ssp. <i>brandegeei</i> . Includes var. <i>wetherillii</i> . Vars. not recognized in <i>Flora of North America</i> (2006)	Brandegee's sandplant	AnnF	RegEn/ RegEn	
Compositae (Asteraceae)	<i>Encelia frutescens</i> var. <i>resinosa</i>		<i>E. resinifera</i> , <i>E. frutescens</i> var. <i>frutescens</i> in pre-2003 editions of <i>UT Flora</i> .	bush encelia	Shrub	Wide/NA	
Compositae (Asteraceae)	<i>Erigeron utahensis</i> var. <i>sparsifolius</i>	<i>Erigeron utahensis</i> var. <i>sparsifolius</i>	<i>E. sparsifolius</i>	slenderleaf daisy	Perf	RegEn/ RegEn	Type locality is Willow Creek, San Juan Co., UT (Eastwood 48 CAS)
Compositae (Asteraceae)	<i>Euthamia occidentalis</i>	<i>Euthamia occidentalis</i>	<i>Solidago occidentalis</i>	western goldenrod	Perf	Wide/ Wide	
Compositae (Asteraceae)	<i>Glyptopleura marginata</i>			crustweed	AnnF	Wide/NA	
Compositae (Asteraceae)	<i>Gnaphalium exilifolium</i>	<i>Gnaphalium uliginosum</i>		slender cudweed	AnnF	Wide/ Wide	
Compositae (Asteraceae)	<i>Gnaphalium palustre</i>	<i>Gnaphalium palustre</i>		lowland cudweed	AnnF	Wide/ Wide	
Compositae (Asteraceae)	<i>Grindelia aphanactis</i>	<i>Grindelia aphanactis</i>	<i>G. nuda</i> var. <i>aphanactis</i> . Included in <i>G. squarrosa</i> in <i>Flora of North America</i> (2006)	Rydberg's gumweed	Perf	Periph/ Periph	
Compositae (Asteraceae)	<i>Grindelia fastigiata</i>	<i>Grindelia fastigiata</i>	Included in <i>G. hirsutula</i> in <i>Flora of North America</i> (2006)	erect gumweed	Perf	RegEn/ RegEn	
Compositae (Asteraceae)	<i>Grindelia laciniata</i>	<i>Grindelia arizonica</i> var. <i>stenophylla</i>	<i>G. arizonica</i>	leafybase gumweed	Perf	RegEn/ RegEn	Type locality is Montezuma Canyon, E of Monticello, San Juan Co., UT (Rydberg & Garrett 9692 NY)

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

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range (UT/CO)	Comments
	Utah	Colorado					
Compositae (Asteraceae)	<i>Haplopappus rusbyi</i>	<i>Isocoma drummondii</i>	<i>H. drummondii</i> , <i>I. rusbyi</i>	Rusby's goldenbush	Shrub	Wide/Periph	
Compositae (Asteraceae)	<i>Haplopappus scopulorum</i> var. <i>hirtellus</i>		<i>Hesperodoria scopulorum</i> , <i>Chrysothamnus scopulorum</i>	spindly goldenbush	Shrub	RegEn/NA	Type locality is Cedar Canyon, Iron Co., UT (Garrett 6051 US)
Compositae (Asteraceae)	<i>Helianthus anomalus</i>		Includes <i>H. deserticola</i>	sand sunflower	AnnF	RegEn/NA	Type locality is desert S of Hanksville, Wayne Co., UT (Stanton 328 US).
Compositae (Asteraceae)	<i>Hymenoxys acaulis</i> var. <i>arizonica</i>	<i>Tetaneuris acaulis</i>	<i>T. acaulis</i> var. <i>arizonica</i>	Arizona hymenoxys	PerF	Wide/Sparse	
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	
Compositae (Asteraceae)	<i>Lactuca tatarica</i> var. <i>pulchella</i>	<i>Lactuca tatarica</i> ssp. <i>pulchella</i>	<i>L. pulchella</i> , <i>L. oblongifolia</i> , <i>Mulgedium pulchellum</i>	blue lettuce	PerF	Wide/Wide	
Compositae (Asteraceae)		<i>Lygodesmia doloresensis</i>	Included in <i>L. dianthopsis</i> by some authors	western rush-pink	PerF	NA/RegEn	Type locality is 6.4 km S of Gateway, Mesa Co., CO (Tomb 648 TEX)
Compositae (Asteraceae)	<i>Lygodesmia grandiflora</i> var. <i>arizonica</i>	<i>Lygodesmia arizonica</i>		Arizona rush-pink	PerF	RegEn/RegEn	
Compositae (Asteraceae)	<i>Machaeranthera canescens</i> var. <i>aristata</i>	<i>Machaeranthera canescens</i> var. <i>aristata</i>	<i>M. linearis</i> , <i>M. rigida</i> , <i>M. canescens</i> var. <i>vacans</i> , <i>Dieteria canescens</i> var. <i>aristata</i>	aristate aster	PerF	RegEn/RegEn	Type locality is Willow Creek, San Juan Co., UT (Eastwood 45 CAS)
Compositae (Asteraceae)	<i>Malacothrix glabrata</i>		<i>M. californica</i> var. <i>glabrata</i>	filiform desert-dandelion	AnnF	Wide/NA	
Compositae (Asteraceae)	<i>Oxytenia acerosa</i>	<i>Oxytenia acerosa</i>	<i>Iva acerosa</i>	copperweed	Shrub	Wide/Periph	

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

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range (UT/CO)	Comments
	Utah	Colorado					
Compositae (Asteraceae)	<i>Prenanthea exigua</i>	<i>Prenanthea exigua</i>	<i>Lygodesmia exigua</i>	prenanthella	AnnF	Wide/ Periph	
Compositae (Asteraceae)	<i>Psilostrophe tagetina</i>	<i>Psilostrophe tagetina</i>		woolly paperflower	PerF	Periph/ Sparse	
Compositae (Asteraceae)	<i>Senecio spartioides</i> var. <i>spartioides</i>	<i>Senecio spartioides</i>	Vars. not recognized in <i>Flora of North America</i> (2006)	broom groundsel	PerF	Wide/ Wide	
Compositae (Asteraceae)	<i>Solidago missouriensis</i>	<i>Solidago missouriensis</i>	<i>S. missouriensis</i> var. <i>missouriensis</i> . Vars. not recognized in <i>Flora of North America</i> (2006).	Missouri goldenrod	PerF	Wide/ Wide	
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	
Compositae (Asteraceae)	<i>Stephanomeria pauciflora</i>	<i>Stephanomeria pauciflora</i>		brown-plume wire-lettuce	PerF	Wide/ Wide	
Compositae (Asteraceae)	<i>Thelesperma megapotamicum</i>	<i>Thelesperma megapotamicum</i>		Hopi-tea	PerF	Periph/ Wide	
Compositae (Asteraceae)	<i>Thelesperma subnudum</i> var. <i>subnudum</i>	<i>Thelesperma subnudum</i>	Vars. not recognized in <i>Flora of North America</i> (2006).	scapose greenthread	PerF	Wide/ Wide	Type locality is "Southern Utah" (Parry 109 GH)
Compositae (Asteraceae)	<i>Thymophylla acerosa</i>		<i>Dyssodia acerosa</i>	dogweed	PerF	Wide/NA	
Compositae (Asteraceae)	<i>Thymophylla pentachaeta</i> var. <i>belenidium</i>		<i>Dyssodia pentachaeta</i> var. <i>belenidium</i>	scale glandweed	PerF	Wide/NA	
Compositae (Asteraceae)	<i>Townsendia annua</i>	<i>Townsendia annua</i>		annual townsendia	AnnF	Wide/ Periph	Type locality is Cottonwood Wash, 1 1/2 miles N of Bluff, San Juan Co., UT (Maguire 13509 GH)

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

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range (UT/CO)	Comments
	Utah	Colorado					
Compositae (Asteraceae)	<i>Vancevea stylosa</i>		<i>Chrysothamnus stylosa</i>	resinbush	Shrub	RegEn/ NA	Type locality is near Epsom Creek [between Bluff & Mexican Hat], San Juan Co., UT (Eastwood 36 CAS)
Compositae (Asteraceae)	<i>Verbesina encelioides</i> var. <i>exauriculata</i>	<i>Ximenesia encelioides</i>		golden crownbeard	AnnF	Wide/ Wide	
Compositae (Asteraceae)	<i>Xylorhiza tortifolia</i> var. <i>imberbis</i>		<i>Machaeranthera tortifolia</i> var. <i>imberbis</i>	hurtleaf woodyaster	PerF	RegEn/ NA	Type locality is E bank of Green River W of Moab (Cronquist 8994 NY)
Cruciferae (Brassicaceae)	<i>Arabis holboellii</i> var. <i>fendleri</i>	<i>Boechea 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	
Cruciferae (Brassicaceae)	<i>Arabis holboellii</i> var. <i>secunda</i>	<i>Boechea retrofracta</i> <i>secunda</i>	<i>A. holboellii</i> var. <i>retrofracta</i> , <i>B. holboellii</i> var. <i>secunda</i>	Holboell's rockcress	PerF	Wide/ Wide	
Cruciferae (Brassicaceae)	<i>Arabis selbyi</i>	<i>Boechea selbyi</i>		Selby's rockcress	PerF	Wide/ Wide	
Cruciferae (Brassicaceae)	<i>Brassica juncea</i>	<i>Brassica juncea</i>		Indian mustard	AnnF	Intro/Intro	Native to Asia
Cruciferae (Brassicaceae)	<i>Brassica nigra</i>	<i>Brassica nigra</i>	<i>Sinapis nigra</i>	black mustard	AnnF	Intro/Intro	Native to Europe
Cruciferae (Brassicaceae)	<i>Conringia orientalis</i>	<i>Conringia orientalis</i>		hare's-ear mustard	AnnF	Intro/Intro	Native to Europe
Cruciferae (Brassicaceae)	<i>Descurainia californica</i>	<i>Descurainia californica</i>		California tansy-mustard	PerF	Wide/ Wide	
Cruciferae (Brassicaceae)	<i>Descurainia pinnata</i> var. <i>filipes</i>	<i>Descurainia incisa</i> ssp. <i>filipes</i>		western tansy-mustard	AnnF	Wide/ Wide	
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>osmiarum</i> by some authors	western tansy-mustard	AnnF	Wide/ Periph	

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

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range (UT/CO)	Comments
	Utah	Colorado					
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>Draba reptans</i>	<i>Draba reptans</i>		dwarf draba	AnnF	Wide/ Wide	
Cruciferae (Brassicaceae)	<i>Hutchinsia procumbens</i>	<i>Hymenolobus procumbens</i>	<i>Hornungia procumbens</i>	ovalpurse	AnnF	Wide/ Sparse	
Cruciferae (Brassicaceae)	<i>Lepidium densiflorum</i> var. <i>ramosum</i>	<i>Lepidium densiflorum</i> var. <i>ramosum</i>		prairie pepperwort	AnnF	Wide/ Periph	
Cruciferae (Brassicaceae)	<i>Lepidium lasiocarpum</i> var. <i>georginum</i>			St. George pepperwort	AnnF	Wide/NA	Type locality is valley of the Virgin near St. George, Washington Co., UT (Parry 19 NY)
Cruciferae (Brassicaceae)	<i>Physaria fendleri</i>	<i>Lesquerella fendleri</i>		Fendler's bladderpod	PerF	Periph/ Periph	
Cruciferae (Brassicaceae)	<i>Physaria ludoviciana</i>	<i>Lesquerella ludoviciana</i>		silver bladderpod	PerF	Wide/ Wide	
Cruciferae (Brassicaceae)	<i>Stanleya integrifolia</i>	<i>Stanleya pinnata</i> var. <i>integrifolia</i>		smoothleaf prince's-plume	PerF	Wide/ Wide	
Cruciferae (Brassicaceae)	<i>Thelypodopsis aurea</i>	<i>Thelypodopsis aurea</i>		golden thelypody	PerF	RegEn/ RegEn	
Cyperaceae	<i>Carex aurea</i>	<i>Carex aurea</i>	<i>C. garberi</i>	golden sedge	PerG	Wide/ Wide	
Cyperaceae	<i>Eleocharis palustris</i>	<i>Eleocharis macrostachya</i>	Includes <i>E. erythropoda</i> & <i>E. uniglumis</i>	common spikerush	PerG	Wide/ Wide	
Cyperaceae	<i>Eleocharis parishii</i>			Parish's spikerush	PerG	Wide/NA	
Cyperaceae	<i>Scirpus pungens</i> var. <i>longispicatus</i>	<i>Schoenoplectus pungens</i>	<i>Scirpus pungens</i> var. <i>polyphyllus</i> , <i>Schoenoplectus pungens</i> var. <i>longispicatus</i> , <i>Schoenoplectus pungens</i> var. <i>polyphyllus</i>	three-square bulrush	PerG	Wide/ Wide	

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

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range (UT/CO)	Comments
	Utah	Colorado					
Elaeagnaceae	<i>Elaeagnus angustifolia</i>	<i>Elaeagnus angustifolia</i>		Russian-olive	Tree	Intro/Intro	CO state noxious weed (List B). Native to Europe
Ephedraceae	<i>Ephedra viridis</i> var. <i>viscida</i>	<i>Ephedra cutleri</i>		Cutler's ephedra	Shrub	RegEn/ RegEn	
Equisetaceae	<i>Equisetum arvense</i>	<i>Equisetum arvense</i>		field horsetail	Fern	Wide/ Wide	
Equisetaceae	<i>Equisetum x nelsonii</i>		Hybrid between <i>E. laevigatum</i> and <i>E. variegatum</i>	Nelson's scouring-rush	Fern	Sparse/ NA	
Ericaceae	<i>Arctostaphylos patula</i>	<i>Arctostaphylos patula</i> ssp. <i>platyphylla</i>		greenleaf manzanita	Shrub	Wide/ Wide	
Euphorbiaceae	<i>Chamaesyce micromeria</i>		<i>Euphorbia micromeria</i>	tiny spurge	AnnF	Wide/NA	
Euphorbiaceae	<i>Chamaesyce serpyllifolia</i>	<i>Chamaesyce serpyllifolia</i>	<i>Euphorbia serpyllifolia</i>	thyme-leaved spurge	AnnF	Wide/ Wide	
Euphorbiaceae	<i>Croton texensis</i> var. <i>utahensis</i>	<i>Croton texensis</i>		Utah dove-weed	AnnF	RegEn/ RegEn	Type locality is about 18 km N of Lynndyl, Juab Co., UT (Cronquist & Thorne 11839 NY)
Gentianaceae	<i>Centaureum calycosum</i>		<i>C. arizonicum</i>	Buckley's centaury	AnnF	Periph/ NA	
Gentianaceae	<i>Centaureum exaltatum</i>	<i>Centaureum exaltatum</i>		Great Basin centaury	PerF	Wide/ Periph	
Gentianaceae	<i>Swertia albomarginata</i>	<i>Frasera albomarginata</i>		white-margined swertia	PerF	Wide/ Periph	Type locality is near St. George, Washington Co., UT (Palmer s.n. US)
Gramineae (Poaceae)	<i>Andropogon gerardii</i> var. <i>chrysocomus</i>	<i>Andropogon hallii</i>		Hall's bluestem	PerG	Wide/ Wide	
Gramineae (Poaceae)	<i>Andropogon gerardii</i> var. <i>gerardii</i>	<i>Andropogon gerardii</i>		big bluestem	PerG	Wide/ Wide	
Gramineae (Poaceae)	<i>Aristida arizonica</i>	<i>Aristida arizonica</i>		Arizona three-awn	PerG	Periph/ Periph	Not included for UT in <i>Flora of North America</i> (2003)

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

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range (UT/CO)	Comments
	Utah	Colorado					
Gramineae (Poaceae)	<i>Bouteloua barbata</i>	<i>Chondrosium barbatum</i>	Includes vars. <i>barbata</i> & <i>rothrockii</i>	sixweeks grama	AnnG	Wide/ Periph	
Gramineae (Poaceae)	<i>Bouteloua eriopoda</i>	<i>Chondrosium eriopodum</i>		black grama	PerG	Wide/ Periph	
Gramineae (Poaceae)	<i>Calamagrostis scopulorum</i>	<i>Calamagrostis scopulorum</i>		Jones' reedgrass	PerG	Wide/ Wide	Type locality is Springdale, Washington Co., UT (Jones 6075 POM)
Gramineae (Poaceae)	<i>Calamovilfa gigantea</i>			big sandreed	PerG	Periph/ NA	
Gramineae (Poaceae)	<i>Distichlis spicata</i>	<i>Distichlis stricta</i>	<i>D. spicata</i> var. <i>stricta</i>	desert saltgrass	PerG	Wide/ Wide	
Gramineae (Poaceae)	<i>Elymus lanceolatus</i>	<i>Elymus lanceolatus</i>	<i>E. lanceolatus</i> var. <i>lanceolatus</i> , <i>A. 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	
Gramineae (Poaceae)	<i>Eragrostis pectinacea</i>	<i>Eragrostis pectinacea</i>		tufted lovegrass	AnnG	Wide/ Wide	
Gramineae (Poaceae)	<i>Eremopyrum triticeum</i>	<i>Eremopyrum triticeum</i>	<i>Agropyron triticeum</i>	annual wheatgrass	AnnG	Intro/Intro	Native to Asia
Gramineae (Poaceae)	<i>Erioneuron pulchellum</i>	<i>Dasyochloa pulchella</i>		fluffgrass	PerG	Wide/ Periph	
Gramineae (Poaceae)	<i>Hordeum pusillum</i>	<i>Critesion pusillum</i>		little barley	AnnG	Wide/ Wide	Specimens from HOVE herbarium are from just outside the park.
Gramineae (Poaceae)	<i>Muhlenbergia depauperata</i>	<i>Muhlenbergia depauperata</i>		sixweeks muhly	AnnG	Sparse/ Periph	
Gramineae (Poaceae)	<i>Muhlenbergia pauciflora</i>	<i>Muhlenbergia pauciflora</i>	Includes reports of <i>M. arsenei</i>	New Mexican muhly	PerG	Wide/ Periph	

