

**FRANK J. SMITH/BOTANIST-WILDLIFE  
WESTERN ECOLOGICAL SERVICES, INC.  
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**EDUCATION**

1979 - B.S Degree in Plant Science, Minor Biology; Utah State University.

**PROFESSIONAL EXPERIENCE**

Wetland Resources, Inc., Logan, Utah. 2018. Surveyed for *Gilia karenae* and mapped habitat for *Pediocactus despainii* on a proposed gypsum mine in Emery County, Utah.

Wetland Resources, Inc., Logan, Utah. 2013-2018. Surveyed for the federally listed *Sclerocactus wetlandicus*, *Sclerocactus brevispinus*, *Schoenocrambe argillacea*, *Schoenocrambe suffrutescens*, *Astragalus equisolensis*, and *Spiranthes diluvialis* on proposed well pad areas, pipeline corridors, and access road corridors in the Uintah Basin of eastern Utah.

EPG, Inc., Salt Lake City, Utah. 2010-2012. Surveyed for rare plants and noxious weeds for the Sigurd to Red Butte Transmission Project in central Utah for Rocky Mountain Power.

Ecology & Environment, Inc. Portland, Oregon 2008-2011. Collected field data on wildlife, rare plants, noxious weeds and wetlands along a proposed natural gas pipeline in western Wyoming and northern Utah. Surveyed for the federally listed *Spiranthes diluvialis* and other rare plants.

Sage Environmental, Salt Lake City, Utah 2006-2008,2011. Conducted a rare plant and wildlife survey for the Tooele and Price airports in Utah, Boise Airport in Idaho, Rocky Metropolitan Airport in Colorado, Las Vegas International Airport in Nevada, Palm Springs Airport in California and the Tuscon International Airport in Arizona.

Tetra Tech, Santa Ana, California. 2010. Conducted a rare plant survey on a proposed Solar Project in Amargosa Valley near Beatty, Nevada

Germ Production, Burbank, California. 2010. Surveyed for *Sclerocactus wrightiae*, a federally listed cactus on film location sites for the movie "John Carter of Mars".

Cirrus Consulting, Logan, Utah. 2010. Surveyed for rare plants on the Wasatch-Cache National Forest in the Bear River Range.

ICF Jones & Stokes, Sacramento, California 2009. Worked on a rare plant survey in Clark County, Nevada. Over 400 sites were surveyed to help define a rare plant model developed by Clark County. Nine rare plants were included in the study.

Bio-West, Logan, Utah 2007-2008. Rare plant survey of endangered, threatened, and sensitive species at Ash Meadows National Wildlife Refuge in southern Nevada.

Cirrus Consulting, Logan, Utah. 2008 Conducted a rare plant survey for a seismic project by Wolverine Oil near Richfield, Utah.

Garcia and Associates, Auburn, California 2008. Conducted a rare plant survey for the Barren Ridge Transmission Project east of Valencia, California.

Engineering-Environmental Management, Inc. Englewood, Colorado 2006-2007. Worked on vegetation mapping projects at Cedar Breaks National Monument in Utah and for the Parashant Grand Canyon.

U.S. Fish and Wildlife Service, Boise, Idaho 2006. Rare plant survey for *Astragalus anserinus* in Nevada.

Jones & Stokes, Salt Lake City, Utah 2006. Conducted a rare plant survey for the proposed Desert Express train in Nevada.

Nevada Natural Heritage Program, Carson City, Nevada. 2003-2006. Conducted a survey for *Penstemon bicolor* var. *bicolor* and *Penstemon bicolor* var. *roseus* in the Las Vegas area. A status report for these taxa are completed.

Bio-Resources, Logan, Utah. 1997-2006. Conducted a rare plant, wildlife and vegetation monitoring inventories for El Paso - Colorado Interstate Gas on proposed pipeline projects in Arizona, Colorado, Kansas, New Mexico, Oklahoma, Nevada, Utah and Wyoming.

