

Survey of Invasive Plants Impacting National Parks in the United States

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OVERVIEW

Beginning in April 1998, a survey of national parks was initiated to ascertain the real extent of exotic plant species affecting natural areas of the National Park System which was not otherwise available. Sixty one parks participated. The survey resulted in a fairly comprehensive list of invasive plants occurring in national parks and was incorporated into the WeedUS Database. Around 2001, a list of invasive plants derived from WeedUS was posted on the 'Weeds Gone Wild' web page of the Plant Conservation Alliance's Alien Plant Working Group at <http://www.nps.gov/plants/alien/list.htm> and in 2006 the entire WeedUS database was made available on that site. As part of a recent collaborative effort with the University of Georgia's Center for Invasive Species and Ecosystem Health to enhance and expand WeedUS, the database was moved to a new site at <http://www.invasive.org/weedus/index.html> in October 2008. The database is updated regularly as new information is obtained.

BACKGROUND

The WeedUS database was initiated in 1998 to address the need for current state-level distribution information on exotic invasive plants affecting natural areas and ecosystems in the United States, including Hawaii and Alaska. WeedUS focuses specifically on natural ecosystems, excluding weeds of agricultural and other heavily managed or harvested lands or developed landscapes and offers a more accurate picture of the extent of invasive plants affecting ecosystems and biodiversity in the U.S. In order to be included in the database, a plant must be exotic¹ to the area under consideration and it must be causing an observable impact to natural habitat, native species or ecological functions. Scientific names used in WeedUS are based on the U.S. Department of Agriculture's Plants Database (<http://plants.usda.gov/index.html>).

As of 2008 WeedUS shows 1,026 invasive plants identified as impacting natural areas in the U.S. including 605 species affecting national parks <http://www.invasive.org/weedus/parks.html>. In most cases, data for invasive species in national parks corroborates reports made by other agencies and organizations concerned about the impacts of invasive species on the nation's ecosystems. This type of information is essential to support funding for monitoring, control and prevention efforts and for predicting the spread and establishment of invasive species. For example, since 2000, the National Park Service has approved funding for seventeen Exotic Plant Management Teams nationwide to manage invasive plants. Occurrence and distribution data from WeedUS have provided substantiation necessary to support many requests for assistance.

PARTICIPATING PARKS AND THEIR INVASIVE PLANTS

Sixty-one national parks from all over the United States participated in the survey and identified about 600 species of exotic invasive plants impacting natural areas and ecosystems. They are listed below according to the region they represent. The state(s) the park is located in, the park's four letter code², and the number of species found in each park is provided in bold.

Great Lakes Region (IL, IN, MI, OH, WI)

Indiana Dunes National Lakeshore (Indiana) **INDU 23**

Saint Croix National Scenic Riverway (Wisconsin) **SACN 10**

Mid-Atlantic Region (DC, DE, MD, NJ, PA, VA, WV)

Antietam National Battlefield (Maryland) **ANTI 83**

Appomattox Court House National Historical Park (Virginia) **APCO 11**

Booker T Washington National Monument (Virginia) **BOWA 9**

Catoctin Mountain Park (Maryland) **CATO 15**

Chesapeake and Ohio Canal National Historical Park (Maryland, Washington, D.C., and West Virginia) **CHOH 29**

Colonial National Historical Park (Virginia) **COLO 110**

Delaware Water Gap National Recreation Area (Pennsylvania) DEWA **10**
Eisenhower National Historic Site (Pennsylvania) EISE **5**
Fredericksburg & Spotsylvania National Military Park (Virginia) FRSP **11**
Gettysburg National Military Park (Pennsylvania) GETT **12**
George Washington Birthplace National Monument (Virginia) GEWA **15**
George Washington Memorial Parkway (Virginia) GWMP **18**
Harpers Ferry National Historical Park (Maryland, Virginia, West Virginia) HAFE **51**
Manassas National Battlefield Park (Virginia) MANA **18**
Monocacy National Battlefield Park (Maryland) MONO **49**
National Capital Parks Central (Washington, D.C.) NACC **1**
National Capital Parks East (Washington, D.C.) NACE **144**
Petersburg National Battlefield (Virginia) PETE **27**
Prince William Forest Park (Virginia) PRWI **10**
Richmond National Battlefield Park (Virginia) RICH **20**
Rock Creek National Park (Washington, D.C.) ROCR **41**
Shenandoah National Park (Virginia) SHEN **29**
Thomas Stone National Historic Site (Maryland) THST **6**
Wolf Trap National Park (Virginia) WOTR **5**

North Central Region (IA, MN, ND, NE, SD)

Badlands National Park (South Dakota) BADL **39**
Scotts Bluff National Monument (Nebraska) SCBL **8**
Theodore Roosevelt National Park (North Dakota) THRO **28**

Northeast Region (CT, MA, ME, NH, NY, RI, VT)

Acadia National Park (Maine) ACAD **13**
Minute Man National Historical Park (Massachusetts) MIMA **15**
Weir Farm National Historical Park (Connecticut) WEFA **6**

Northwest Region (ID, MT, OR, WA, WY)

Craters of the Moon National Monument (Idaho) CRMO **16**
Devils Tower National Monument (Wyoming) DETO **2**
Glacier National Park (Montana) GLAC **5**
Yellowstone National Park (Wyoming) YELL **114**

Pacific Islands (HI)

Haleakala National Park (Hawaii) HALE **291**

South Central Region (AR, KS, LA, MO, OK, TX)

Lake Meredith National Recreation Area (Texas) LAMR **4**
San Antonio Missions National Historical Park (Texas) SAAN **7**

Southeast Region (AL, FL, GA, KY, MS, NC, SC, TN)

Big Cypress National Preserve (Florida) BICY **2**
Blue Ridge Parkway (North Carolina) BLRI **28**
Dry Tortugas DRTO **1**
Everglades National Park (Florida) EVER **9**
Great Smoky Mountains National Park (North Carolina & Tennessee) GRSM **41**
Kings Mountain National Military Park (South Carolina) KIMO **11**
Stones River National Battlefield (Tennessee) STRI **71**
Vicksburg National Military Park (Mississippi) VICK **12**

Southwest Region (AZ, CA, CO, NM, NV, UT)

Chiricahua National Monument (Arizona) CHIR **45**

Death Valley National Park (California) DEVA **82**
Dinosaur National Monument (Colorado) DINO **21**
Fort Bowie National Historic Site (Arizona) FOBO **21**
Glen Canyon National Recreation Area (Utah) GLCA **19**
Grand Canyon National Park (Arizona) GRCA **61**
Lake Mead National Park (Nevada) LAME **45**
Organ Pipe National Monument (Arizona) ORPI **23**
Presidio National Park (California) PRES **22**
Redwood National Park (California) REDW **24**
Rocky Mountains National Park (Colorado) ROMO **31**
Sequoia and Kings Canyon National Parks (California) SEKI **15**
Wupatki National Monument (Arizona) WUPA **3**
Yosemite National Park (California) YOSE **18**

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For more information or to contribute to WeedUS please contact Jil Swearingen at jil_swearingen@nps.gov or by phone at: 202-342-1443, ex 218.

REFERENCES

U.S. Department of Agriculture. 2008. Plants Database. Natural Resource Conservation Service. <http://plants.usda.gov/>

¹ A species is exotic to an area if it was introduced to the invaded area directly or indirectly by humans rather than by natural dispersal via wind, water, wildlife or other non-human-mediated mechanisms.

² The National Park Service assigns each park an official 4-letter code that is used in various databases, email and other ways where an abbreviated name is useful. These codes are used in WeedUS.