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

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range (UT/CO)	Comments
	Utah	Colorado					
Gramineae (Poaceae)	<i>Panicum acuminatum</i>	<i>Dichanthelium acuminatum</i>	<i>P. occidentale</i> , <i>P. tennesseense</i> , <i>P. huachucae</i> , <i>Dichanthelium acuminatum</i> ssp. <i>fasciculatum</i> , <i>D. lanuginosum</i> var. <i>fasciculatum</i>	bundle panicgrass	PerG	Wide/ Sparse	
Gramineae (Poaceae)	<i>Panicum capillare</i>	<i>Panicum capillare</i> var. <i>occidentale</i>		witchgrass	AnnG	Wide/ Wide	
Gramineae (Poaceae)	<i>Panicum obtusum</i>	<i>Panicum obtusum</i>		vine mesquite	PerG	Wide/ Wide	
Gramineae (Poaceae)	<i>Polypogon interruptus</i>	<i>Polypogon interruptus</i>	Hybrid between <i>P. monspeliensis</i> x <i>Agrostis stolonifera</i>	ditch polypogon	PerG	Intro/Intro	
Gramineae (Poaceae)	<i>Polypogon semiverticillatus</i>	<i>Polypogon viridis</i>	<i>Agrostis semiverticillata</i>	water polypogon	PerG	Intro/Intro	Specimens from HOVE herbarium are from just outside the park. Native to Eurasia and Africa
Gramineae (Poaceae)	<i>Puccinellia distans</i>			weeping alkaligrass	PerG	Intro/NA	Native to Eurasia
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	
Gramineae (Poaceae)	<i>Setaria viridis</i>	<i>Setaria viridis</i>		green bristlegrass	AnnG	Intro/Intro	Native to Eurasia
Gramineae (Poaceae)	<i>Sorghastrum nutans</i>	<i>Sorghastrum avenaceum</i>		Indiangrass	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 flexuosus</i>	<i>Sporobolus flexuosus</i>		mesa dropseed	PerG	Wide/ Periph	
Gramineae (Poaceae)	<i>Sporobolus giganteus</i>	<i>Sporobolus giganteus</i>		giant dropseed	PerG	Wide/ Periph	
Gramineae (Poaceae)	<i>Stipa arida</i>	<i>Stipa arida</i>	<i>Achnatherum aridum</i>	Mormon needlegrass	PerG	Wide/ Periph	Type locality is near Milford, Beaver Co., UT (Jones 2106)

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

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range (UT/CO)	Comments
	Utah	Colorado					
Gramineae (Poaceae)	<i>Stipa neomexicana</i>	<i>Hesperostipa neomexicana</i>		New Mexico feathergrass	PerG	Wide/ Wide	
Hydrophyllaceae	<i>Nama densum</i> var. <i>parviflorum</i>	<i>Nama densum</i>		leafy fiddleleaf	AnnF	Wide/ Periph	
Hydrophyllaceae	<i>Nama retrorsum</i>	<i>Nama retrorsum</i>		Howell's nama	AnnF	RegEn/ RegEn	USFWS 3C
Hydrophyllaceae	<i>Phacelia integrifolia</i>	<i>Phacelia integrifolia</i>		Torrey's phacelia	AnnF	Periph/ Periph	
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	
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	
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	
Labiatae (Lamiaceae)	<i>Hedeoma nanum</i>		Includes ssp. <i>californicum</i>	dwarf pennyroyal	PerF	Periph/ NA	
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	
Labiatae (Lamiaceae)	<i>Monarda pectinata</i>	<i>Monarda pectinata</i>		plains beebalm	AnnF	Periph/ Wide	
Leguminosae (Fabaceae)	<i>Alhagi maurorum</i>	<i>Alhagi maurorum</i>		camel-thorn	PerF	Intro/Intro	Native to Asia
Leguminosae (Fabaceae)	<i>Astragalus cronquistii</i>	<i>Astragalus cronquistii</i>		Cronquist's milkvetch	PerF	LocEn/ LocEn	Type locality is W of Comb Reef, San Juan Co., UT (Cronquist 9123 NY). UT BLM: Sensitive, USFWS: former C2 candidate

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

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range (UT/CO)	Comments
	Utah	Colorado					
Leguminosae (Fabaceae)	<i>Astragalus eastwoodiae</i>	<i>Astragalus eastwoodiae</i>		Eastwood's milkvetch	PerF	RegEn/ RegEn	Type locality is Westwater, Grand Co., UT (Jones s.n. POM)
Leguminosae (Fabaceae)	<i>Astragalus episcopus</i>		<i>A. episcopus</i> var. <i>episcopus</i>	Bishop's milkvetch	PerF	RegEn/ NA	Type locality is 'southern Utah', Kane Co?, UT (Bishop s.n. GH)
Leguminosae (Fabaceae)	<i>Astragalus flavus</i>	<i>Astragalus flavus</i>	<i>A. flavus</i> var. <i>candicans</i>	yellow milkvetch	PerF	Wide/ Wide	
Leguminosae (Fabaceae)	<i>Astragalus fucatus</i>	<i>Astragalus fucatus</i>		Hopi milkvetch	PerF	RegEn/ RegEn	
Leguminosae (Fabaceae)	<i>Astragalus lentiginosus</i> var. <i>palans</i>	<i>Astragalus lentiginosus</i> var. <i>palans</i>		straggling milkvetch	PerF	RegEn/ RegEn	Type locality is Montezuma Canyon, San Juan Co., UT (Eastwood s.n. POM)
Leguminosae (Fabaceae)	<i>Astragalus lonchocarpus</i>	<i>Astragalus lonchocarpus</i>		great rushy milkvetch	PerF	Wide/ Wide	Type locality is 'southern Utah', (Parry 32 ISC)
Leguminosae (Fabaceae)	<i>Astragalus moencoppensis</i>			Moenkopi milkvetch	PerF	RegEn/ NA	
Leguminosae (Fabaceae)	<i>Astragalus naturitensis</i>	<i>Astragalus naturitensis</i>		Naturita milkvetch	PerF	RegEn/ RegEn	USFWS: 3C
Leguminosae (Fabaceae)	<i>Astragalus pattersonii</i>	<i>Astragalus pattersonii</i>		Patterson's milkvetch	PerF	RegEn/ RegEn	
Leguminosae (Fabaceae)	<i>Astragalus praelongus</i> var. <i>lonchopus</i>	<i>Astragalus praelongus</i> var. <i>lonchopus</i>		longstipe milkvetch	PerF	RegEn/ RegEn	
Leguminosae (Fabaceae)	<i>Astragalus preussii</i> var. <i>latus</i>		Included in var. <i>preussii</i> by some authors	Preuss' milkvetch	PerF	RegEn/ NA	Type locality is Green River, Emery Co., UT (Jones s.n. POM)
Leguminosae (Fabaceae)	<i>Astragalus sabulorum</i>			gravel milkvetch	AnnF	Wide/NA	

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

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range (UT/CO)	Comments
	Utah	Colorado					
Leguminosae (Fabaceae)	<i>Astragalus zionis</i> var. <i>zionis</i>			Zion milkvetch	PerF	RegEn/ NA	Type locality is Springdale, Washington Co., UT (Jones 5259 POM)
Leguminosae (Fabaceae)	<i>Dalea flavescens</i> var. <i>flavescens</i>		<i>D. flavescens</i>	Kanab prairie-clover	PerF	RegEn/ NA	Type locality is "Kanab" (but probably from farther east (Thompson s.n. GH)
Leguminosae (Fabaceae)	<i>Dalea lanata</i> var. <i>terminalis</i>	<i>Dalea lanata</i> var. <i>terminalis</i>		woolly dalea	PerF	Periph/ Periph	
Leguminosae (Fabaceae)	<i>Dalea oligophylla</i>	<i>Dalea candida</i> var. <i>oligophylla</i>	<i>Petalostemon candidum</i> , <i>P. occidentale</i>	white prairie-clover	PerF	Wide/ Wide	
Leguminosae (Fabaceae)	<i>Glycyrrhiza lepidota</i>	<i>Glycyrrhiza lepidota</i>	<i>G. lepidota</i> var. <i>lepidota</i>	Nuttall's licorice	PerF	Wide/ Wide	
Leguminosae (Fabaceae)	<i>Lathyrus brachycalyx</i> var. <i>zionis</i>	<i>Lathyrus brachycalyx</i> var. <i>zionis</i>		Zion sweetpea	PerF	RegEn/ RegEn	Type locality is 10 miles E of Zion NP, Kane Co., UT (Hitchcock 19013 isotype NY)
Leguminosae (Fabaceae)	<i>Lupinus argenteus</i> var. <i>moabensis</i>	<i>Lupinus argenteus</i> var. <i>moabensis</i>		Moab lupine	PerF	RegEn/ RegEn	Type locality is Professor Valley Ranch, Grand Co., UT (Welsh & Taylor 14632 BRY)
Leguminosae (Fabaceae)	<i>Lupinus brevicaulis</i>	<i>Lupinus brevicaulis</i>		shortstem lupine	AnnF	Wide/ Wide	
Leguminosae (Fabaceae)	<i>Lupinus caudatus</i> var. <i>argophyllus</i>	<i>Lupinus caudatus</i> var. <i>argophyllus</i>	<i>L. caudatus</i> , <i>L. argenteus</i> var. <i>argophyllus</i> , <i>L. caudatus</i> var. <i>cutleri</i>	silverleaf lupine	PerF	Wide/ Wide	
Leguminosae (Fabaceae)	<i>Lupinus pusillus</i> var. <i>intermontanus</i>			Great Basin lupine	AnnF	Wide/NA	
Leguminosae (Fabaceae)	<i>Lupinus pusillus</i> var. <i>rubens</i>	<i>Lupinus pusillus</i> ssp. <i>rubens</i>	<i>L. rubens</i> , included in var. <i>pusillus</i> by some authors	blackbrush lupine	AnnF	Wide/ Periph	Type locality is near St. George, Washington Co., UT (Parry 41 NY)

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

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range (UT/CO)	Comments
	Utah	Colorado					
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	
Leguminosae (Fabaceae)	<i>Parryella filifolia</i>	<i>Parryella filifolia</i>		narrow-leaf dunebroom	Shrub	RegEn/ RegEn	
Leguminosae (Fabaceae)	<i>Pediomelum megalanthum</i>	<i>Pediomelum megalanthum</i>	<i>Psoralea megalantha</i> , <i>Pediomelum megalanthum</i> var. <i>megalanthum</i>	large-flowered breadroot	Perf	RegEn/ RegEn	
Leguminosae (Fabaceae)	<i>Psoralidium junceum</i>		<i>Psoralea juncea</i>	rush scurfpea	Perf	RegEn/ NA	Type locality is Ep-som Creek, San Juan Co., UT (Eastwood 21 CAS)
Leguminosae (Fabaceae)	<i>Psoralidium lanceolatum</i> var. <i>stenophyllum</i>	<i>Psoralidium lanceolatum</i>	Vars. not recognized in Barneby (1989)	slenderleaf scurfpea	Perf	RegEn/ Wide	Type locality is near Wilson Mesa, Grand Co., UT (Rydberg & Garrett 8367 NY)
Leguminosae (Fabaceae)	<i>Robinia pseudoacacia</i>	<i>Robinia pseudoacacia</i>		black locust	Tree	Intro/Intro	Native to E North America
Leguminosae (Fabaceae)	<i>Sophora stenophylla</i>			silvery sophora	Perf	Wide/NA	
Leguminosae (Fabaceae)	<i>Vicia americana</i> var. <i>americana</i>	<i>Vicia americana</i> var. <i>americana</i>		American vetch	Perf	Wide/ Wide	
Liliaceae (Alliaceae)	<i>Allium macropetalum</i>	<i>Allium macropetalum</i>		San Juan onion	Perf	Wide/ Wide	
Liliaceae (Alliaceae)	<i>Allium nevadense</i>	<i>Allium nevadense</i>	Welsh et al. (2003) includes <i>A. atrobens</i> var. <i>crisatum</i>	Nevada onion	Perf	Wide/ Periph	
Liliaceae (Anthericaceae)	<i>Eremocrinum albomarginatum</i>			sand lily	Perf	RegEn/ NA	Type locality is near Green River, Emery Co., UT (Jones s.n. POM)
Liliaceae (Convallariaceae or Ruscaceae)	<i>Smilacina stellata</i>	<i>Maianthemum stellatum</i>		starry false Solomon's-seal	Perf	Wide/ Wide	
Linaceae	<i>Linum australe</i>	<i>Mesynium australe</i>		small yellow flax	AnnF	Sparse/ Wide	

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

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range (UT/CO)	Comments
	Utah	Colorado					
Linaceae	<i>Linum subteres</i>			Utah yellow-flax	PerF	RegEn/ NA	Type locality is Willow Creek, San Juan Co., UT (Eastwood s.n.)
Loasaceae	<i>Mentzelia pterosperma</i>	<i>Nuttallia pterosperma</i>		wing-seed stickleaf	PerF	Wide/ Wide	Type locality is Willow Creek, San Juan Co., UT (Eastwood 31 CAS)
Malvaceae	<i>Sphaeralcea grossulariifolia</i>	<i>Sphaeralcea grossulariifolia</i>	<i>S. grossulariifolia</i> var. <i>grossulariifolia</i>	gooseberry-leaf globemallow	PerF	Wide/ Periph	
Nyctaginaceae	<i>Allionia choisyi</i>			trailing four-o'clock	AnnF	Periph/ NA	Not recognized for UT by Welsh et al. (2003)
Nyctaginaceae	<i>Tripterocalyx carneus</i> var. <i>wootonii</i>	<i>Tripterocalyx carneus</i> var. <i>wootonii</i>	<i>T. wootonii</i>	Wooton's sand-verbena	AnnF	RegEn/ RegEn	
Nyctaginaceae	<i>Tripterocalyx micranthus</i>	<i>Tripterocalyx micranthus</i>	<i>Abronia micrantha</i> , <i>T. pedunculatus</i>	small-flower sandpuffs	AnnF	Wide/ Wide	
Onagraceae	<i>Calylophus lavandulifolius</i>	<i>Calylophus lavandulifolius</i>	<i>C. hartwegii</i> ssp. <i>lavandulifolius</i>	lavender-leaf sundrops	PerF	Wide/ Wide	
Onagraceae	<i>Camissonia walkeri</i>	<i>Camissonia walkeri</i>		Walker's camissonia	AnnF	Wide/ Periph	Type locality is Paradox Valley, Montrose Co., CO
Onagraceae	<i>Gaura coccinea</i>	<i>Gaura coccinea</i>		scarlet gaura	PerF	Wide/ Wide	
Onagraceae	<i>Gaura parviflora</i>	<i>Gaura mollis</i>		small-flowered gaura	AnnF	Wide/ Wide	
Onagraceae	<i>Oenothera caespitosa</i> var. <i>navajoensis</i>	<i>Oenothera caespitosa</i> ssp. <i>navajoensis</i>		Paria evening-primrose	PerF	RegEn/ RegEn	Specimen at HOVE from outside the park. Type locality is Paria River, Kane Co., UT (Cronquist 10202 MO)
Onagraceae	<i>Oenothera coronifolia</i>	<i>Oenothera coronifolia</i>		hairy-throat evening-primrose	PerF	Wide/ Wide	
Onagraceae	<i>Oenothera elata</i>	<i>Oenothera elata</i> ssp. <i>hirsutissima</i>		western evening-primrose	PerF	Wide/ Wide	

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

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range (UT/CO)	Comments
	Utah	Colorado					
Onagraceae	<i>Oenothera longissima</i>	<i>Oenothera longissima</i>		Bridges evening-primrose	Perf	RegEn/ RegEn	Type locality is Armstrong & White canyons [Natural Bridges NIM], San Juan Co., UT (Rydberg & Garrett 9410 NY)
Orchidaceae	<i>Epipactis gigantea</i>	<i>Epipactis gigantea</i>		giant helleborine	Perf	Wide/ Sparse	USFS R2 Sensitive
Orchidaceae	<i>Habenaria hyperborea</i>	<i>Limnorchis hyperborea</i>	Includes <i>Platanthera aquilonis</i> , <i>P. huronensis</i>	northern bog orchid	Perf	Wide/ Wide	
Orchidaceae	<i>Habenaria sparsiflora</i> var. <i>sparsiflora</i>	<i>Limnorchis ensifolia</i>	<i>Platanthera sparsiflora</i> . Vars. not recognized in <i>Flora of North America</i> (2002)	slender bog orchid	Perf	Wide/ Wide	
Papaveraceae	<i>Argemone corymbosa</i> var. <i>arenicola</i>			San Rafael prickly-poppy	Perf	RegEn/ NA	Type locality is 37.9 miles SW of Green River, Emery Co., UT (Ownbey & Ownbey 2146)
Polemoniaceae	<i>Gilia haydenii</i>	<i>Gilia haydenii</i>	<i>Aliciella haydenii</i>	San Juan gilia	Perf	RegEn/ RegEn	Type locality is "plains of the San Juan River in S Colorado or adjacent Utah" (Brandegee s.n.)
Polemoniaceae	<i>Gilia subnuda</i>		<i>Aliciella subnuda</i>	carmine gilia	Perf	RegEn/ NA	
Polemoniaceae	<i>Ipomopsis congesta</i> var. <i>frutescens</i>	<i>Ipomopsis congesta</i> ssp. <i>frutescens</i>	<i>Gilia congesta</i> var. <i>frutescens</i>	shrubby gilia	Perf	RegEn/ RegEn	Type locality is Springdale, Washington Co., UT (Jones 5247 NY)
Polemoniaceae	<i>Ipomopsis gunnisonii</i>	<i>Ipomopsis gunnisonii</i>	<i>Gilia gunnisonii</i>	Gunnison's gilia	AnnF	RegEn/ RegEn	Type locality is "sand banks of the Green River", UT (Cruetzfeldt s.n. NY)