Wildland International, Las Vegas, Nevada. 2005. Conducted a rare plant survey for the groundwater project for the Southern Nevada Water Authority.

Cirrus Consulting, Logan, Utah. 2005. Conducted a rare plant survey for a seismic project in central Utah.

Engineering-Environmental Management, Inc, Littleton, Colorado. 2005. Worked on a vegetation mapping project at Fossil Butte National Monument in Wyoming. Also worked on a grazing assessment project for the Bureau of Land Management in Safford, Arizona.

Utah State University, Logan, Utah. 2003-2004. Worked on a botanical project in Armenia (Former Republic of U.S.S.R).

Wildland International, Las Vegas, Nevada. 2004 Surveyed for rare plants and desert tortoise at a proposed reservoir site for the Southern Nevada Water Authority.

Engineering-Environmental Management, Inc, Littleton, Colorado. 2002-2004 Worked on a vegetation mapping project at Canyonlands National Park, Capital Reef National Park in Utah, and Black Canyon of the Gunnison in Colorado.

White Horse Associates, Smithfield, Utah. 2002-2003. Worked on a riparian mapping project in the Owens Valley for the Los Angeles Water Department.

Southern Nevada Water Authority, Las Vegas, Nevada. 2003. Worked on a rare plant survey for the Southern Nevada Water Authority in the Spring Mountains outside of Las Vegas, Nevada.

Cirrus Consulting, Logan, Utah. 2003. Conducted a rare plant survey in the Ruby Mountains in Nevada for a helicopter skiing project.

Nellis Air Force Base, Las Vegas, Nevada. 2001-2002. Vegetation mapping project for the southern ranges of the Nellis Air Force Bombing and Gunnery Range in Clark County.

Nevada Natural Heritage Program, Carson City, Nevada. 2001. Status reports for *Phacelia parishii* and *Astragalus oophorus* var. *clokeyanus*.

White Horse Associates, Smithfield, Utah. 2000. Described wetland vegetation types in Owens Delta for the Los Angeles Water Department in California.

The Nature Conservancy, Minneapolis, Minnesota. 2000. Worked on a vegetation mapping project for Zion National Park.

The Nature Conservancy, Reno, Nevada. 2000. Conducted a rare plant survey for Hawthorne Army Depot in Nevada.

The Nature Conservancy, Las Vegas, Nevada.. 1998-2000. Collected data for a monitoring project for *Arctomecon merriamii* and *Phacelia parishii* on Nellis Air Force Bombing and Gunnery Range, in Nevada.

The Nature Conservancy, Las Vegas, Nevada. 1993-2000. Conducted an inventory of rare, threatened, endangered, and endemic plants and unique communities on Nellis Air Force Bombing and Gunnery Range in Nevada. During this period, I discovered two new taxa of *Phacelia*.

Ecosystems Sciences, Boise, Idaho. 1998-99. Worked on a botanical inventory of 100 seeps and springs on the Lower Owens River Project for the Los Angeles Water Department in California.

Ohio State University, Columbus, Ohio. 1999. Assisted in a plant collecting trip to South Africa. Plants were collected in the Scrophulariaceae Family for a genetic study.

Sinclair Oil, Salt Lake City, Utah. 1998. Conducted a plant survey for *Draba burkei* at the Snow Basin Ski Resort and the vicinity for the 2002 Olympics.

Donald D. Sada, Bishop, California. 1997. Conducted a vegetation inventory of 50 springs for the Ruby Lake National Wildlife Refuge in Ruby Valley, Nevada.

Bio-Resources, Inc., Logan, Utah. 1997. Conducted a rare plant inventory for Colorado Interstate Gas on proposed pipeline projects in Colorado and New Mexico.

Nevada Natural Heritage Program, Carson City, Nevada. 1997. Status report for *Astragalus oophorus* var. *clokeyanus* in Nevada.