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

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range (UT/CO)	Comments
	Utah	Colorado					
Polemoniaceae	<i>Ipomopsis longiflora</i>	<i>Ipomopsis longiflora</i>	<i>Gilia longiflora</i>	long-flowered gilia	PerF	Wide/ Wide	
Polemoniaceae	<i>Ipomopsis roseata</i>	<i>Ipomopsis roseata</i>	<i>Gilia roseata</i>	San Rafael gilia	PerF	RegEn/ RegEn	
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	
Polygalaceae	<i>Polygala acanthoclada</i> var. <i>acanthoclada</i>		<i>P. acanthoclada</i>	thorny milkwort	Shrub	Periph/ NA	Type locality is San Juan River, San Juan Co., UT (Brandegee 1172 GH)
Polygalaceae	<i>Polygala acanthoclada</i> var. <i>intricata</i>		<i>P. intermontana</i>	thorny milkwort	Shrub	Wide/NA	Type locality is Willow Creek, San Juan Co., UT (Eastwood 10 CAS)
Polygalaceae	<i>Polygala subspinosa</i>	<i>Polygala subspinosa</i>	<i>P. subspinosa</i> var. <i>subspinosa</i>	cushion milkwort	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 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	
Polygonaceae	<i>Eriogonum corymbosum</i> var. <i>orbiculatum</i>	<i>Eriogonum corymbosum</i> var. <i>orbiculatum</i>		rimrock wild buckwheat	Shrub	RegEn/ RegEn	Type locality is Green River, Emery Co., UT (Jones s.n. POM)
Polygonaceae	<i>Eriogonum flexum</i>	<i>Stenogonum flexum</i>		bent wild buckwheat	AnnF	RegEn/ RegEn	
Polygonaceae	<i>Eriogonum hookeri</i>	<i>Eriogonum hookeri</i>		Hooker's wild buckwheat	AnnF	Wide/ Wide	
Polygonaceae	<i>Eriogonum inflatum</i> var. <i>fusifforme</i>	<i>Eriogonum fusiforme</i>		Grand Valley desert trumpet	AnnF	RegEn/ RegEn	
Polygonaceae	<i>Eriogonum leptoclados</i> var. <i>papiliunculi</i>			butterfly wild buckwheat	Shrub	RegEn/ NA	
Polygonaceae	<i>Eriogonum leptoclados</i> var. <i>ramosissimum</i>	<i>Eriogonum leptoclados</i> var. <i>ramosissimum</i>		San Juan wild buckwheat	Shrub	RegEn/ RegEn	Type locality is near Butler Wash, San Juan Co., UT (Eastwood 134 CAS)

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

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range (UT/CO)	Comments
	Utah	Colorado					
Polygonaceae	<i>Eriogonum salsuginosum</i>	<i>Stenogonum salsuginosum</i>		smooth wild buckwheat	AnnF	Wide/ Wide	
Polygonaceae	<i>Eriogonum shockleyi</i>	<i>Eriogonum shockleyi</i> var. <i>longilobum</i>	Includes vars. <i>longilobum</i> & <i>shockleyi</i>	Shockley's wild buckwheat	PerF	Wide/ Wide	Type locality of var. <i>longilobum</i> is near Price, Carbon Co., UT (Jones 5590j POM)
Polygonaceae	<i>Eriogonum umbellatum</i> var. <i>umbellatum</i>	<i>Eriogonum umbellatum</i> var. <i>umbellatum</i>		sulfur wild buckwheat	PerF	Wide/ Wide	
Polygonaceae	<i>Eriogonum wetherillii</i>	<i>Eriogonum wetherillii</i>		Wetherill's wild buckwheat	AnnF	RegEn/ RegEn	Type locality is along the San Juan River, San Juan Co., UT (Eastwood 124 CAS)
Polypodiaceae (Adiantaceae)	<i>Cheilanthes feei</i>	<i>Cheilanthes feei</i>		slender lip-fern	Fern	Wide/ Wide	
Portulacaceae	<i>Talinum brevifolium</i>		<i>Pheimeranthus brevifolius</i>	sausageleaf talinum	PerF	Wide/NA	
Ranunculaceae	<i>Myosurus minimus</i>	<i>Myosurus minimus</i>		tiny mousetail	AnnF	Sparse/ Wide	
Ranunculaceae	<i>Ranunculus cymbalaria</i>	<i>Halerpestes cymbalaria</i> ssp. <i>saximontana</i>	<i>R. cymbalaria</i> var. <i>cymbalaria</i> . Vars. not recognized in <i>Flora of North America</i> (1997)	marsh buttercup	PerF	Wide/ Wide	
Ranunculaceae (Helleboraceae)	<i>Aquilegia micrantha</i>	<i>Aquilegia micrantha</i>		alcove columbine	PerF	RegEn/ RegEn	Type locality is Bluff, San Juan Co., UT (Wetherill s.n. CAS)
Rhamnaceae	<i>Rhamnus betulifolia</i>		<i>Frangula betulifolia</i>	birchleaf buckthorn	Shrub	Wide/NA	
Rosaceae	<i>Cercocarpus intricatus</i>	<i>Cercocarpus intricatus</i>	<i>C. ledifolius</i> var. <i>intricatus</i>	dwarf mountain mahogany	Shrub	Wide/ Wide	
Rosaceae	<i>Fallugia paradoxa</i>	<i>Fallugia paradoxa</i>		Apache plume	Shrub	Wide/ Wide	
Rosaceae	<i>Holodiscus dumosus</i>	<i>Holodiscus discolor</i>		bush oceanspray	Shrub	Wide/ Wide	

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

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range (UT/CO)	Comments
	Utah	Colorado					
Rosaceae	<i>Petrophyton caespitosum</i>	<i>Petrophyton caespitosum</i>	<i>Spiraea caespitosa</i>	rock spiraea	PerF	Wide/ Wide	
Rubiaceae	<i>Galium aparine</i> var. <i>echinospermon</i>	<i>Galium spurium</i>		cleavers	AnnF	Wide/ Wide	
Rubiaceae	<i>Galium multiflorum</i> var. <i>coloradoense</i>	<i>Galium coloradoense</i>		Colorado bedstraw	PerF	RegEn/ RegEn	
Rubiaceae	<i>Houstonia rubra</i>			red bluets	PerF	Periph/ NA	
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	
Salicaceae	<i>Salix goodingii</i>	<i>Salix goodingii</i>	<i>S. nigra</i> var. <i>vallicola</i>	Goodding's black willow	Tree	Wide/ Periph	
Saxifragaceae (Hydrangeaceae)	<i>Fendlera rupicola</i>	<i>Fendlera falcata</i>	<i>F. rupicola</i> var. <i>rupicola</i>	fendlerbush	Shrub	Wide/ Wide	
Scrophulariaceae	<i>Castilleja exilis</i>	<i>Castilleja minor</i>	<i>C. minor</i> ssp. <i>minor</i>	annual paintbrush	AnnF	Wide/ Wide	
Scrophulariaceae	<i>Mimulus guttatus</i>	<i>Mimulus guttatus</i>		yellow monkeyflower	PerF	Wide/ Wide	
Scrophulariaceae	<i>Mimulus rubellus</i>	<i>Mimulus rubellus</i>		reddish monkeyflower	AnnF	Wide/ Wide	
Scrophulariaceae	<i>Pedicularis centranthera</i>	<i>Pedicularis centranthera</i>		dwarf lousewort	PerF	Wide/ Wide	
Scrophulariaceae	<i>Penstemon ambiguus</i> var. <i>laevissimus</i>		<i>Lelostemon ambiguus</i>	bush penstemon	PerF	Wide/NA	
Scrophulariaceae	<i>Penstemon angustifolius</i> var. <i>venosus</i>	<i>Penstemon angustifolius</i> var. <i>venosus</i>		veined penstemon	PerF	RegEn/ RegEn	
Scrophulariaceae	<i>Penstemon barbatus</i> var. <i>barbatus</i>	<i>Penstemon barbatus</i> var. <i>torreyi</i>		beardlip penstemon	PerF	Wide/ Wide	
Scrophulariaceae	<i>Penstemon comarrhenus</i>	<i>Penstemon comarrhenus</i>		dusty penstemon	PerF	RegEn/ RegEn	Type locality is Aquarius Plateau, Garfield Co., UT (Ward 462 GH)
Scrophulariaceae	<i>Penstemon rostriflorus</i>	<i>Penstemon rostriflorus</i>	<i>P. bridgesii</i>	beaked penstemon	PerF	Wide/ Periph	

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

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range (UT/CO)	Comments
	Utah	Colorado					
Scrophulariaceae	<i>Penstemon strictiformis</i>	<i>Penstemon strictiformis</i>		Natural Bridges penstemon	PerF	RegEn/ RegEn	Type locality is Mancos, Montezuma Co., CO (Baker, Earle, & Tracy 76 NY)
Scrophulariaceae	<i>Veronica anagallis-aquatica</i>	<i>Veronica anagallis-aquatica</i>		water speedwell	PerF	Intro/Intro	Native to Europe
Selaginellaceae	<i>Selaginella mutica</i>	<i>Selaginella mutica</i>	<i>S. mutica</i> var. <i>mutica</i>	blunt-leaf spike-moss	Fern	Wide/ Wide	
Solanaceae	<i>Lycium andersonii</i>			Anderson's wolfberry	Shrub	Wide/NA	
Solanaceae	<i>Physalis longifolia</i>	<i>Physalis virginiana</i> var. <i>sonorae</i>		long-leaf ground-cherry	PerF	Wide/ Wide	
Solanaceae	<i>Solanum jamesii</i>	<i>Solanum jamesii</i>		James' potato	PerF	Periph/ Periph	
Solanaceae	<i>Solanum rostratum</i>	<i>Solanum rostratum</i>		buffalobur	AnnF	Intro/ Wide	Native to C North America
Typhaceae	<i>Typha domingensis</i>	<i>Typha domingensis</i>		southern cattail	PerG	Wide/ Sparse	
Umbelliferae (Apiaceae)	<i>Cymopterus terebinthinus</i> var. <i>petraeus</i>	<i>Aletes petraeus</i>	<i>C. petraeus</i> , <i>Pteryxia petraea</i>	rock spring-parsley	PerF	Wide/ Periph	
Umbelliferae (Apiaceae)	<i>Lomatium parryi</i>			Parry's lomatium	PerF	Wide/NA	Type locality is "Southern Utah" (Parry 85)
Vitaceae	<i>Parthenocissus vitacea</i>	<i>Parthenocissus vitacea</i>		thicket-creeper	Shrub	Wide/ Wide	

The vascular plant species listed in this table are known from the vicinity of Hovenweep National Monument (San Juan County, Utah, and Montezuma 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 of species from just outside the monument in the Hovenweep National Monument herbarium. Some species from Appendix C (especially those collected by William Litzinger from just outside Hovenweep) could be considered as potentially occurring in the monument, but are not included here.

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

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range	Park stat.	UT	CO	Comments
	Utah	Colorado								
Amaranthaceae	<i>Amaranthus californicus</i>			California amaranth	AnnF	Periph/ NA	FalsRep	O		Report from HOVE herbarium based on a misidentified specimen of <i>A. blitoides</i> .
Amaranthaceae	<i>Amaranthus torreyi</i>			Torrey's amaranthus	AnnF	Wide/ NA	FalsRep	O		Report from HOVE herbarium based on a misidentified specimen of <i>Bassia scoparia</i>
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	FalsRep	O		Report from HOVE herbarium based on a misidentified specimen of <i>Amsonia jonesii</i> .
Asclepiadaceae	<i>Asclepias speciosa</i>	<i>Asclepias speciosa</i>		showy milkweed	PerF	Wide/ Wide	FalsRep	O		Reported by Schelz & Moran (2003) based on a specimen from HOVE herbarium (Litzinger 739) from outside the park.
Asclepiadaceae	<i>Asclepias subverticillata</i>	<i>Asclepias subverticillata</i>	<i>A. galloides</i>	whorled milkweed	PerF	Wide/ Wide	FalsRep	O		Reported by Schelz & Moran (2003) based on a specimen from HOVE herbarium (Litzinger 737) collected outside the park
Boraginaceae	<i>Cryptantha bakeri</i>	<i>Oreocarya bakeri</i>		Baker's cryptanth	PerF	RegEn/ RegEn	FalsRep	O		Report from HOVE herbarium based on a misidentified specimen of <i>C. osterhoutii</i> .
Boraginaceae	<i>Cryptantha longiflora</i>	<i>Oreocarya longiflora</i>		long-flower cryptanth	PerF	RegEn/ RegEn	FalsRep	O		Report from HOVE herbarium based on a misidentified specimen of <i>C. flavoculata</i> . Type locality is Palisades, Mesa Co., CO (Crandall s.n. RM)
Boraginaceae	<i>Cryptantha paradoxa</i>	<i>Oreocarya paradoxa</i>		Paradox cryptanth	PerF	RegEn/ RegEn	FalsRep	O		Report from HOVE herbarium based on a misidentified specimen of <i>C. flavoculata</i> . USFWS 3C
Boraginaceae	<i>Cryptantha tenuis</i>	<i>Cryptantha tenuis</i>		slender cryptanth	PerF	RegEn/ RegEn	FalsRep	O		Report from Schelz & Moran (2003) based on a misidentified specimen of <i>C. flavoculata</i> . Type locality is Courthouse Wash, Grand Co., UT (Eastwood s.n. CAS)

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

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range	Park stat.	UT	CO	Comments
	Utah	Colorado								
Boraginaceae	<i>Lithospermum arvense</i>	<i>Buglossoides arvensis</i>		gromwell	AnnF	Intro/ Intro	FalsRep	O	O	Reported by Schelz & Moran (2003) based on a misidentified specimen of <i>L. ruderale</i> . Native to Eurasia
Boraginaceae	<i>Lithospermum multiflorum</i>	<i>Lithospermum multiflorum</i>		southwestern stoneseed	PerF	Wide/ Wide	FalsRep		O	Report from HOVE herbarium based on a misidentified specimen of <i>L. ruderale</i> .
Capparaceae (Cleomaceae)	<i>Cleome lutea</i>	<i>Cleome lutea</i>		yellow beeplant	AnnF	Wide/ Wide	FalsRep	?	?	Reported by Schelz & Moran (2003) based on HOVE specimen (Litzinger 773) collected outside the park.
Capparaceae (Cleomaceae)	<i>Cleome serrulata</i>	<i>Cleome serrulata</i>		Rocky Mountain beeplant	AnnF	Wide/ Wide	FalsRep	?	?	Reported by Schelz & Moran (2003) based on HOVE specimen (Litzinger 821) collected outside the park.
Caryophyllaceae (Alsinaeae)	<i>Arenaria fendleri</i> var. <i>fendleri</i>	<i>Eremogone fendleri</i>		Fendler's sandwort	PerF	Periph/ Wide	Ques?	O		Reported by Von Loh et al. (2008), but HOVE is well outside of the known range of this taxon. Report probably based on var. <i>eastwoodiae</i> .
Chenopodiaceae	<i>Atriplex hortensis</i>	<i>Atriplex hortensis</i>		garden orach	AnnF	Intro/ Intro	Ques?	O		Reported by Schelz & Moran (2003), but HOVE is well outside the known range of this species. Native to Eurasia
Chenopodiaceae	<i>Atriplex obovata</i>	<i>Atriplex obovata</i>		New Mexico saltbush	Shrub	Periph/ Periph	FalsRep	O		Reported by Schelz & Moran (2003) based on misidentified specimens of <i>A. gardneri</i> var. <i>utahensis</i> and var. <i>cuneata</i>
Chenopodiaceae	<i>Atriplex truncata</i>	<i>Atriplex truncata</i>		wedge orach	AnnF	Wide/ Wide	FalsRep	O		Report from HOVE herbarium based on a misidentified specimen of <i>A. argentea</i> var. <i>rydbergii</i>
Chenopodiaceae	<i>Chenopodium fremontii</i> var. <i>fremontii</i>	<i>Chenopodium fremontii</i>	<i>C. fremontii</i>	Fremont's goosefoot	AnnF	Wide/ Wide	FalsRep	O	O	Reported by Schelz & Moran (2003) based on a misidentified specimen of <i>C. album</i> var. <i>berlandieri</i>

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

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range	Park stat.	UT	CO	Comments
	Utah	Colorado								
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	FalsRep	O	O	Reported by Schelz & Moran (2003) based on a specimen in HOVE herbarium (Litzinger 890) from outside the park.
Compositae (Asteraceae)	<i>Ambrosia trifida</i>	<i>Ambrosia trifida</i>		giant ragweed	AnnF	Intro/ Wide	Ques?	?	?	Reported by Schelz & Moran (2003), but HOVE is well beyond the known range of this species. Native to C North America.
Compositae (Asteraceae)	<i>Antennaria dimorpha</i>	<i>Antennaria dimorpha</i>		low pussytoes	PerF	Wide/ Wide	FalsRep	O	O	Reported by Schelz & Moran (2003) based on a misidentified specimen of <i>Gnaphalium exilifolium</i> .
Compositae (Asteraceae)	<i>Artemisia dracunculus</i> var. <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	FalsRep	O	O	Reported by Schelz & Moran (2003) based on a misidentified specimen of <i>A. ludoviciana</i> var. <i>albula</i> .
Compositae (Asteraceae)	<i>Artemisia ludoviciana</i> var. <i>incompta</i>	<i>Artemisia ludoviciana</i> ssp. <i>incompta</i>		Louisiana wormwood	PerF	Wide/ Wide	FalsRep	O	O	Reported by Schelz & Moran (2003) based on misidentified specimens of <i>A. ludoviciana</i> var. <i>albula</i> .
Compositae (Asteraceae)	<i>Artemisia ludoviciana</i> var. <i>latiloba</i>	<i>Artemisia ludoviciana</i> ssp. <i>latiloba</i>	<i>A. ludoviciana</i> ssp. <i>candicans</i>	Louisiana wormwood	PerF	Sparse/ Periph	FalsRep	?	?	Reports from HOVE herbarium based on a misidentified specimen of <i>A. ludoviciana</i> var. <i>albula</i> .
Compositae (Asteraceae)	<i>Artemisia ludoviciana</i> var. <i>ludoviciana</i>	<i>Artemisia ludoviciana</i> ssp. <i>ludoviciana</i>		Louisiana wormwood	PerF	Wide/ Wide	FalsRep	O	O	Reported by Schelz & Moran (2003) based on misidentified specimens of <i>A. ludoviciana</i> var. <i>albula</i> .
Compositae (Asteraceae)	<i>Aster pauciflorus</i>	<i>Almutaster pauciflorus</i>		alkali aster	PerF	Wide/ Wide	FalsRep	O	O	Reports from HOVE herbarium based on misidentified specimens of <i>Chaetopappa ericoides</i> .
Compositae (Asteraceae)	<i>Chaenactis douglasii</i>	<i>Chaenactis douglasii</i>	Includes var. <i>douglasii</i> & var. <i>montana</i>	hoary dusty- maiden	PerF	Wide/ Wide	FalsRep	O	O	Reports from HOVE herbarium based on misidentified specimens of <i>C. stevioides</i> .

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

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range	Park stat.	UT	CO	Comments
	Utah	Colorado								
Compositae (Asteraceae)	<i>Chrysopsis zionensis</i>	<i>Chrysopsis zionensis</i>	<i>H. villosa</i> var. <i>H. foliosa</i> , <i>H.</i> <i>zionensis</i>	Zion goldenaster	PerF	RegEn/ RegEn	FalsRep	O		Reported by Schelz & Moran (2003, as <i>H. villosa</i> var. <i>foliosa</i>) based on a misidentified specimen of <i>C. villosa</i> var. <i>minor</i> . Type locality is W of Leeds along road to Silver Reef Campgrounds, Washington Co., UT (Semple & Heard 7859 NY)
Compositae (Asteraceae)	<i>Chrysothamnus nauseosus</i> var. <i>arenarius</i>		<i>Ericameria nauseosa</i> var. <i>arenaria</i>	sand rabbitbrush	Shrub	RegEn/ NA	FalsRep	O		Reported by Schelz & Moran (2003) based on a misidentified specimen of <i>C. nauseosus</i> var. <i>gnaphalodes</i> .
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	FalsRep	O		Report from HOVE herbarium based on a misidentified specimen of <i>C. nauseosus</i> var. <i>gnaphalodes</i> . Type locality is Canaan Ranch, Kane Co., UT (Jones 6066c POM)
Compositae (Asteraceae)	<i>Chrysothamnus pulchellus</i> var. <i>baileyi</i>		<i>Ericameria pulchella</i> , <i>Lorandersonia baileyi</i> , <i>C. baileyi</i>	pretty rabbitbrush	Shrub	Periph/ NA	FalsRep	O		Report from HOVE herbarium based on a misidentified specimen of <i>C. nauseosus</i> var. <i>gnaphalodes</i> .
Compositae (Asteraceae)	<i>Chrysothamnus viscidiflorus</i> var. <i>lanceolatus</i>	<i>Chrysothamnus viscidiflorus</i> var. <i>lanceolatus</i>		lanceleaf rabbitbrush	Shrub	Wide/ Wide	FalsRep	O		Reported by Schelz & Moran (2003) based on a specimen from HOVE herbarium (Litzinger 373) from outside the park.
Compositae (Asteraceae)	<i>Cichorium intybus</i>	<i>Cichorium intybus</i>		chicory	PerF	Intro/ Intro	FalsRep	O		Reported by Schelz & Moran (2003) based on a specimen from HOVE herbarium (Litzinger 766) from outside the park. CO state noxious weed (List C). Native to Eurasia

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

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range	Park stat.	UT	CO	Comments
	Utah	Colorado								
Compositae (Asteraceae)	<i>Erigeron speciosus</i> var. <i>macranthus</i>	<i>Erigeron speciosus</i>		aspen daisy	PerF	Wide/ Wide	FalsRep		O	Reported by Schelz & Moran (2003, without variety) based on a misidentified specimen of <i>Aster ascendens</i> collected outside the park.
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	FalsRep		O	Reported by Schelz & Moran (2003) based on a misidentified specimen of <i>G. laciniata</i>
Compositae (Asteraceae)	<i>Gutierrezia microcephala</i>	<i>Gutierrezia microcephala</i>		thread snakeweed	Shrub	Wide/ Periph	FalsRep		O	Reported by Schelz & Moran (2003) and Von Loh et al. (2008), but all records in HOVE herbarium are based on misidentified specimens of <i>G. sarothrae</i>
Compositae (Asteraceae)		<i>Hymenopappus filifolius</i> var. <i>parvulus</i>		Colorado hyalineherb	PerF	NA/ RegEn	FalsRep		O	Report from HOVE herbarium based on a misidentified specimen of <i>Hymenoxys richardsonii</i> var. <i>floribunda</i> .
Compositae (Asteraceae)	<i>Lygodesmia juncea</i>	<i>Lygodesmia juncea</i>		rush skeleton-plant	PerF	Periph/ Wide	FalsRep		O	Report from HOVE herbarium based on a misidentified specimen of <i>Stephanomeria tenuifolia</i> var. <i>tenuifolia</i> .
Compositae (Asteraceae)	<i>Perityle tenella</i>			Dixie rock-daisy	PerF	RegEn/ NA	Ques?	?	?	Reported by Schelz & Moran (2003), but HOVE is well beyond the known range of this species. Type locality is Springdale, Washington Co., UT (Jones 5249a US).
Compositae (Asteraceae)	<i>Platyschkuhria integrifolia</i> var. <i>desertorum</i>	<i>Platyschkuhria integrifolia</i> var. <i>desertorum</i>	<i>Bahia nudicaulis</i> var. <i>desertorum</i>	desert bahia	PerF	RegEn/ RegEn	Ques?	?	?	Reported by Schelz & Moran (2003), but HOVE is outside the known range of this taxon. Type locality is CisCo., Grand Co., UT (Jones s.n. US)
Compositae (Asteraceae)	<i>Senecio spartioides</i> var. <i>multicapitatus</i>	<i>Senecio multicapitatus</i>	Vars. not recognized in <i>Flora of North America</i> (2006)	many-headed groundsel	PerF	Wide/ Wide	FalsRep		O	Reported by Schelz & Moran (2003) based on a misidentified specimen of <i>S. douglasii</i> var. <i>longilobus</i> .

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

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range	Park stat.	UT	CO	Comments
	Utah	Colorado								
Compositae (Asteraceae)	<i>Sonchus asper</i>	<i>Sonchus asper</i>		spiny-leaf sow- thistle	AnnF	Intro/ Intro	FalsRep	O	O	Reported by Schelz & Moran (2003) based on a misidentified specimen of <i>Lactuca serriola</i> . Native to Europe
Compositae (Asteraceae)	<i>Stephanomeria exigua</i>	<i>Stephanomeria exigua</i>	<i>S. exigua</i> sp. <i>exigua</i>	white-plume wire-lettuce	AnnF	Wide/ Wide	FalsRep	O		Reported by Schelz & Moran (2003) based on a specimen from HOVE herbarium (Litzinger 352) from outside the park.
Compositae (Asteraceae)	<i>Stephanomeria wrightii</i>			Wright's wirelettuce	PerF	NA/NA	FalsRep	O		Report from HOVE herbarium based on a misidentified specimen of <i>S. tenuifolia</i> var. <i>tenuifolia</i> . Native to southwestern US, but not Utah or Colorado.
Compositae (Asteraceae)	<i>Townsendia florifer</i>		<i>T. florifera</i>	showy townsendia	PerF	Wide/ NA	FalsRep	O	O	Reported by Schelz & Moran (2003) based on misidentified specimens of <i>T. incana</i> .
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	FalsRep	O	O	Reported by Schelz & Moran (2003) based on specimen from HOVE herbarium (Litzinger 698) from outside the park.
Compositae (Asteraceae)	<i>Xanthium strumarium</i> var. <i>canadense</i>	<i>Xanthium strumarium</i>	<i>X. pennsylvanicum</i> , <i>X. saccharatum</i> ; vars. not recognized in <i>Flora of North America</i> (2006).	rough cocklebur	AnnF	Wide/ Wide	FalsRep	O		Reported by Schelz & Moran (2003) based on specimen from HOVE herbarium (Litzinger 820) from outside the park.
Convolvulaceae (Cuscutaceae)		<i>Grammica umbellata</i>	<i>Cuscuta umbellata</i>	flatglobe dodder	AnnF	NA/ Wide	FalsRep	O		Reported by Schelz & Moran (2003) based on a misidentified specimen of <i>C. pentagona</i> collected outside the park.
Crossosomataceae (Celastraceae)	<i>Glossopetalon spinescens</i> var. <i>meionandrum</i>		<i>Forsellisia meionandra</i>	spiny greasebush	Shrub	RegEn/ NA	FalsRep	O		Report from HOVE herbarium based on a misidentified specimen of var. <i>microphyllum</i> .

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

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range	Park stat.	UT	CO	Comments
	Utah	Colorado								
Cruciferae (Brassicaceae)	<i>Alyssum alyssoides</i>	<i>Alyssum alyssoides</i>		pale madwort	AnnF	Intro/ Intro	Ques?	O	O	Reported by Schelz & Moran (2003), but HOVE is well beyond the known range of this species. Native to Europe
Cruciferae (Brassicaceae)	<i>Erysimum asperum</i> var. <i>purshii</i>	<i>Erysimum asperum</i>	<i>E. asperum</i> var. <i>asperum</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	FalsRep		O	Reported by Schelz & Moran (2003) based on a specimen in HOVE herbarium (Litzinger 582) from outside the park.
Cruciferae (Brassicaceae)	<i>Erysimum inconspicuum</i>	<i>Erysimum inconspicuum</i>		shy wallflower	PerF	Wide/ Wide	FalsRep	O		Previous reports from HOVE herbarium were based on misidentified specimens of <i>Schoenocrambe linifolia</i> .
Cruciferae (Brassicaceae)	<i>Lepidium campestre</i>	<i>Neolepia campestris</i>		field pepperwort	AnnF	Intro/ Intro	FalsRep	O		Previous reports from HOVE herbarium were based on misidentified specimens of <i>L. montanum</i> var. <i>jonesii</i> . Native to Asia
Cruciferae (Brassicaceae)	<i>Lepidium virginicum</i> var. <i>medium</i>	<i>Lepidium virginicum</i>		poor-man's pepperwort	AnnF	Periph/ Sparse	FalsRep		O	Previous reports from HOVE herbarium were based on misidentified specimens of <i>L. montanum</i> var. <i>jonesii</i> .
Cruciferae (Brassicaceae)	<i>Physaria newberryi</i>		<i>P. newberryi</i> var. <i>racemosa</i>	Newberry's twinpod	PerF	RegEn/ NA	Ques?		O	Reported by Schelz & Moran (2003), but HOVE is well beyond the known range of this species
Cruciferae (Brassicaceae)	<i>Rorippa curvipes</i> var. <i>curvipes</i>	<i>Rorippa curvipes</i>		blunt-leaf yellowcress	PerF	Wide/ Wide	Ques?	?	?	Reported by Schelz & Moran (2003), but HOVE is outside the known range of this taxon.
Cruciferae (Brassicaceae)	<i>Thelypodium integrifolium</i> var. <i>affine</i>		<i>T. rhomboideum</i>	cousin thelypody	PerF	Wide/ NA	FalsRep		O	Previous reports from HOVE herbarium were based on misidentified specimens of var. <i>gracilipes</i> from outside the park.

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

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range	Park stat.	UT	CO	Comments
	Utah	Colorado								
Cruciferae (Brassicaceae)	<i>Thelypodium integrifolium</i> var. <i>gracilipes</i>	<i>Thelypodium integrifolium</i>		Moab thelypody	PerF	RegEn/ RegEn	Ques?		O	Reported by Schelz & Moran (2003) based on a specimen from HOVE herbarium (Litzinger 724) collected outside the park
Cruciferae (Brassicaceae)	<i>Thlaspi arvense</i>	<i>Thlaspi arvense</i>		field pennycress	AnnF	Intro/ Intro	FalsRep	O		Report from HOVE herbarium based on a misidentified specimen of <i>Lepidium densiflorum</i> var. <i>densiflorum</i> . Native to Europe
Cyperaceae	<i>Carex petasata</i>	<i>Carex petasata</i>		Liddon sedge	PerG	Wide/ Wide	FalsRep	O		Report from HOVE herbarium based on a misidentified specimen of <i>C. praegracilis</i> .
Cyperaceae	<i>Scirpus pallidus</i>	<i>Scirpus pallidus</i>	<i>S. atrovirens</i> var. <i>pallidus</i>	pale bulrush	PerG	Sparse/ Wide	FalsRep	O		Report from HOVE herbarium based on a misidentified specimen of <i>S. maritimus</i> .
Elaeagnaceae	<i>Shepherdia rotundifolia</i>			roundleaf buffaloberry	Shrub	RegEn/ NA	FalsRep	O		Report from Schelz & Moran (2003) based on a misidentified specimen of <i>Atriplex confertifolia</i> . Type locality is upper valley of the Virgin, Kane Co., UT (Siler s.n. 15C)
Equisetaceae	<i>Equisetum laevigatum</i>	<i>Hippochaete laevigata</i>	<i>E. kansanum</i>	smooth scouring-rush	Fern	Wide/ Wide	FalsRep	O		Report from HOVE herbarium based on misidentified specimen of <i>E. x nelsonii</i> .
Euphorbiaceae	<i>Euphorbia brachycera</i>	<i>Tithymalus brachyceras</i>	<i>E. robusta</i> , <i>E. brachycera</i> var. <i>robusta</i>	shorthorn spurge	PerF	Wide/ Wide	FalsRep	O		Report from Schelz & Moran (2003) based on a collection from HOVE herbarium (Litzinger 712) from outside the park.
Fagaceae	<i>Quercus turbinella</i>	<i>Quercus turbinella</i>		turbinella live- oak	Shrub	Wide/ Wide	FalsRep	O	O	Report from Schelz & Moran (2003) based on misidentified specimens of <i>Q. welshii</i> and <i>Mahonia repens</i> .
Gentianaceae	<i>Swertia perennis</i>	<i>Swertia perennis</i>		felwort	PerF	Wide/ Wide	FalsRep	O		Report from HOVE herbarium based on a misidentified specimen of <i>S. utahensis</i> .

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

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range	Park stat.	UT CO	Comments
	Utah	Colorado							
Gramineae (Poaceae)	<i>Bouteloua curtipendula</i>	<i>Bouteloua curtipendula</i>	Includes vars. <i>curtipendula</i> & <i>caespitosa</i>	sideoats grama	PerG	Wide/ Wide	FalsRep	O	Reported by Schelz & Moran (2003) based on a specimen from HOVE herbarium (Litzinger 732) from outside the park.
Gramineae (Poaceae)	<i>Bromus anomalus</i>	<i>Bromopsis porteri</i>	<i>Bromus porteri</i> , <i>B. frondosus</i> , <i>Bromopsis porteri</i>	nodding brome	PerG	Wide/ Wide	FalsRep	O	Report from HOVE herbarium based on a misidentified specimen of <i>B. tectorum</i>
Gramineae (Poaceae)	<i>Bromus secalinus</i>	<i>Bromus secalinus</i>		rye chess	AnnG	Intro/ Intro	FalsRep	O	Report from Schelz & Moran (2003) based on a misidentified specimen of <i>B. japonicus</i> . Native to Eurasia
Gramineae (Poaceae)	<i>Cenchrus longispinus</i>	<i>Cenchrus longispinus</i>	<i>Cenchrus pauciflorus</i>	field sandbur	AnnG	Wide/ Wide	FalsRep	O	Reported by Schelz & Moran (2003) based on a specimen from HOVE herbarium (Litzinger 735) from outside the park.
Gramineae (Poaceae)	<i>Elymus canadensis</i>	<i>Elymus canadensis</i>	<i>E. canadensis</i> var. <i>canadensis</i>	Canada wildrye	PerG	Wide/ Wide	FalsRep	O	Reported by Schelz & Moran (2003) based on a specimen from HOVE herbarium (Litzinger 668) from outside the park.
Gramineae (Poaceae)	<i>Elymus glaucus</i>	<i>Elymus glaucus</i>	<i>E. glaucus</i> var. <i>glaucus</i>	blue wildrye	PerG	Wide/ Wide	FalsRep	O	Report from HOVE herbarium based on a misidentified specimen of <i>E. smithii</i> .
Gramineae (Poaceae)	<i>Elymus repens</i>	<i>Elytrigia repens</i>	<i>Agropyron repens</i>	quackgrass	PerG	Intro/ Intro	FalsRep	O	Report from HOVE herbarium based on a misidentified specimen of <i>E. smithii</i> . Utah state noxious weed. CO state noxious weed (List B). Native to Eurasia
Gramineae (Poaceae)	<i>Festuca arundinacea</i>	<i>Festuca arundinacea</i>	<i>Lolium arundinaceum</i> , <i>Schedonorus phoenix</i> , <i>S. arundinaceus</i>	tall fescue	PerG	Intro/ Intro	FalsRep	O	Report from HOVE herbarium based on a misidentified specimen of <i>Bromus inermis</i> . Native to Europe

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

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range	Park stat.	UT	CO	Comments
	Utah	Colorado								
Gramineae (Poaceae)	<i>Lolium perenne</i>	<i>Lolium perenne</i>		perennial ryegrass	PerG	Intro/ Intro	FalsRep	O		Report from Schelz & Moran (2003) based on a misidentified specimen of <i>Elymus elongatus</i> . Native to Eurasia and Africa
Gramineae (Poaceae)	<i>Muhlenbergia asperifolia</i>	<i>Muhlenbergia asperifolia</i>		scratchgrass	PerG	Wide/ Wide	FalsRep	O		Reported by Schelz & Moran (2003) based on a specimen from HOVE herbarium (Litzinger 736) from outside the park.
Gramineae (Poaceae)	<i>Phleum alpinum</i>	<i>Phleum commutatum</i>		alpine timothy	PerG	Wide/ Wide	FalsRep	O		Reported by Schelz & Moran (2003) based on a specimen from HOVE herbarium (Litzinger 811) from outside the park.
Gramineae (Poaceae)	<i>Phleum pratense</i>	<i>Phleum pratense</i>		timothy	PerG	Intro/ Intro	FalsRep	O		Reported by Schelz & Moran (2003) based on a specimen from HOVE herbarium (Litzinger 720) from outside the park. Native to Eurasia
Gramineae (Poaceae)	<i>Poa palustris</i>	<i>Poa palustris</i>		fowl bluegrass	PerG	Wide/ Wide	FalsRep	O		Report from HOVE herbarium based on a misidentified specimens of <i>P. fendleriana</i> .
Gramineae (Poaceae)	<i>Poa trivialis</i>	<i>Poa trivialis</i>		roughstalked bluegrass	PerG	Intro/ Intro	FalsRep	O		Reports from HOVE herbarium based on a misidentified specimen of <i>P. pratensis</i> . Native to Eurasia
Gramineae (Poaceae)	<i>Secale cereale</i>	<i>Secale cereale</i>		cultivated rye	AnnG	Intro/ Intro	FalsRep	O		Reported by Schelz & Moran (2003) based on a specimen from HOVE herbarium (Litzinger 713) from outside the park. Native to Eurasia
Gramineae (Poaceae)	<i>Setaria glauca</i>	<i>Setaria glauca</i>	<i>S. pumila</i> ssp. <i>pumila</i> , <i>Pennisetum glaucum</i>	yellow bristleglass	AnnG	Intro/ Intro	FalsRep	O		Report from HOVE herbarium based on a misidentified specimen of <i>S. viridis</i> . Native to Eurasia