Nevada Natural Heritage Program, Carson City, Nevada. 1996. Status report for *Penstemon albomarginatus* in Nevada.

Bio-Resources, Inc., Logan, Utah. 1995. Conducted a vegetation inventory for the Battle Mountain Gold Project near Chesaw, Washington.

Humboldt National Forest, Elko, Nevada. 1995. Conducted a rare plant inventory for the Humboldt National Forest.

Nevada Natural Heritage Program, Carson City, Nevada. 1994-1995. Status report for *Cryptantha welshii*, *Frasera gypsicola* and *Phacelia parishii*.

Wildland International, Las Vegas, Nevada. 1994. Rare plant and desert tortoise inventory for the Southern Nevada Water Authority on the secondary in-take and water distribution corridor for Las Vegas.

Bio-Resources, Inc., Logan, Utah. 1994. Rare plant inventory for Colorado Interstate Gas on a proposed pipeline project within the Cimarron National Grasslands in south-western Kansas.

The Nature Conservancy, Reno, Nevada. 1993-1994. Rare plant inventory on the Spring Mountains for the Toiyabe National Forest.

Knight & Leavitt Associates, Las Vegas, Nevada. 1993. Rare plant inventory on a proposed beltway project in Las Vegas.

Bureau of Land Management, Salt Lake City, Utah. 1993. Status report on *Mentzelia shultziorum* near Moab, Utah.

Utah Natural Heritage Program, Salt Lake City, Utah. 1993. Conducted a survey on *Viola frank-smithii* for the Wasatch-Cache National Forest.

White Horse Associates, Logan, Utah. 1992. Inventory of riparian and upland habitats of the Bruneau Basin, Humboldt National Forest, Nevada.

White Horse Associates, Logan, Utah. 1992. Classification and inventory of riverine riparian habitats, Five Mile Creek Basin, Umatilla National Forest, Oregon.

Ecosystem Research Institute, Logan, Utah. 1992. Rare plant inventory for *Asclepias sanjuanensis* Navajo Indian Reservation, New Mexico.

Knight & Leavitt Associates, Las Vegas, Nevada. 1992. Rare plant inventory for the proposed Overton to Mesquite transmission line, Overton Power District, Nevada.

Bio-Resources, Inc., Logan, Utah. 1992. Vegetation and wildlife inventory of the California gnatcatcher in Orange and Riverside counties, California for Chevron.

Biosystems Analysis, Inc., Santa Cruz, California. 1991. Rare plant inventory for the Mohave pipeline from Needles to Mohave, California.

Ecotone Environmental Consulting, Logan, Utah. 1991. Rare plant inventory of the Twin Lakes Project in the Big Horn Mountains, Wyoming.

Bio-Resources, Inc., Logan, Utah. 1991. Rare plant inventory for the proposed Colorado Interstate Gas pipeline in Wyoming, Colorado, and Utah.

Utah Natural Heritage Program, Salt Lake City, Utah. 1991. Rare plant inventory for *Aster kingii* var. *kingii* and *Lesquerella garrettii* for the Wasatch-Cache National Forest.

White Horse Associates, Smithfield, Utah. 1991. Vegetation inventory for the Auger Falls hydroelectric project in the Snake River Canyon near Twin Falls, Idaho.

Ecotone Environmental Consulting, Logan, Utah. 1991. Wetland delineation for the Snow Basin Ski Resort Project in Utah.

White Horse Associates, Smithfield, Utah. 1991. Mapped and described vegetation types for a 16 mile reach of the Snake River Canyon near Twin Falls, Idaho.

Bureau of Land Management, Salt Lake City, Utah. 1991. Status report for *Talinum thompsonii* in the Cedar Mountains, Utah.

Bio-Resources, Inc., Logan, Utah. 1990. Rare plant survey for the proposed WyCal pipeline in Nevada, Utah, and Wyoming. Also surveyed for the desert tortoise in Nevada and Utah along the proposed pipeline route.