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

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range	Park stat.	UT	CO	Comments
	Utah	Colorado								
Gramineae (Poaceae)	<i>Sporobolus contractus</i>	<i>Sporobolus contractus</i>		spike dropseed	PerG	Wide/ Sparse	FalsRep	O		Reported by Schelz & Moran (2003) based on a specimen from HOVE herbarium (Litzinger 775) from outside the park. Native to Eurasia
Gramineae (Poaceae)	<i>Sporobolus vaginiflorus</i>			sheathed dropseed	AnnG	NA/NA	FalsRep	O		Report from HOVE herbarium based on a misidentified specimen of <i>Polygogon semiverticillatus</i> . Native to eastern and southwestern North America, but outside of Utah or Colorado.
Juncaceae	<i>Juncus filiformis</i>	<i>Juncus filiformis</i>		thread rush	PerG	Periph/ Wide	FalsRep	O		Report from HOVE herbarium based on a misidentified specimen of <i>J. arcticus</i> .
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	FalsRep	O		Report from HOVE herbarium based on a misidentified specimen of <i>J. longistylis</i> .
Labiatae (Lamiaceae)	<i>Poliomintha incana</i>	<i>Poliomintha incana</i>		purple sage	Shrub	Wide/ Periph	FalsRep	O		Reported by Schelz & Moran (2003) based on a specimen from HOVE herbarium (Litzinger 697) from outside the park.
Leguminosae (Fabaceae)	<i>Astragalus argophyllus</i>	<i>Astragalus argophyllus</i> var. <i>martinii</i>		silver-leaved milkvetch	PerF	Wide/ Periph	FalsRep	O		Report from HOVE herbarium based on a misidentified specimen of <i>A. calycosus</i> var. <i>calycosus</i> .
Leguminosae (Fabaceae)	<i>Astragalus bisulcatus</i> var. <i>haydenianus</i>	<i>Astragalus haydenianus</i>		Hayden's milkvetch	PerF	Wide/ Wide	FalsRep	O		Report from Schelz & Moran (2003) based on a misidentified specimen of <i>A. flavus</i> var. <i>flavus</i> .
Leguminosae (Fabaceae)	<i>Astragalus flexuosus</i> var. <i>flexuosus</i>	<i>Astragalus flexuosus</i>		pliant milkvetch	PerF	Periph/ Wide	FalsRep	O		Report from Schelz & Moran (2003) based on a misidentified specimen of <i>A. wingatanus</i>

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

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range	Park stat.	UT	CO	Comments
	Utah	Colorado								
Leguminosae (Fabaceae)	<i>Astragalus gilensis</i>			Gila milkvetch	PerF	NA/NA	FalsRep	O		Report from Schelz & Moran (2003) based on misidentified specimens of <i>A. nuttallianus</i> var. <i>micranthiformis</i> and <i>A. sabulorum</i> . Native to SW US but not to Utah or Colorado.
Leguminosae (Fabaceae)	<i>Astragalus newberryi</i> var. <i>newberryi</i>	<i>Astragalus newberryi</i>	Includes var. <i>escalantinus</i>	Newberry's milkvetch	PerF	RegEn/ RegEn	FalsRep	? ?	?	Report from HOVE herbarium based on a misidentified specimen of <i>A. amphioxys</i> var. <i>amphioxys</i> .
Leguminosae (Fabaceae)	<i>Astragalus tephrodes</i>			ashen milkvetch	PerF	NA/NA	FalsRep	? ?	?	Report from HOVE herbarium based on a misidentified specimen of <i>Hedysarum boreale</i> var. <i>boreale</i> . Not native to Utah or Colorado.
Leguminosae (Fabaceae)	<i>Astragalus utahensis</i>			Utah milkvetch	PerF	Wide/ NA	FalsRep		O	Report from HOVE herbarium based on a misidentified specimen of <i>A. mollissimus</i> var. <i>thompsoniae</i>
Leguminosae (Fabaceae)	<i>Lupinus argenteus</i> var. <i>argenteus</i>	<i>Lupinus argenteus</i>		silvery lupine	PerF	Wide/ Wide	FalsRep		O	Report from Schelz & Moran (2003) based on a misidentified specimen of <i>L. caudatus</i> var. <i>utahensis</i> .
Leguminosae (Fabaceae)	<i>Robinia neomexicana</i>	<i>Robinia neomexicana</i>		New Mexico locust	Tree	Periph/ Wide	FalsRep		O	Report from HOVE herbarium based on a misidentified specimen of <i>Petteria scoparia</i> .
Liliaceae (Alliaceae)	<i>Allium acuminatum</i>	<i>Allium acuminatum</i>		taper-tip onion	PerF	Wide/ Wide	FalsRep	? ?	?	Reported by Schelz & Moran (2003) based on a specimen from HOVE herbarium (Litzinger 934) from outside the park.
Liliaceae (Melanthiaceae)	<i>Zigadenus elegans</i>	<i>Anticlea elegans</i>		mountain death camas	PerF	Wide/ Wide	Ques?		O	Reported by Von Loh et al. (2008), but HOVE is beyond the known range of this taxon. Report probably based on <i>Z. paniculatus</i> .

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

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range	Park stat.	UT CO	Comments
	Utah	Colorado							
Loasaceae	<i>Mentzelia multiflora</i>	<i>Nuttallia multiflora</i>	<i>M. multiflora</i> var. <i>multiflora</i>	desert stickleaf	PerF	Wide/ Wide	FalsRep	O	Report from Schelz & Moran (2003) based on a misidentified specimen of <i>M. marginata</i> .
Loasaceae	<i>Mentzelia pumila</i> var. <i>pumila</i>		<i>M. pumila</i>	Wyoming stickleaf	PerF	RegEn/ NA	FalsRep	O	Report from HOVE herbarium based on a misidentified specimen of <i>M. marginata</i> .
Malvaceae	<i>Sphaeralcea angustifolia</i>		narrowleaf globemallow		PerF	Periph/ NA	FalsRep	O	Report from HOVE herbarium based on a misidentified specimen of <i>S. leptophylla</i> .
Onagraceae	<i>Gayophytum ramosissimum</i>	<i>Gayophytum ramosissimum</i>	branching groundsmoke		AnnF	Wide/ Wide	FalsRep	O	Reported by Schelz & Moran (2003) based on a specimen from HOVE herbarium (Litzinger 704) from outside the park.
Onagraceae	<i>Oenothera pallida</i> var. <i>trichocalyx</i>	<i>Oenothera pallida</i> ssp. <i>trichocalyx</i>	pale evening-primrose		PerF	RegEn/ RegEn	FalsRep	O	Report from HOVE herbarium based on a misidentified specimen of <i>O. albicaulis</i>
Orobanchaceae	<i>Orobancha fasciculata</i>	<i>Aphyllon fasciculatum</i>	clustered broomrape		PerF	Wide/ Wide	FalsRep	O O	Report from Schelz & Moran (2003) based on a misidentified specimen of <i>O. ludoviciana</i> var. <i>cooperi</i>
Plantaginaceae	<i>Plantago lanceolata</i>	<i>Plantago lanceolata</i>	English plantain		PerF	Intro/ Intro	FalsRep	O	Reported by Schelz & Moran (2003) based on a specimen from HOVE herbarium (Litzinger 561) from outside the park. Native to Eurasia.
Polemoniaceae	<i>Gilia hutchinsifolia</i>		<i>Aliciella hutchinsifolia</i>	broadlobe gilia	AnnF	Wide/ NA	FalsRep	O	Report from Schelz & Moran (2003) based on a misidentified specimen of <i>G. inconspicua</i> .
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	FalsRep	O	Reported by Schelz & Moran (2003) based on a specimen from HOVE herbarium (Litzinger 586) from outside the park.

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

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range	Park stat.	UT	CO	Comments
	Utah	Colorado								
Polygonaceae	<i>Eriogonum clavellatum</i>	<i>Eriogonum clavellatum</i>		Comb Wash wild buckwheat	Shrub	RegEn/ RegEn	FalsRep	O		Report from Schelz & Moan (2003) based on a misidentified specimen of <i>E. microthecum</i> var. <i>simpsonii</i> . USFWS 3C
Polygonaceae	<i>Polygonum douglasii</i> var. <i>johnstonii</i>	<i>Polygonum douglasii</i>	<i>P. sawatchense</i> var. <i>sawatchense</i>	Sawatch knotweed	AnnF	Wide/ Wide	FalsRep		O	Reported by Schelz & Moran (2003) based on a specimen from HOVE herbarium (Litzinger 729) from outside the park.
Rosaceae	<i>Coleogyne ramosissima</i>	<i>Coleogyne ramosissima</i>		blackbrush	Shrub	Wide/ Periph	FalsRep	O		Reported by Schelz & Moran (2003) based on a specimen from HOVE herbarium (Litzinger 569) from outside the park.
Salicaceae	<i>Populus balsamifera</i>	<i>Populus balsamifera</i>	Includes vars. <i>californica</i> & <i>balsamifera</i> & ssp. <i>trichocarpa</i> , <i>P. trichocarpa</i>	balsam poplar	Tree	Wide/ Wide	FalsRep		O	Report from HOVE herbarium based on a misidentified specimen of <i>P. fremontii</i> var. <i>wisizenii</i>
Scrophulariaceae		<i>Penstemon angustifolius</i> var. <i>caudatus</i>			PerF	NA/ Wide	FalsRep	O	O	Report from Schelz & Moran (2003) based on misidentified specimens of <i>P. angustifolius</i> var. <i>venosus</i> and <i>P. lentus</i> var. <i>caudatus</i> is a Great Plains taxon.
Scrophulariaceae	<i>Penstemon eatonii</i> var. <i>eatonii</i>	<i>Penstemon eatonii</i> var. <i>eatonii</i>		Eaton's firecracker	PerF	Wide/ Periph	FalsRep		O	Report by Schelz & Moran (2003) based on a misidentified specimen of var. <i>undulosus</i> .
Scrophulariaceae	<i>Penstemon linarioides</i> var. <i>sileri</i>			Siler's penstemon	PerF	RegEn/ NA	FalsRep		O	Report from Schelz & Moran (2003) based on misidentified specimens of ssp. <i>coloradoensis</i> . Type locality is Osmer, Kane Co., UT (Siler s.n. GH)

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

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range	Park stat.	UT	CO	Comments
	Utah	Colorado								
Scrophulariaceae	<i>Penstemon strictus</i>	<i>Penstemon strictus</i>		Rocky Mountain penstemon	PerF	Wide/ Wide	FalsRep		O	Reported by Schelz & Moran (2003) based on a specimen from HOVE herbarium (Litzinger 657) from outside the park.
Solanaceae	<i>Nicotiana attenuata</i>	<i>Nicotiana attenuata</i>		coyote tobacco	AnnF	Wide/ Wide	FalsRep		O	Reported by Schelz & Moran (2003) based on a HOVE herbarium specimen (Litzinger 706) from outside the park.
Solanaceae	<i>Solanum carolinense</i>	<i>Solanum carolinense</i>		Carolina nightshade	PerF	Intro/ Intro	FalsRep		O	Report from HOVE herbarium based on a misidentified specimen of <i>Chamaesaracha coronopus</i> . Native to E North America
Solanaceae	<i>Solanum elaeagnifolium</i>	<i>Solanum elaeagnifolium</i>		silverleaf nightshade	PerF	Intro/ Intro	FalsRep		O	Report from HOVE herbarium based on a misidentified specimen of <i>Chamaesaracha coronopus</i> . Native to C North America.
Ulmaceae (Celtidaceae)	<i>Celtis occidentalis</i>	<i>Celtis occidentalis</i>		common hackberry	Tree	Intro/ Wide	FalsRep		O	Report from Schelz & Moran (2003) based on a misidentified specimen of <i>C. reticulata</i> . Native to E North America.
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	FalsRep		O	Report from Schelz & Moran (2003) based on misidentified specimens of <i>L. triternatum</i> ssp. <i>platycarpum</i> .
Umbelliferae (Apiaceae)	<i>Lomatium grayi</i> var. <i>grayi</i>	<i>Lomatium grayi</i>		milfoil lomatium	PerF	Wide/ Wide	FalsRep		O	Report from Schelz & Moran (2003) based on misidentified specimens of <i>Cymopterus acaulis</i> var. <i>fendleri</i> and <i>C. purpureus</i> var. <i>purpureus</i> .
Umbelliferae (Apiaceae)	<i>Lomatium juniperinum</i>	<i>Lomatium juniperinum</i>		juniper lomatium	PerF	RegEn/ RegEn	FalsRep		O	Report from HOVE herbarium based on a misidentified specimen of <i>Cymopterus purpureus</i> var. <i>purpureus</i> .

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

Family	Species name		Synonyms/ Taxonomic notes	Common name	Life form	Range	Park stat.	UT	CO	Comments
	Utah	Colorado								
Zygophyllaceae	<i>Tribulus terrestris</i>	<i>Tribulus terrestris</i>		puncture vine	AnnF	Intro/ Intro	FalsRep	O		Reported by Schelz & Moran (2003) based on a HOVE herbarium specimen (Litzinger 774) from outside the park. CO state noxious weed (List C). Native to Eurasia

The vascular plant species listed in this table have been reported for Hovenweep National Monument from published and unpublished literature (Von Loh et al. 2008; Schelz & Moran 2003) or from herbarium specimens, but are now believed to be erroneous because corroborating vouchers were misidentified or collected outside the monument (False Reports or FalsRep) or because Hovenweep NM is well outside the known or expected range of the species (Questionable or Ques?).

X = documented with a voucher; O = documented by an observation; ? = reported for the monument without the state specified (i.e., could be UT or CO).

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

Family	Species name		Common name	Nativity	Park status	Flower time	Sage	Pin-Jun	Wet	Comments
	Utah	Colorado								
Trees										
Fagaceae	<i>Quercus gambelii</i> var. <i>gambelii</i>	<i>Quercus gambelii</i>	Gambel's oak	Native	Pres	Apr-Jun	x	x	x	
Pinaceae	<i>Pinus edulis</i>	<i>Pinus edulis</i>	two-needle pinyon	Native	Pres	NA	x	x		
Salicaceae	<i>Populus fremontii</i> var. <i>fremontii</i>	<i>Populus deltooides</i> ssp. <i>wislizenii</i>	Fremont cottonwood	Native	Pres	Mar-Jun			x	
Ulmaceae (Celtidaceae)	<i>Celtis reticulata</i>	<i>Celtis reticulata</i>	netleaf hackberry	Native	Pres	Apr-May	x		x	
Shrubs										
Agavaceae	<i>Yucca angustissima</i>	<i>Yucca angustissima</i>	narrowleaved yucca	Native	Pres	May-Jul	x	x		Sandy soils
Agavaceae	<i>Yucca baccata</i>	<i>Yucca baccata</i>	datil yucca	Native	Pres	Apr-Jun	x	x		
Agavaceae	<i>Yucca harrimaniae</i> var. <i>harrimaniae</i>	<i>Yucca harrimaniae</i>	Harriman's yucca	Native	Rep	Apr-May	x	x		
Anacardiaceae	<i>Rhus aromatica</i> var. <i>simplicifolia</i>	<i>Rhus aromatica</i> ssp. <i>trilobata</i> forma <i>simplicifolia</i>	squawbush	Native	Pres	May-Jul	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	
Anacardiaceae	<i>Toxicodendron rydbergii</i>	<i>Toxicodendron rydbergii</i>	western poison ivy	Native	Rep	May-Jun			x	
Berberidaceae	<i>Berberis fendleri</i>	<i>Berberis fendleri</i>	Fendler's barberry	Native	Pres	May-Jun			x	
Berberidaceae	<i>Mahonia repens</i>	<i>Mahonia repens</i>	Oregon-grape	Native	Pres	Apr-Jun	x	x	x	
Cactaceae	<i>Opuntia whipplei</i>	<i>Cylindropuntia whipplei</i>	Whipple's cholla	Native	Rep	May-Jul	x	x		
Chenopodiaceae	<i>Atriplex canescens</i> var. <i>canescens</i>	<i>Atriplex canescens</i>	four-wing saltbush	Native	Pres	May-Sep	x	x		Sandy soils
Chenopodiaceae	<i>Atriplex confertifolia</i>	<i>Atriplex confertifolia</i>	shadscale	Native	Pres	May-Sep	x	x		Clayey to gravelly soils
Chenopodiaceae	<i>Atriplex gardneri</i> var. <i>cuneata</i>	<i>Atriplex gardneri</i>	Castle Valley saltbush	Native	Pres	May-Sep			x	Saline clays
Chenopodiaceae	<i>Atriplex gardneri</i> var. <i>utahensis</i>	<i>Atriplex gardneri</i> var. <i>utahensis</i>	basin saltbush	Native	Pres	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	

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

Family	Species name		Common name	Nativity	Park status	Flower time	Sage	Pin-Jun	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 filifolia</i>	<i>Oligosporus filifolius</i>	sand sagebrush	Native	Rep	Aug-Oct	x	x		
Compositae (Asteraceae)	<i>Artemisia frigida</i>	<i>Artemisia frigida</i>	fringed sagebrush	Native	Pres	Jul-Sep	x	x		
Compositae (Asteraceae)	<i>Artemisia nova</i> var. <i>nova</i>	<i>Seriphidium novum</i>	black sagebrush	Native	Pres	Sep-Oct	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>wyomingensis</i>	<i>Seriphidium tridentatum</i> ssp. <i>wyomingense</i>	Wyoming big sagebrush	Native	Pres	Jul-Sep	x	x		
Compositae (Asteraceae)	<i>Brickellia californica</i>	<i>Brickellia californica</i>	California brickellbush	Native	Pres	Aug-Sep		x		Rock crevices
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> var. <i>linifolia</i>	Mohave brickellbush	Native	Pres	Jun-Aug	x	x		
Compositae (Asteraceae)	<i>Chrysothamnus depressus</i>	<i>Chrysothamnus depressus</i>	dwarf rabbitbrush	Native	Pres	Jul-Sep	x	x		
Compositae (Asteraceae)	<i>Chrysothamnus greenei</i>	<i>Chrysothamnus greenei</i>	Greene's rabbitbrush	Native	Pres	Jul-Sep	x	x		
Compositae (Asteraceae)	<i>Chrysothamnus nauseosus</i> var. <i>gnaphalodes</i>	<i>Chrysothamnus nauseosus</i> var. <i>gnaphalodes</i>	graystem rabbitbrush	Native	Pres	Aug-Oct	x	x		
Compositae (Asteraceae)	<i>Chrysothamnus nauseosus</i> var. <i>graveolens</i>	<i>Chrysothamnus nauseosus</i> var. <i>graveolens</i>	glabrate rabbitbrush	Native	Pres	Aug-Oct	x		x	
Compositae (Asteraceae)	<i>Chrysothamnus nauseosus</i> var. <i>junceus</i>	<i>Chrysothamnus nauseosus</i> var. <i>junceus</i>	rush rabbitbrush	Native	Rep	Aug-Oct	x	x		

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

Family	Species name		Common name	Nativity	Park status	Flower time	Sage	Pin-Jun	Wet	Comments
	Utah	Colorado								
<i>Shrubs, cont.</i>										
Compositae (Asteraceae)	<i>Chrysothamnus nauseosus</i> var. <i>speciosus</i>	<i>Chrysothamnus nauseosus</i> var. <i>speciosus</i>	whitestem rabbitbrush	Native	Pres	Aug–Oct	x	x		
Compositae (Asteraceae)	<i>Chrysothamnus viscidiflorus</i> var. <i>stenophyllus</i>	<i>Chrysothamnus viscidiflorus</i> var. <i>stenophyllus</i>	slenderleaf rabbitbrush	Native	Pres	Jul–Sep	x	x		
Compositae (Asteraceae)	<i>Gutierrezia sarothrae</i>	<i>Gutierrezia sarothrae</i>	broom snakeweed	Native	Pres	Jul–Oct	x	x		
Compositae (Asteraceae)	<i>Tetradymia canescens</i>	<i>Tetradymia canescens</i>	spineless horsebrush	Native	Pres	Jun–Sep	x			
Compositae (Asteraceae)	<i>Tetradymia spinosa</i>	<i>Tetradymia spinosa</i>	shortspine horsebrush	Native	Pres	Apr–Jun	x	x		
Crossosomataceae (Celastraceae)	<i>Glossopetalon spinescens</i> var. <i>microphyllum</i>	<i>Forsellesia meionandra</i>	small-leaved greasebush	Native	Pres	Mar–Jun	x	x		
Cupressaceae	<i>Juniperus osteosperma</i>	<i>Sabina osteosperma</i>	Utah juniper	Native	Pres	NA	x	x		
Ephedraceae	<i>Ephedra torreyana</i>	<i>Ephedra torreyana</i>	Torrey's ephedra	Native	Pres	NA		x		
Ephedraceae	<i>Ephedra viridis</i> var. <i>viridis</i>	<i>Ephedra viridis</i>	green ephedra	Native	Pres	NA	x	x		
Fagaceae	<i>Quercus welshii</i>	<i>Quercus havardii</i> var. <i>tuckeri</i>	shinnery oak	Native	Pres	Apr–Jun		x		Sandy soils
Fagaceae	<i>Quercus x eastwoodiae</i>	<i>Quercus x eastwoodiae</i>	Eastwood's oak	Native	Pres	Apr–Jun		x		
Leguminosae (Fabaceae)	<i>Psoralea thompsoniae</i> var. <i>thompsoniae</i>	<i>Psoralea thompsoniae</i> var. <i>thompsoniae</i>	Thompson's indigo-bush	Native	Pres	May–Aug		x		
Oleaceae	<i>Forestiera pubescens</i>	<i>Forestiera pubescens</i>	desert olive	Native	Rep	Apr–May			x	
Oleaceae	<i>Fraxinus anomala</i>	<i>Fraxinus anomala</i>	singleleaf ash	Native	Pres	Apr–May		x		
Polemoniaceae	<i>Leptodactylon pungens</i>	<i>Leptodactylon pungens</i>	prickly-phlox	Native	Pres	May–Jul	x	x		
Polygonaceae	<i>Eriogonum corymbosum</i> var. <i>corymbosum</i>	<i>Eriogonum corymbosum</i> var. <i>corymbosum</i>	crisp-leaf wild buckwheat	Native	Rep	Jul–Oct	x	x		
Rosaceae	<i>Amelanchier utahensis</i>	<i>Amelanchier utahensis</i>	Utah serviceberry	Native	Pres	Apr–Jun	x	x		
Rosaceae	<i>Cercocarpus montanus</i>	<i>Cercocarpus montanus</i>	alder-leaf mountain mahogany	Native	Pres	May–Jun	x	x		
Rosaceae	<i>Peraphyllum ramosissimum</i>	<i>Peraphyllum ramosissimum</i>	squaw-apple	Native	Pres	May–Jun	x	x		

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

Family	Species name		Common name	Nativity	Park status	Flower time	Sage	Pin-Jun	Wet	Comments
	Utah	Colorado								
<i>Shrubs, cont.</i>										
Rosaceae	<i>Prunus virginiana</i> var. <i>melanocarpa</i>	<i>Padus virginiana</i> sp. <i>melanocarpa</i>	western chokecherry	Native	Pres	May–Jul	x	x		
Rosaceae	<i>Purshia mexicana</i> var. <i>stansburyana</i>	<i>Purshia stansburyana</i>	cliff-rose	Native	Pres	May–Jun	x	x		
Rosaceae	<i>Purshia tridentata</i>	<i>Purshia tridentata</i>	antelope bitterbrush	Native	Pres	Apr–Jul	x	x		
Rosaceae	<i>Rosa woodsii</i>	<i>Rosa woodsii</i>	Woods' rose	Native	Pres	May–Jul			x	
Salicaceae	<i>Salix exigua</i> var. <i>stenophylla</i>	<i>Salix exigua</i>	coyote willow	Native	Pres	Apr–Aug			x	
Saxifragaceae (Grossulariaceae)	<i>Ribes aureum</i>	<i>Ribes aureum</i>	golden currant	Native	Pres	Mar–Jul	x	x	x	
Saxifragaceae (Grossulariaceae)	<i>Ribes leptanthum</i>	<i>Ribes leptanthum</i>	trumpet gooseberry	Native	Rep	Apr–Jun		x		
Solanaceae	<i>Lycium pallidum</i>	<i>Lycium pallidum</i>	pale wolfberry	Native	Pres	Mar–May	x	x		
Tamaricaceae	<i>Tamarix chinensis</i>	<i>Tamarix ramosissima</i>	five-stamen tamarisk	Intro	Pres	Apr–Sep			x	
Perennial Forbs										
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		
Asclepiadaceae	<i>Asclepias cryptoceras</i> var. <i>cryptoceras</i>	<i>Asclepias cryptoceras</i>	pallid milkweed	Native	Pres	Apr–Jun	x	x		
Boraginaceae	<i>Cryptantha flava</i>	<i>Oreocarya flava</i>	plateau yellow cryptanth	Native	Rep	Apr–Jun	x	x		
Boraginaceae	<i>Cryptantha flavoculata</i>	<i>Oreocarya flavoculata</i>	yellow-eye cryptanth	Native	Pres	Apr–Jun	x	x		
Boraginaceae	<i>Cryptantha fulvocanescens</i>	<i>Oreocarya fulvocanescens</i>	plateau cryptanth	Native	Pres	May–Jun	x	x		Mancos Shale
Boraginaceae	<i>Cryptantha osterhoutii</i>	<i>Oreocarya osterhoutii</i>	Osterhout's cryptanth	Native	Pres	May–Jun		x		
Boraginaceae	<i>Lithospermum incisum</i>	<i>Lithospermum incisum</i>	showy stoneseed	Native	Pres	Apr–Jul	x	x		
Boraginaceae	<i>Lithospermum ruderale</i>	<i>Lithospermum ruderale</i>	western stoneseed	Native	Pres	Apr–Jun	x	x		
Boraginaceae	<i>Mertensia fusiformis</i>	<i>Mertensia oblongifolia</i>	spindle-rooted bluebell	Native	Pres	May–Jun	x	x		
Cactaceae	<i>Coryphantha vivipara</i> var. <i>arizonica</i>	<i>Coryphantha vivipara</i>	Arizona pincushion	Native	Pres	Apr–Aug	x	x		

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

Family	Species name		Common name	Nativity	Park status	Flower time	Sage	Pin-Jun	Wet	Comments
	Utah	Colorado								
Perennial Forbs, cont.										
Cactaceae	<i>Echinocereus triglochidiatus</i> var. <i>melanacanthus</i>	<i>Echinocereus triglochidiatus</i>	claretcup	Native	Pres	Apr–Jun	x	x		
Cactaceae	<i>Opuntia erinacea</i> var. <i>erinacea</i>	<i>Opuntia erinacea</i>	common pricklypear	Native	Pres	May–Jun	x			
Cactaceae	<i>Opuntia erinacea</i> var. <i>utahensis</i>		Utah pricklypear	Native	Rep	May–Jun	x	x		
Cactaceae	<i>Opuntia fragilis</i>	<i>Opuntia fragilis</i> var. <i>brachyartha</i>	brittle prickly-pear	Native	Pres	Jun–Jul	x	x		
Cactaceae	<i>Opuntia phaeacantha</i> var. <i>major</i>		large pricklypear	Native	Rep	Apr–Jul		x		
Cactaceae	<i>Opuntia phaeacantha</i> var. <i>phaeacantha</i>	<i>Opuntia phaeacantha</i>	berry pricklypear	Native	Pres	Apr–Jul		x		
Cactaceae	<i>Opuntia polyacantha</i> var. <i>polyacantha</i>	<i>Opuntia polyacantha</i>	plains prickly-pear	Native	Pres	May–Jun	x	x		
Cactaceae	<i>Sclerocactus whipplei</i> var. <i>roseus</i>	<i>Sclerocactus whipplei</i> var. <i>intermedius</i>	small-flower fishhook cactus	Native	Rep	Apr–May	x	x		
Caryophyllaceae (Aisinaceae)	<i>Arenaria fendleri</i> var. <i>eastwoodiae</i>	<i>Eremogone fendleri</i>	Eastwood's sandwort	Native	Pres	May–Sep	x	x		
Commelinaceae	<i>Tradescantia occidentalis</i>	<i>Tradescantia occidentalis</i>	western spiderwort	Native	Rep	May–Aug	x	x		
Compositae (Asteraceae)	<i>Achillea millefolium</i> var. <i>lanulosa</i>	<i>Achillea lanulosa</i>	common yarrow	Native	Pres	May–Sep	x	x		
Compositae (Asteraceae)	<i>Antennaria parvifolia</i>	<i>Antennaria parvifolia</i>	common pussytoes	Native	Rep	May–Jul	x	x		
Compositae (Asteraceae)	<i>Arctium minus</i>	<i>Arctium minus</i>	burdock	Intro	Pres	Jul–Sep			x	Disturbed areas
Compositae (Asteraceae)	<i>Artemisia ludoviciana</i> var. <i>albula</i>	<i>Artemisia ludoviciana</i> ssp. <i>albula</i>	Louisiana wormwood	Native	Pres	Jul–Oct	x		x	
Compositae (Asteraceae)	<i>Artemisia ludoviciana</i> var. <i>mexicana</i>	<i>Artemisia ludoviciana</i> ssp. <i>mexicana</i>	Louisiana wormwood	Native	Pres	Jul–Oct		x	x	
Compositae (Asteraceae)	<i>Balsamorhiza sagittata</i>	<i>Balsamorhiza sagittata</i>	arrowleaf balsamroot	Native	Pres	Apr–Jul	x	x		
Compositae (Asteraceae)	<i>Carduus nutans</i>	<i>Carduus nutans</i> var. <i>macrolepis</i>	musk thistle	Intro	Pres	Jun–Sep	x	x		Disturbed areas

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

Family	Species name		Common name	Nativity	Park status	Flower time	Sage	Pin-Jun	Wet	Comments
	Utah	Colorado								
<i>Perennial Forbs, cont.</i>										
Compositae (Asteraceae)	<i>Centaurea repens</i>	<i>Acroptilon repens</i>	Russian knapweed	Intro	Pres	Jun-Sep			x	Disturbed areas
Compositae (Asteraceae)	<i>Chaetopappa ericoides</i>	<i>Leucelene ericoides</i>	rose-heath	Native	Pres	May-Sep	x	x		
Compositae (Asteraceae)	<i>Chrysopsis villosa</i> var. <i>minor</i>	<i>Heterotheca villosa</i> var. <i>minor</i>	hispid golden-aster	Native	Pres	May-Sep	x	x		
Compositae (Asteraceae)	<i>Chrysopsis villosa</i> var. <i>villosa</i>	<i>Heterotheca villosa</i> var. <i>villosa</i>	hairy golden-aster	Native	Pres	May-Sep	x	x		
Compositae (Asteraceae)	<i>Cirsium arvense</i>	<i>Breea arvensis</i>	Canada thistle	Intro	Pres	Jul-Sep			x	Disturbed areas
Compositae (Asteraceae)	<i>Cirsium calcareum</i> var. <i>calcareum</i>	<i>Cirsium calcareum</i>	Caineville thistle	Native	Pres	Jun-Sep			x	
Compositae (Asteraceae)	<i>Cirsium neomexicanum</i> var. <i>neomexicanum</i>	<i>Cirsium neomexicanum</i>	New Mexico thistle	Native	Rep	May-Jun	x	x		
Compositae (Asteraceae)	<i>Cirsium undulatum</i> var. <i>undulatum</i>	<i>Cirsium undulatum</i>	wavy-leaved thistle	Native	Rep	Jun-Sep	x	x		
Compositae (Asteraceae)	<i>Crepis intermedia</i>	<i>Psilochenia intermedia</i>	gray hawksbeard	Native	Pres	May-Jul	x	x		
Compositae (Asteraceae)	<i>Crepis occidentalis</i> var. <i>occidentalis</i>	<i>Psilochenia occidentalis</i>	western hawksbeard	Native	Pres	May-Jul	x	x		
Compositae (Asteraceae)	<i>Erigeron divergens</i> var. <i>divergens</i>	<i>Erigeron divergens</i>	spreading daisy	Native	Pres	May-Sep	x	x		
Compositae (Asteraceae)	<i>Erigeron pumilus</i> var. <i>concinus</i>	<i>Erigeron concinns</i>	Navajo fleabane	Native	Pres	May-Aug	x	x		
Compositae (Asteraceae)	<i>Erigeron utahensis</i> var. <i>utahensis</i>	<i>Erigeron utahensis</i>	Utah daisy	Native	Rep	Apr-Jun		x		
Compositae (Asteraceae)	<i>Gaillardia pinnatifida</i>	<i>Gaillardia pinnatifida</i>	Hopi blanketflower	Native	Pres	Apr-Aug		x		
Compositae (Asteraceae)	<i>Haplopappus armerioides</i> var. <i>armerioides</i>	<i>Stenotus armerioides</i>	thrift goldenweed	Native	Pres	May-Jun	x	x		
Compositae (Asteraceae)	<i>Haplopappus spinulosus</i> var. <i>paradoxus</i>	<i>Machaeranthera pinnatifida</i> var. <i>paradoxa</i>	spiny goldenweed	Native	Pres	Apr-Sep	x	x		Morrison F

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

Family	Species name		Common name	Nativity	Park status	Flower time	Sage	Pin-Jun	Wet	Comments
	Utah	Colorado								
Perennial Forbs, cont.										
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		
Compositae (Asteraceae)	<i>Hymenoxys acaulis</i> var. <i>ivesiana</i>	<i>Tetrateuris acaulis</i>	canyonlands hymenoxys	Native	Pres	Apr–Jun		x		
Compositae (Asteraceae)	<i>Hymenoxys richardsonii</i> var. <i>floribunda</i>	<i>Picadentia richardsonii</i> var. <i>floribunda</i>	Colorado rubber-plant	Native	Pres	May–Aug	x	x		
Compositae (Asteraceae)	<i>Lygodesmia grandiflora</i> var. <i>grandiflora</i>	<i>Lygodesmia grandiflora</i>	showy rush-pink	Native	Rep	May–Jun	x	x		
Compositae (Asteraceae)	<i>Machaeranthera canescens</i> var. <i>canescens</i>	<i>Machaeranthera canescens</i>	hoary aster	Native	Pres	May–Sep	x	x		
Compositae (Asteraceae)	<i>Machaeranthera grindelioides</i> var. <i>grindelioides</i>	<i>Machaeranthera grindelioides</i>	gumweed aster	Native	Rep	May–Jul	x	x		
Compositae (Asteraceae)	<i>Petroradia pumila</i> var. <i>pumila</i>	<i>Petroradia pumila</i>	rock-goldenrod	Native	Pres	Jul–Sep	x	x		
Compositae (Asteraceae)	<i>Senecio douglasii</i> var. <i>longilobus</i>	<i>Senecio flaccidus</i> var. <i>douglasii</i>	Douglas' groundsel	Native	Pres	May–Oct	x	x		
Compositae (Asteraceae)	<i>Senecio multilobatus</i>	<i>Packera multilobata</i>	basin groundsel	Native	Pres	Apr–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	
Compositae (Asteraceae)	<i>Taraxacum officinale</i>	<i>Taraxacum officinale</i>	common dandelion	Intro	Pres	Apr–Dec	x	x	x	Disturbed areas
Compositae (Asteraceae)	<i>Townsendia incana</i>	<i>Townsendia incana</i>	hoary townsendia	Native	Pres	Apr–Jul	x	x		
Compositae (Asteraceae)	<i>Tragopogon dubius</i>	<i>Tragopogon dubius</i> var. <i>major</i>	yellow saisyf	Intro	Pres	May–Jul	x		x	Disturbed areas
Compositae (Asteraceae)	<i>Viguiera multiflora</i> var. <i>multiflora</i>	<i>Heliomeris multiflora</i> var. <i>multiflora</i>	showy goldeneye	Native	Pres	Jun–Sep	x	x	x	
Convulvulaceae	<i>Convolvulus arvensis</i>	<i>Convolvulus arvensis</i>	field bindweed	Intro	Pres	Jun–Aug				Disturbed areas
Crassulaceae	<i>Sedum lanceolatum</i>	<i>Amerosdeum lanceolatum</i>	lance-leaved stonecrop	Native	Rep	Jun–Aug	x	x		
Cruciferae (Brassicaceae)	<i>Arabis holboellii</i> var. <i>pinetorum</i>	<i>Boechera holboellii</i> var. <i>pinetorum</i>	Holboell's rockcross	Native	Rep	May–Jul	x	x	x	

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

Family	Species name		Common name	Nativity	Park status	Flower time	Sage	Pin-Jun	Wet	Comments
	Utah	Colorado								
<i>Perennial Forbs, cont.</i>										
Cruciferae (Brassicaceae)	<i>Arabis perennans</i> var. <i>perennans</i>	<i>Boechera perennans</i>	perennial rockcress	Native	Pres	Mar–Jul	x	x		
Cruciferae (Brassicaceae)	<i>Arabis pulchra</i> var. <i>pallens</i>	<i>Boechera pulchra</i> var. <i>pallens</i>	desert rockcress	Native	Pres	Mar–Jun	x	x		
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>Physaria acutifolia</i> var. <i>acutifolia</i>	<i>Physaria acutifolia</i>	sharp-leaf twinpod	Native	Pres	May–Jul	x	x		
Cruciferae (Brassicaceae)	<i>Physaria rectipes</i>	<i>Lesquerella rectipes</i>	Colorado Plateau bladderpod	Native	Pres	Apr–Aug		x		
Cruciferae (Brassicaceae)	<i>Schoenocrambe linifolia</i>	<i>Schoenocrambe linifolia</i>	flax-leaved plainsmustard	Native	Pres	Apr–Jul	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>Thlaspi montanum</i> var. <i>montanum</i>	<i>Noccaea montana</i>	alpine pennycress	Native	Rep	Apr–Aug		x		
Cucurbitaceae	<i>Cucurbita foetidissima</i>	<i>Cucurbita foetidissima</i>	buffalo gourd	Native	Rep	May–Aug	x	x	x	Disturbed areas
Euphorbiaceae	<i>Chamaesyce fendleri</i>	<i>Chamaesyce fendleri</i>	Fendler's spurge	Native	Pres	May–Sep	x	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		
Gentianaceae	<i>Swertia utahensis</i>	<i>Frasera paniculata</i>	Utah swertia	Native	Pres	Jun–Jul		x		Sandy soils
Iridaceae	<i>Iris germanica</i>	<i>Iris germanica</i>	German iris	Intro	Rep	Apr–May				Cultivated
Labiatae (Lamiaceae)	<i>Dracocephalum parviflorum</i>	<i>Dracocephalum parviflorum</i>	smallflower dragonhead	Native	Pres	Jun–Aug	x	x		
Labiatae (Lamiaceae)	<i>Hedeoma drummondii</i>	<i>Hedeoma drummondii</i>	mock pennyroyal	Native	Pres	May–Aug	x	x		
Labiatae (Lamiaceae)	<i>Marrubium vulgare</i>	<i>Marrubium vulgare</i>	common horehound	Intro	Pres	May–Oct				Disturbed areas
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 Hovenweep National Monument, organized by life form with ecological notes, cont.