Nevada Goldfields, Inc., Austin, Nevada. 1990. Rare plant survey for *Frasera pahutensis* on a gold mine lease area in the Toiyabe Range on the Toiyabe National Forest in Nevada.

Utah Natural Heritage Program, Salt Lake City, Utah. 1990. Rare plant survey for the federally listed Maguire primrose (*Primula maguirei*) for the Wasatch-Cache National Forest in Utah.

White Horse Associates, Smithfield, Utah. 1990. Wetlands inventory along 10th West for Logan City.

Ecotone Environmental Consulting, Logan, Utah. 1990. Rare plant survey for the Exxon Corporation Carter Mountain Unit No.1 Exploratory Oil Well on the Greybull Ranger District, Shoshone National Forest, in Park County, Wyoming.

Bio-Resources, Inc., Logan, Utah. 1989. Vegetation and wildlife inventory at Hayden Hill in Modoc County, California for Amax, Inc. An intensive search for the rare plant *Antennaria flagellaris* was conducted in northeastern California.

Utah Natural Heritage Program, Salt Lake City, Utah. 1989. Rare plant survey for *Erigeron cronquistii* and *Musineon lineriae* for the Wasatch-Cache National Forest in Utah. During this period, I discovered a new taxon of *Viola*. The name given is *Viola frank-smithii* N. Holmgren.

Regional Office, U.S. Forest Service, Ogden, Utah. 1989. Field guides for threatened, endangered, and sensitive plants for Utah, Nevada-California, and Idaho-Wyoming in Region 4.

White Horse Associates, Smithfield, Utah. 1989. Inventory of riparian habitats in the Independence Range and Bull Run Mountains in Nevada for the Freeport Mine. Also conducted a riparian inventory for the proposed Sierra Pacific Coal Fired Power Plant in Elko County, Nevada.

Nevada Natural Heritage Program, Carson City, Nevada. 1989. Rare plant survey in the southern Ruby Mountains for the Humboldt National Forest, Nevada.

Alpine Consulting, Providence, Utah. 1989. Rare plant survey on the Ruby A Federal #1-9 Exploratory Oil/Gas Well for Phillips Petroleum Company in Carbon County, Montana.

San Juan College, Farmington, New Mexico. 1989. Recovery plan for *Phacelia argillacea* and *Ranunculus acriformis* var. *aestivalis* in Utah. Also worked on the status report for *Penstemon gibbensii* in Colorado and *Asplenium adiantum-nigrum* in Utah for the U.S. Fish and Wildlife Service.

Bio/West, Inc., Logan, Utah. 1988. Threatened and endangered plant survey along the proposed Craig-Bonanza Transmission Line in Utah and Colorado for the Western Area Power Administration.

Bio-Resources, Inc., Logan, Utah. 1988. Vegetation survey at the Tererro Mine in Pecos, New Mexico for Amax, Inc. and the New Mexico Department of Fish and Game.

Western Resource Development Corporation, Boulder, Colorado. 1988. Production, cover, and density data from the community types that occur adjacent to a uranium mine tailings site in Monticello, Utah.

White Horse Associates, Smithfield, Utah. 1988. Classification and inventory of riparian habitat in the North Fork Humboldt watershed for the Environmental Protection Agency and Nevada Department of Wildlife.

Mountain West Environmental Services, Cheyenne, Wyoming. 1988. Threatened and endangered plant inventory on approximately 120,000 acres of federal land in Mesa County, Colorado.

Woodward-Clyde Consultants, Oakland, California. 1987. Threatened and endangered plant survey for the proposed Sierra Pacific Coal Fired Power Plant in Elko County, Nevada. Also collected vegetation data from the major community types.

Endangered Plant Studies, Inc., Orem, Utah. 1987. Threatened and endangered plant inventory of Zion National Park for the National Park Service.

Western Hog Ranch Company, Sparks, Nevada. 1987. Surveyed for *Eriogonum crosbyae* in northwestern Nevada on a number of gold mine properties for the Bureau of Land Management.