Family	Species name		Common name	Nativity	Park status	Flower time	Sage	Pin-Jun	Wet	Comments
	Utah	Colorado								
Perennial Forbs, cont.										
Leguminosae (Fabaceae)	<i>Astragalus amphioxys</i> var. <i>amphioxys</i>	<i>Astragalus amphioxys</i>	crested milkvetch	Native	Pres	Mar–Jun		x		
Leguminosae (Fabaceae)	<i>Astragalus calycosus</i> var. <i>calycosus</i>	<i>Astragalus calycosus</i>	Torrey's milkvetch	Native	Pres	Apr–Jul	x	x		
Leguminosae (Fabaceae)	<i>Astragalus ceramicus</i> var. <i>ceramicus</i>	<i>Astragalus ceramicus</i> var. <i>ceramicus</i>	painted milkvetch	Native	Rep	Apr–Jun	x	x	x	
Leguminosae (Fabaceae)	<i>Astragalus coltonii</i> var. <i>moabensis</i>	<i>Astragalus coltonii</i> var. <i>moabensis</i>	Moab milkvetch	Native	Pres	Apr–Jun		x		
Leguminosae (Fabaceae)	<i>Astragalus desperatus</i> var. <i>desperatus</i>	<i>Astragalus desperatus</i>	rimrock milkvetch	Native	Rep	May–Jul	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 scopulorum</i>	<i>Astragalus scopulorum</i>	Rocky Mountain milkvetch	Native	Pres	May–Aug	x	x		
Leguminosae (Fabaceae)	<i>Astragalus wingatanus</i>	<i>Astragalus wingatanus</i>	Fort Wingate milkvetch	Native	Pres	Apr–Jul	x	x		
Leguminosae (Fabaceae)	<i>Hedysarum boreale</i> var. <i>boreale</i>	<i>Hedysarum boreale</i>	northern sweetvetch	Native	Pres	May–Aug		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		
Leguminosae (Fabaceae)	<i>Lupinus polyphyllus</i> var. <i>ammophilus</i>	<i>Lupinus ammophilus</i>	sand lupine	Native	Pres	Jun–Aug	x	x		Sandy soils
Leguminosae (Fabaceae)	<i>Medicago sativa</i>	<i>Medicago sativa</i>	alfalfa	Intro	Pres	May–Sep			x	Disturbed areas
Leguminosae (Fabaceae)	<i>Melilotus officinalis</i>	<i>Melilotus officinalis</i>	yellow sweet-clover	Intro	Pres	May–Oct			x	Disturbed areas
Leguminosae (Fabaceae)		<i>Pteris scoparia</i>	rush ptereria	Intro	Pres			x		
Leguminosae (Fabaceae)	<i>Trifolium pratense</i>	<i>Trifolium pratense</i>	red clover	Intro	Rep	May–Oct			x	Disturbed areas
Liliaceae (Alliaceae, Themidaceae)	<i>Androstaphium breviflorum</i>	<i>Androstaphium breviflorum</i>	pink funnel-lily	Native	Pres	Apr–May	x	x		
Liliaceae (Asparagaceae)	<i>Asparagus officinalis</i>	<i>Asparagus officinalis</i>	asparagus	Intro	Pres	Jun–Jul			x	Disturbed areas

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

Family	Species name		Common name	Nativity	Park status	Flower time	Sage	Pin-Jun	Wet	Comments
	Utah	Colorado								
<i>Perennial Forbs, cont.</i>										
Liliaceae (Calochortaceae)	<i>Calochortus flexuosus</i>	<i>Calochortus flexuosus</i>	sinuous mariposa	Native	Pres	Apr–Jun		x		
Liliaceae (Calochortaceae)	<i>Calochortus nuttallii</i>	<i>Calochortus nuttallii</i>	sego-lily	Native	Pres	Jun–Jul	x	x		
Liliaceae (Convallariaceae or Ruscaceae)	<i>Smilacina racemosa</i>	<i>Maianthemum amplexicaule</i>	false Solomon's-seal	Native	Rep	Jun–Jul		x		
Liliaceae (Melanthiaceae)	<i>Zigadenus paniculatus</i>	<i>Toxicoscordion paniculatum</i>	foothills death camas	Native	Pres	Mar–Jun	x	x		
Linaceae	<i>Linum perenne</i> ssp. <i>lewisii</i>	<i>Adenolinum lewisii</i>	blue flax	Native	Pres	Apr–Aug	x	x		
Loasaceae	<i>Mentzelia marginata</i>	<i>Nuttallia marginata</i>	Colorado stickleaf	Native	Pres	Apr–Oct	x	x		
Malvaceae	<i>Sphaeralcea coccinea</i>	<i>Sphaeralcea coccinea</i> ssp. <i>dissecta</i>	scarlet globe-mallow	Native	Pres	Apr–Oct	x	x		
Malvaceae	<i>Sphaeralcea leptophylla</i>	<i>Sphaeralcea leptophylla</i>	slenderleaf globemallow	Native	Pres	May–Sep	x	x		
Malvaceae	<i>Sphaeralcea parvifolia</i>	<i>Sphaeralcea parvifolia</i>	small-leaf globemallow	Native	Pres	Mar–Oct	x	x		
Nyctaginaceae	<i>Abronia fragrans</i>	<i>Abronia elliptica</i>	fragrant sand-verbena	Native	Pres	Apr–Sep	x	x		
Nyctaginaceae	<i>Allionia incarnata</i>	<i>Allionia incarnata</i>	trailing four-o'clock	Native	Rep	Apr–Sep	x			
Nyctaginaceae	<i>Mirabilis linearis</i> var. <i>linearis</i>	<i>Oxybaphus linearis linearis</i>	narrow-leaf four-o'clock	Native	Rep	May–Aug	x	x	x	
Nyctaginaceae	<i>Mirabilis multiflora</i>	<i>Mirabilis multiflora</i>	showy four-o'clock	Native	Pres	Apr–Jul		x		
Onagraceae	<i>Epilobium ciliatum</i>	<i>Epilobium ciliatum</i>	northern willow-herb	Native	Rep	Jun–Aug			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		
Onagraceae	<i>Oenothera pallida</i> var. <i>pallida</i>	<i>Oenothera pallida</i> ssp. <i>pallida</i>	pale evening-primrose	Native	Rep	May–Jul	x	x		
Orchidaceae	<i>Corallorhiza maculata</i>	<i>Corallorhiza maculata</i>	spotted coral-root	Native	Rep	Jun–Jul		x		
Orobanchaceae	<i>Orobanche ludoviciana</i> var. <i>cooperi</i>	<i>Orobanche ludoviciana</i> var. <i>cooperi</i>	Cooper's broomrape	Native	Pres	May–Jul	x	x		

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

Family	Species name		Common name	Nativity	Park status	Flower time	Sage	Pin-Jun	Wet	Comments
	Utah	Colorado								
Perennial Forbs, cont.										
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>Phlox longifolia</i>	<i>Phlox longifolia</i>	long-leaf phlox	Native	Pres	Apr-Jul	x	x		
Polygonaceae	<i>Eriogonum inflatum</i> var. <i>inflatum</i>	<i>Eriogonum inflatum</i>	desert trumpet	Native	Pres	Mar-Oct		x		Sandy soils
Polygonaceae	<i>Eriogonum jamesii</i> var. <i>flavescens</i>	<i>Eriogonum jamesii</i>	Baker's wild buckwheat	Native	Pres	Jun-Oct	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		
Polygonaceae	<i>Eriogonum ovalifolium</i>	<i>Eriogonum ovalifolium</i> var. <i>ovalifolium</i>	cushion wild buckwheat	Native	Pres	Apr-Aug	x	x		
Polygonaceae	<i>Eriogonum racemosum</i> var. <i>racemosum</i>	<i>Eriogonum racemosum</i>	redroot wild buckwheat	Native	Pres	Jun-Oct	x	x		
Polygonaceae	<i>Eriogonum umbellatum</i> var. <i>subaridum</i>	<i>Eriogonum umbellatum</i> var. <i>subaridum</i>	arid wild buckwheat	Native	Pres	Jun-Oct	x	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	Pres	Apr-Jun	x			
Ranunculaceae	<i>Clematis ligusticifolia</i>	<i>Clematis ligusticifolia</i>	white virgin's-bower	Native	Pres	Jul-Aug			x	
Ranunculaceae (Helleboraceae)	<i>Delphinium andersonii</i> var. <i>scaposum</i>	<i>Delphinium andersonii</i> var. <i>scaposum</i>	pale larkspur	Native	Pres	Apr-Jun		x		
Ranunculaceae (Helleboraceae)	<i>Delphinium nuttallianum</i>	<i>Delphinium nuttallianum</i>	Nuttall's larkspur	Native	Pres	Apr-Jul	x	x		
Santalaceae	<i>Comandra umbellata</i> var. <i>pallida</i>	<i>Comandra umbellata</i> var. <i>pallida</i>	bastard toadflax	Native	Pres	Apr-Aug	x	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		
Scrophulariaceae	<i>Castilleja scabrida</i> var. <i>scabrida</i>	<i>Castilleja scabrida</i>	Eastwood's paintbrush	Native	Pres	May-Jul	x	x		Slickrock
Scrophulariaceae	<i>Linaria dalmatica</i>	<i>Linaria genistifolia</i> ssp. <i>dalmatica</i>	Dalmatian toadflax	Intro	Pres	Jul-Aug	x		x	Disturbed areas
Scrophulariaceae	<i>Penstemon breviculus</i>	<i>Penstemon breviculus</i>	shortest penstemon	Native	Pres	May-Jun	x	x		

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

Family	Species name		Common name	Nativity	Park status	Flower time	Sage	Pin-Jun	Wet	Comments
	Utah	Colorado								
<i>Perennial Forbs, cont.</i>										
Scrophulariaceae	<i>Penstemon eatonii</i> var. <i>undulosus</i>	<i>Penstemon eatonii</i> var. <i>undulosus</i>	undulate penstemon	Native	Pres	May–Jul	x	x		
Scrophulariaceae	<i>Penstemon lentus</i> var. <i>lentus</i>	<i>Penstemon lentus</i> var. <i>lentus</i>	Abajo penstemon	Native	Pres	May–Jun	x	x		
Scrophulariaceae		<i>Penstemon linarioides</i> ssp. <i>coloradoensis</i>	Colorado penstemon	Native	Pres	May–Jul		x		
Scrophulariaceae	<i>Penstemon palmeri</i> var. <i>eglandulosus</i>	<i>Penstemon palmeri</i> var. <i>eglandulosus</i>	Palmer's penstemon	Native	Rep	May–Aug	x	x		
Scrophulariaceae	<i>Penstemon utahensis</i>	<i>Penstemon utahensis</i>	Utah penstemon	Native	Pres	Apr–Jun	x	x		
Scrophulariaceae	<i>Verbascum thapsus</i>	<i>Verbascum thapsus</i>	woolly mullein	Intro	Pres	Jun–Aug	x	x		Disturbed areas
Solanaceae	<i>Chamaesaracha coronopus</i>	<i>Chamaesaracha coronopus</i>	false nightshade	Native	Pres	Apr–Jul	x			Disturbed areas
Solanaceae	<i>Physalis hederifolia</i> var. <i>fendleri</i>	<i>Physalis hederifolia</i> var. <i>cordifolia</i>	Fendler's ground-cherry	Native	Pres	May–Oct	x	x		
Umbelliferae (Apiaceae)	<i>Cymopterus acaulis</i> var. <i>fendleri</i>	<i>Cymopterus fendleri</i>	Fendler's cymopterus	Native	Pres	Apr–May	x	x		
Umbelliferae (Apiaceae)	<i>Cymopterus bulbosus</i>	<i>Cymopterus bulbosus</i>	onion spring-parsley	Native	Pres	Apr–May	x	x		
Umbelliferae (Apiaceae)	<i>Cymopterus newberryi</i>	<i>Cymopterus newberryi</i>	sticky spring-parsley	Native	Rep	Apr–May	x	x		
Umbelliferae (Apiaceae)	<i>Cymopterus purpurascens</i>	<i>Cymopterus purpurascens</i>	basin white-cup spring-parsley	Native	Pres	Mar–May	x	x		
Umbelliferae (Apiaceae)	<i>Cymopterus purpureus</i> var. <i>purpureus</i>	<i>Cymopterus purpureus</i>	Colorado Plateau spring-parsley	Native	Pres	Apr–Jun	x	x		
Umbelliferae (Apiaceae)	<i>Lomatium triternatum</i> ssp. <i>platycarpum</i>	<i>Lomatium triternatum</i> ssp. <i>platycarpum</i>	flat-seed lomatium	Native	Pres	May–Jul	x	x		
Verbenaceae	<i>Verbena bracteata</i>	<i>Verbena bracteata</i>	prostrate vervain	Native	Rep	May–Sep	x	x		Disturbed areas
Viscaceae	<i>Arceuthobium divaricatum</i>	<i>Arceuthobium divaricatum</i>	pinyon dwarf-mistletoe	Native	Pres	Aug–Sep		x		
Viscaceae	<i>Phoradendron juniperinum</i>	<i>Phoradendron juniperinum</i>	juniper mistletoe	Native	Pres	Jul–Sep		x		

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

Family	Species name		Common name	Nativity	Park status	Flower time	Sage	Pin-Jun	Wet	Comments
	Utah	Colorado								
Annual Forbs										
Amaranthaceae	<i>Amaranthus blitoides</i>	<i>Amaranthus blitoides</i>	prostrate pigweed	Native	Rep	Jun-Sep				Disturbed areas
Amaranthaceae	<i>Amaranthus cruentus</i>	<i>Amaranthus cruentus</i>	blood amaranth	Intro	Rep	Jun-Sep				Cultivated
Amaranthaceae	<i>Amaranthus retroflexus</i>	<i>Amaranthus retroflexus</i>	redroot pigweed	Intro	Pres	Jun-Sep				Disturbed areas
Boraginaceae	<i>Cryptantha crassisejala</i> var. <i>elachantha</i>	<i>Cryptantha crassisejala</i> var. <i>elachantha</i>	thick-seeped cryptanth	Native	Pres	Apr-Jun	x	x		
Boraginaceae	<i>Cryptantha fendleri</i>	<i>Cryptantha fendleri</i>	sand dune cryptanth	Native	Rep	May-Jul	x	x		
Boraginaceae	<i>Cryptantha gracilis</i>	<i>Cryptantha gracilis</i>	slender cryptanth	Native	Pres	Apr-Jul	x	x		
Boraginaceae	<i>Cryptantha pterocarya</i> var. <i>cycloptera</i>	<i>Cryptantha pterocarya</i> var. <i>cycloptera</i>	wing-nut cryptanth	Native	Pres	Apr-Jul	x	x		
Boraginaceae	<i>Lappula occidentalis</i> var. <i>cupulata</i>	<i>Lappula marginata</i>	cupseed stickseed	Native	Pres	Apr-Jun	x	x		Disturbed areas
Caryophyllaceae	<i>Silene antirrhina</i>	<i>Silene antirrhina</i>	sleepy catchfly	Native	Pres	May-Aug		x		
Chenopodiaceae	<i>Atriplex saccharia</i> var. <i>saccharia</i>	<i>Atriplex saccharia</i>	stalked orach	Native	Pres	Aug-Sep		x		Mancos & Morrison F
Chenopodiaceae	<i>Bassia scoparia</i>	<i>Bassia sieversiana</i>	summer-cypress	Intro	Pres	Aug-Oct	x	x		Disturbed areas
Chenopodiaceae	<i>Chenopodium album</i> var. <i>album</i>	<i>Chenopodium album</i>	lambquarter	Intro	Pres	Jun-Sep				Disturbed areas
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 desiccatum</i>	<i>Chenopodium desiccatum</i>	desert goosefoot	Native	Rep	Jun-Sep	x	x		Disturbed areas
Chenopodiaceae	<i>Chenopodium fremontii</i> var. <i>incanum</i>	<i>Chenopodium incanum</i> var. <i>incanum</i>	silvery goosefoot	Native	Pres	Jun-Aug		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			
Chenopodiaceae	<i>Halogeton glomeratus</i>	<i>Halogeton glomeratus</i>	halogeton	Intro	Rep	Jul-Aug		x		Disturbed areas

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

Family	Species name		Common name	Nativity	Park status	Flower time	Sage	Pin-Jun	Wet	Comments
	Utah	Colorado								
<i>Annual Forbs, cont.</i>										
Chenopodiaceae	<i>Salsola tragus</i>	<i>Salsola australis</i>	Russian thistle	Intro	Pres	Jun-Sep				Disturbed areas
Chenopodiaceae	<i>Spinacia oleracea</i>	<i>Spinacia oleracea</i>	spinach	Intro	Pres	May-Sep				Cultivated
Chenopodiaceae	<i>Suaeda torreyana</i> var. <i>torreyana</i>	<i>Suaeda moquinii</i>	Torrey's seepweed	Native	Pres	Jun-Sep			x	
Compositae (Asteraceae)	<i>Ambrosia acanthicarpa</i>	<i>Ambrosia acanthicarpa</i>	bur ragweed	Native	Rep	Jul-Oct	x	x	x	Disturbed areas
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	Rep	Jul-Sep			x	
Compositae (Asteraceae)	<i>Erigeron bellidiastrum</i>	<i>Erigeron bellidiastrum</i>	pretty daisy	Native	Pres	May-Aug		x		
Compositae (Asteraceae)	<i>Helianthus annuus</i> var. <i>lenticularis</i>	<i>Helianthus annuus</i>	common sunflower	Native	Pres	Jun-Sep		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>Iva xanthifolia</i>	<i>Cyclachaena xanthifolia</i>	marsh-elder	Native	Rep	Aug-Oct			x	Disturbed areas
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	Pres	Apr-Jun	x	x		
Cruciferae (Brassicaceae)	<i>Alyssum minus</i> var. <i>micranthum</i>	<i>Alyssum parviflorum</i>	European madwort	Intro	Pres	Apr-Jul	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>Chorisporea tenella</i>	<i>Chorisporea tenella</i>	blue mustard	Intro	Pres	Apr-Jun				Disturbed areas
Cruciferae (Brassicaceae)	<i>Descurainia pinnata</i> var. <i>osmiarum</i>	<i>Descurainia pinnata</i> ssp. <i>halictorum</i>	western tansy-mustard	Native	Pres	Mar-Aug	x	x		
Cruciferae (Brassicaceae)	<i>Descurainia sophia</i>	<i>Descurainia sophia</i>	flixweed	Intro	Pres	Mar-Aug	x	x		Disturbed areas
Cruciferae (Brassicaceae)	<i>Dithyrea wislizenii</i>	<i>Dimorphocarpa wislizenii</i>	spectacle-pod	Native	Pres	Apr-Sep	x	x		

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

Family	Species name		Common name	Nativity	Park status	Flower time	Sage	Pin-Jun	Wet	Comments
	Utah	Colorado								
Annual Forbs, cont.										
Cruciferae (Brassicaceae)	<i>Draba cuneifolia</i> var. <i>cuneifolia</i>	<i>Draba cuneifolia</i>	wedgeleaf draba	Native	Pres	Feb–Jul	x	x		
Cruciferae (Brassicaceae)	<i>Lepidium densiflorum</i> var. <i>densiflorum</i>	<i>Lepidium densiflorum</i>	prairie pepperwort	Native	Pres	May–Jul	x	x		
Cruciferae (Brassicaceae)	<i>Lepidium lasiocarpum</i> var. <i>lasiocarpum</i>	<i>Lepidium lasiocarpum</i>	hairy-pod pepperwort	Native	Pres	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	Rep	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		
Cuscutaceae (Convolvulaceae)	<i>Cuscuta pentagona</i>	<i>Grammica campestris</i>	field dodder	Native	Rep	Jul–Sep	x	x		
Euphorbiaceae	<i>Chamaesyce glyptosperma</i>	<i>Chamaesyce glyptosperma</i>	ridge-seeded spurge	Native	Rep	Jun–Aug	x	x		Disturbed areas
Geraniaceae	<i>Erodium cicutarium</i>	<i>Erodium cicutarium</i>	stork's-bill	Intro	Pres	Feb–Oct	x	x		Disturbed areas
Hydrophyllaceae	<i>Phacelia crenulata</i> var. <i>corrugata</i>	<i>Phacelia crenulata</i>	corrugate phacelia	Native	Pres	May–Jun	x	x		
Hydrophyllaceae	<i>Phacelia ivesiana</i>	<i>Phacelia ivesiana</i>	Ives' phacelia	Native	Pres	Apr–Jun	x	x		
Leguminosae (Fabaceae)	<i>Astragalus nuttallianus</i> var. <i>micranthiformis</i>	<i>Astragalus nuttallianus</i> var. <i>micranthiformis</i>	small-flowered milkvetch	Native	Pres	Apr–Jun	x	x		
Leguminosae (Fabaceae)	<i>Lupinus pusillus</i> var. <i>pusillus</i>	<i>Lupinus pusillus</i>	dwarf lupine	Native	Rep	Apr–Jul	x	x		Sandy soils
Leguminosae (Fabaceae)	<i>Melilotus alba</i>	<i>Melilotus albus</i>	white sweet-clover	Intro	Pres	May–Oct		x	x	Disturbed areas
Linaceae	<i>Linum aristatum</i>	<i>Mesynium aristatum</i>	broom-flax	Native	Rep	Apr–Jun	x	x		
Loasaceae	<i>Mentzelia albicaulis</i>	<i>Acroclasia albicaulis</i>	white-stem blazingstar	Native	Pres	Apr–Aug	x	x		
Malvaceae	<i>Malva neglecta</i>	<i>Malva neglecta</i>	common mallow	Intro	Rep	Apr–Oct				Disturbed areas

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

Family	Species name		Common name	Nativity	Park status	Flower time	Sage	Pin-Jun	Wet	Comments
	Utah	Colorado								
<i>Annual Forbs, cont.</i>										
Onagraceae	<i>Oenothera albicaulis</i>	<i>Oenothera albicaulis</i>	white-stem evening-primrose	Native	Pres	Mar–Jun		x		
Plantaginaceae	<i>Plantago patagonica</i>	<i>Plantago patagonica</i>	woolly plantain	Native	Pres	Mar–Aug	x	x		
Polemoniaceae	<i>Eriastrum diffusum</i>	<i>Eriastrum diffusum</i>	spreading eriastrum	Native	Pres	May–Jun		x		
Polemoniaceae	<i>Gilia inconspicua</i>	<i>Gilia sinuata</i>	shy gilia	Native	Pres	Apr–Jul	x	x		
Polemoniaceae	<i>Gilia leptomeria</i> var. <i>leptomeria</i>	<i>Gilia leptomeria</i>	common gilia	Native	Rep	May–Jun	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	Rep	Mar–Jun	x	x		
Polygonaceae	<i>Eriogonum divaricatum</i>	<i>Eriogonum divaricatum</i>	spreading wild buckwheat	Native	Rep	May–Oct		x		
Polygonaceae	<i>Eriogonum palmerianum</i>	<i>Eriogonum palmerianum</i>	Palmer's wild buckwheat	Native	Pres	Mar–Oct	x	x		
Polygonaceae	<i>Polygonum aviculare</i>	<i>Polygonum arenastrum</i>	yard knotweed	Intro	Pres	May–Oct				Disturbed areas
Portulacaceae	<i>Portulaca halimoides</i>	<i>Portulaca halimoides</i>	dwarf purslane	Native	Pres	May–Sep		x		
Portulacaceae	<i>Portulaca oleracea</i>	<i>Portulaca oleracea</i>	common purslane	Intro	Rep	Jun–Sep				Disturbed areas
Primulaceae	<i>Androsace occidentalis</i>	<i>Androsace occidentalis</i>	western rock-jasmine	Native	Pres	Apr–Jun		x		
Primulaceae	<i>Androsace septentrionalis</i>	<i>Androsace septentrionalis</i>	pygmy-flower rock-jasmine	Native	Pres	May–Aug	x	x		
Ranunculaceae	<i>Ranunculus testiculatus</i>	<i>Ceratocephala orthoceras</i>	bur buttercup	Intro	Pres	Mar–Jun	x	x		Disturbed areas
Scrophulariaceae	<i>Collinsia parviflora</i>	<i>Collinsia parviflora</i>	blue-eyed Mary	Native	Pres	Apr–Jun	x	x		
Scrophulariaceae	<i>Cordylanthus wrightii</i>	<i>Cordylanthus wrightii</i>	Wright's bird's-beak	Native	Pres	Jul–Sep	x	x		Sandy soils
Solanaceae	<i>Datura wrightii</i>	<i>Datura wrightii</i>	angel's trumpet	Native	Pres	Apr–Oct	x	x		
Solanaceae	<i>Solanum triflorum</i>	<i>Solanum triflorum</i>	cut-leaf nightshade	Native	Rep	May–Sep	x	x		Disturbed areas
Zygophyllaceae	<i>Kallstroemia parviflora</i>	<i>Kallstroemia parviflora</i>	orange kallstroemia	Native	Rep	Jul–Sep				Disturbed areas

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

Family	Species name		Common name	Nativity	Park status	Flower time	Sage	Pin-Jun	Wet	Comments
	Utah	Colorado								
Perennial Graminoids										
Cyperaceae	<i>Carex geyeri</i>	<i>Carex geyeri</i>	elk sedge	Native	Rep	Apr-Jul		x		
Cyperaceae	<i>Carex occidentalis</i>	<i>Carex occidentalis</i>	western sedge	Native	Pres	Jun-Aug		x		
Cyperaceae	<i>Carex praegracilis</i>	<i>Carex praegracilis</i>	blackcreeper sedge	Native	Pres	May-Aug			x	
Cyperaceae	<i>Carex rossii</i>	<i>Carex rossii</i>	Ross' sedge	Native	Pres	May-Aug	x	x		
Cyperaceae	<i>Scirpus maritimus</i>	<i>Bolboschoenus maritimus</i> ssp. <i>paludosus</i>	alkali bulrush	Native	Pres	Jun-Sep			x	
Gramineae (Poaceae)	<i>Agropyron cristatum</i>	<i>Agropyron desertorum</i>	crested wheatgrass	Intro	Pres	Jun-Aug	x	x		Disturbed areas
Gramineae (Poaceae)	<i>Agrostis stolonifera</i>	<i>Agrostis stolonifera</i>	redtop	Intro	Pres	Jun-Sep			x	
Gramineae (Poaceae)	<i>Aristida purpurea</i>	<i>Aristida purpurea</i> var. <i>longiseta</i>	purple three-awn	Native	Pres	Mar-Sep	x	x		
Gramineae (Poaceae)	<i>Bouteloua gracilis</i>	<i>Chondrosium gracile</i>	blue grama	Native	Pres	Jul-Sep	x	x		
Gramineae (Poaceae)	<i>Bromus inermis</i> var. <i>inermis</i>	<i>Bromopsis inermis</i>	smooth brome	Intro	Pres	Jun-Aug		x	x	Disturbed areas
Gramineae (Poaceae)	<i>Elymus elongatus</i>	<i>Thinopyrum ponticum</i>	tall wheatgrass	Intro	Rep	Jun-Aug	x			Disturbed areas
Gramineae (Poaceae)	<i>Elymus elymoides</i>	<i>Elymus elymoides</i>	squirreltail	Native	Pres	May-Aug	x	x	x	
Gramineae (Poaceae)	<i>Elymus hispidus</i>	<i>Thinopyrum intermedium</i> ssp. <i>barbulatum</i>	intermediate wheatgrass	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		
Gramineae (Poaceae)	<i>Elymus trachycaulus</i>	<i>Elymus trachycaulus</i>	slender wheatgrass	Native	Pres	Jun-Aug	x		x	
Gramineae (Poaceae)	<i>Erioneuron pilosum</i>	<i>Erioneuron pilosum</i>	hairy tridens	Native	Pres	May-Jul	x	x		

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

Family	Species name		Common name	Nativity	Park status	Flower time	Sage	Pin-Jun	Wet	Comments
	Utah	Colorado								
<i>Perennial Graminoids, cont.</i>										
Gramineae (Poaceae)	<i>Festuca pratensis</i>	<i>Festuca pratensis</i>	meadow fescue	Intro	Rep	Jun-Aug			x	Disturbed areas
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 jubatum</i>	<i>Critesion jubatum</i>	foxtail barley	Native	Pres	Jun-Aug	x	x	x	Disturbed areas
Gramineae (Poaceae)	<i>Koeleria macrantha</i>	<i>Koeleria macrantha</i>	junegrass	Native	Pres	Jun-Aug	x	x		
Gramineae (Poaceae)	<i>Muhlenbergia andina</i>	<i>Muhlenbergia andina</i>	foxtail muhly	Native	Rep	Jul-Sep			x	
Gramineae (Poaceae)	<i>Muhlenbergia pungens</i>	<i>Muhlenbergia pungens</i>	sandhill muhly	Native	Rep	Jul-Sep	x	x		
Gramineae (Poaceae)	<i>Oryzopsis micrantha</i>	<i>Piptatherum micranthum</i>	littleseed ricegrass	Native	Rep	Jun-Aug	x	x		
Gramineae (Poaceae)	<i>Phragmites australis</i>	<i>Phragmites australis</i>	common reed	Native	Rep	Jul-Sep			x	
Gramineae (Poaceae)	<i>Poa bulbosa</i>	<i>Poa bulbosa</i>	bulbous bluegrass	Intro	Pres	Apr-Jul	x	x	x	Disturbed areas
Gramineae (Poaceae)	<i>Poa compressa</i>	<i>Poa compressa</i>	Canada bluegrass	Intro	Pres	Jun-Aug	x	x	x	
Gramineae (Poaceae)	<i>Poa fendleriana</i>	<i>Poa fendleriana</i>	muttongrass	Native	Pres	May-Aug	x	x		
Gramineae (Poaceae)	<i>Poa pratensis</i>	<i>Poa pratensis</i>	Kentucky bluegrass	Intro	Pres	May-Aug	x	x	x	Disturbed areas
Gramineae (Poaceae)	<i>Poa secunda</i>	<i>Poa secunda</i>	Sandberg's bluegrass	Native	Pres	Apr-Sep	x	x	x	
Gramineae (Poaceae)	<i>Sporobolus airoides</i> var. <i>airoides</i>	<i>Sporobolus airoides</i>	alkali sacaton	Native	Pres	Jun-Aug	x	x	x	Disturbed areas
Gramineae (Poaceae)	<i>Sporobolus contractus</i>	<i>Sporobolus contractus</i>	spike dropseed	Native	Rep	Jun-Sep		x		
Gramineae (Poaceae)	<i>Sporobolus cryptandrus</i>	<i>Sporobolus cryptandrus</i>	sand dropseed	Native	Pres	Jun-Aug	x	x		Disturbed areas

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

Family	Species name		Common name	Nativity	Park status	Flower time	Sage	Pin-Jun	Wet	Comments
	Utah	Colorado								
<i>Perennial Gramineoids, cont.</i>										
Gramineae (Poaceae)	<i>Stipa comata</i> var. <i>comata</i>	<i>Hesperostipa comata</i>	needle-and-thread	Native	Pres	May–Jul	x	x		
Gramineae (Poaceae)	<i>Stipa hymenoides</i>	<i>Achnatherum hymenoides</i>	Indian ricegrass	Native	Pres	May–Jul	x	x		
Gramineae (Poaceae)	<i>Stipa speciosa</i>	<i>Achnatherum speciosum</i>	desert needlegrass	Native	Pres	Apr–Jun	x	x		
Juncaceae	<i>Juncus arcticus</i>	<i>Juncus arcticus</i> ssp. <i>ater</i>	Baltic rush	Native	Pres	May–Jul			x	
Juncaceae	<i>Juncus longistylus</i>	<i>Juncus longistylus</i>	longstyle rush	Native	Pres	Jun–Aug			x	
Juncaceae	<i>Juncus torreyi</i>	<i>Juncus torreyi</i>	Torrey's rush	Native	Pres	Jun–Aug			x	
Typhaceae	<i>Typha latifolia</i>	<i>Typha latifolia</i>	broad-leaved cattail	Native	Pres	Jun–Aug			x	
Annual Gramineoids										
Gramineae (Poaceae)	<i>Aegilops cylindrica</i>	<i>Cylindropyrum cylindricum</i>	jointed goatgrass	Intro	Rep	May–Jun				Disturbed areas
Gramineae (Poaceae)	<i>Avena fatua</i> var. <i>sativa</i>	<i>Avena fatua</i> var. <i>sativa</i>	oats	Intro	Pres	Jun–Aug			x	Disturbed areas
Gramineae (Poaceae)	<i>Bromus japonicus</i>	<i>Bromus japonicus</i>	Japanese chess	Intro	Pres	Jun–Aug	x	x		
Gramineae (Poaceae)	<i>Bromus rubens</i>	<i>Anisantha rubens</i>	red brome	Intro	Pres	Mar–Jun				Disturbed areas
Gramineae (Poaceae)	<i>Bromus tectorum</i>	<i>Anisantha tectorum</i>	cheatgrass	Intro	Pres	May–Jul	x	x		Disturbed areas
Gramineae (Poaceae)	<i>Bromus trinii</i>	<i>Bromus trinii</i>	Chilean chess	Intro	Rep	Apr–May	x			Disturbed areas
Gramineae (Poaceae)	<i>Echinochloa crus-galli</i>	<i>Echinochloa crus-galli</i>	barnyard-grass	Intro	Rep	Aug–Sep			x	Disturbed areas
Gramineae (Poaceae)	<i>Festuca octoflora</i>	<i>Vulpia octoflora</i>	six-weeks fescue	Native	Pres	Apr–Jun	x	x		
Gramineae (Poaceae)	<i>Hordeum murinum</i>	<i>Critesion glaucum</i>	rabbit barley	Intro	Pres	May–Jul	x			Disturbed areas
Gramineae (Poaceae)	<i>Munroa squarrosa</i>	<i>Monroa squarrosa</i>	false buffalograss	Native	Pres	Jun–Sep	x	x		Disturbed areas
Gramineae (Poaceae)	<i>Poa bigelovii</i>	<i>Poa bigelovii</i>	Bigelow's bluegrass	Native	Pres	Mar–May	x	x		
Gramineae (Poaceae)	<i>Polypogon monspeliensis</i>	<i>Polypogon monspeliensis</i>	rabbitfoot-grass	Intro	Pres	Jun–Aug			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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National Park Service
U.S. Department of the Interior



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