The Nature Conservancy, Carson City, Nevada. 1987. Status report for *Astragalus robbinsii* var. *occidentalis* in the Ruby Mountains, Nevada.

White Horse Associates, Smithfield, Utah. 1987. Assessment of botanical resources for three sites in southern Idaho where hydroelectric generating facilities have been proposed. Also, assisted on an inventory of riparian community types in the North Fork Humboldt River watershed, Nevada.

Bio/West, Inc., Logan, Utah. 1987. Assisted on a number of wetland projects entailing vegetation mapping, description, and sampling in Colorado, Idaho, and Utah. Also conducted an assessment of wetland areas and rare plants for a proposed ski resort near Steamboat Springs, Colorado.

Neese Investigations, Salt Lake City, Utah. 1986. Threatened and endangered plant inventory for the federally listed Wright fishhook cactus (*Sclerocactus wrightiae*) on approximately 500,000 acres of federal land in Wayne and Sevier counties, Utah. Also, a number of other endemics were searched for and documented. During this period, I discovered a new taxon of a perennial *Gilia*. The name given is *Gilia tenuis* Smith & Neese.

Bio/West, Inc., Logan, Utah. 1986. Worked on an Environmental Impact Statement (EIS) for the proposed Mojave-Kern-El Dorado Natural Gas Pipeline Project which includes the states of Arizona, California, Colorado, Nevada, New Mexico, Utah, Texas, and Wyoming. Worked mainly on the threatened and endangered plants portion of the EIS project.

White Horse Associates, Smithfield, Utah. 1986. Assisted in the riparian reclamation studies for the hydroelectric projects at Cedar Draw, located northwest of Twin Falls, Idaho, and at Birch Creek, west of Idaho Falls, Idaho.

Intermountain Forest and Range Experiment Station, Boise, Idaho. 1986. Worked on a riparian and aquatic habitat study in Idaho, Nevada, and Utah. In each hydrographic region a preliminary riparian classification was developed.

Kaiser Coal Corporation, Sunnyside, Utah. 1985. Vegetation inventory for Horse Canyon and C-Canyon permits. Searched for threatened and endangered plant species. Also collected vegetation data on a number of reclamation plots on the Sunnyside Mine and at the Wellington Plant. During this period I discovered a new taxon of *Mentzelia*. The name given is *Mentzelia multicaulis* (Osterh.) Goodman var. *librina* Thorne & F.J. Smith.

Bio-Resources, Inc., Logan, Utah. 1985. Vegetation inventory on a number of reclamation plots for Consolidated Coal at the Emery Mine in Utah and the Burnham Mine in New Mexico.

Intermountain Forest and Range Experiment Station, Logan, Utah. 1985. Collected vegetation data on the Northfork Well near Cody, Wyoming, and the Gold Reef Well near Meeteetse, Wyoming, on the Shoshone National Forest for Marathon Oil.

Bio-Resources, Inc., Logan, Utah. 1984. Outlined vegetation types on 7.5 min. maps. This information was then transferred to the computer to be digitized. White River Shale Project, Utah, was the area mapped. Also surveyed for

threatened and endangered plants and wildlife on a number of proposed well sites in the Uintah Basin, Utah.

Bio/West, Inc., Logan, Utah. 1984. Inventory of abandoned mines in Juab, Utah, and Tooele counties. The survey was to determine if any safety hazards existed. A description was written for each mine.

White Horse Associates, Smithfield, Utah. 1984. Bear River Wetlands Project in Wyoming. Involved description of geomorphic, soil, and floristic parameters.

Spellenberg Botanical Consultants, Las Cruces, New Mexico. 1983. Vegetation resource analysis was conducted for the Velarde Community Ditch Project for the Rio Arriba and Santa Fe counties for the U.S. Bureau of Reclamation.

New Mexico State University, Las Cruces, New Mexico. 1983. Vegetation survey at Fort Bliss in New Mexico and Texas. The survey was to determine the effects tank maneuvers had on vegetation.

Stanford University, Palo Alto, California. 1983. Island Biogeography Project in central Nevada. The project consisted of surveying for birds, butterflies, mammals, and vegetation. I worked mostly on the vegetation but also assisted in the other surveys.

Bio/West, Inc., Logan, Utah. 1983. Threatened and endangered plant census in Uintah County, Utah.

Bio/West, Inc., Logan, Utah. 1981-1982. An inventory and population study of threatened, endangered, and rare plant species was conducted on approximately 290,000 acres of federal land in Uintah County, Utah. During this period, I discovered a new taxon of *Haploppapus*. The name given is *Haploppapus armerioides* (Nutt.) Gray var. *gramineus* Welsh & F.J. Smith.

Ertec Northwest, Inc., Seattle, Washington. 1982. Inventory for threatened and endangered plants and sensitive wildlife habitats on drill sites for the proposed MX dense pack missile system in the vicinities of Cheyenne, Wyoming and Clovis, New Mexico.

W.F. Sigler and Associates, Inc., Logan, Utah. 1982. Threatened and endangered plant census for the Altex Oil Corporation in Wayne and Garfield counties, Utah.

Bio-Resources, Inc., Logan, Utah. 1981. Vegetation and wildlife inventory on a proposed oil shale tract for Synfuel, Inc., Denver, Colorado. The study included collection of quantitative data on birds, small mammals, and vegetation.

White Horse Associates, Smithfield, Utah. 1981. Collected production and frequency data for a riparian classification study on the upper portions of the Salmon and Middle Fork Salmon River watersheds in central Idaho.

Biosystems Analysis, Inc., San Francisco, California. 1981. Vegetation and soil survey for the MX missile system on the proposed operational bases in Nevada, New Mexico, and Utah. The survey consisted of vegetation mapping, soil descriptions, vegetation sampling, and search of threatened and endangered plants. Assisted in the soil survey and the vegetation mapping. Co-author of the report.

Ertec Northwest, Inc., Seattle, Washington. 1980-1981. Vegetation and wildlife inventory of the MX missile system in Dry Lake Valley, Delamar Valley, and Muleshoe Valley in Nevada, and Pine Valley and Wah Wah Valley in Utah. Collected quantitative data on vegetation. Also surveyed for threatened and endangered plants and sensitive wildlife habitats.

Bio-Resources, Inc., Logan, Utah. 1980. Threatened and endangered plant census for the El Paso Coal Company in San Juan County, New Mexico. Assisted in the black-footed ferret study and the bird and mammal census.

Forest Service, Reno, Nevada. 1979-1980. Threatened and endangered plant census in the Toiyabe National Forest. The ranges surveyed were the Shoshone Range, Toiyabe Range, Toquima Range, and Monitor Range in central Nevada; Spring Mountain southwest of Las Vegas; and the Sweetwater Mountains and Sierras in California.

Utah State University, Logan, Utah. 1978. Threatened and endangered plant census in the Bridger-Teton National Forest in the Wyoming Range for the U.S. Forest Service.

Bureau of Land Management, St. George, Utah. 1978. Bird, mammal, reptile, and vegetation inventory of the Pakoon Burro Study Site on the Arizona Strip District in northwestern Arizona. Threatened and endangered plants were surveyed in the area. Assisted in the bird, mammal, and reptile census. During the work on the Arizona Strip District, I discovered a new species of *Penstemon*. The name given is *Penstemon distans* N. Holmgren.

Bio/West, Inc., Logan, Utah. 1978. Evaluation of the degree and patterns of winter wildlife use of irrigation canals in the Uintah Basin of northeastern Utah.

Intermountain Forest and Range Experiment Station, Logan, Utah. 1977. Vegetation survey at major coal mines in the Great Plains and New Mexico. Worked on the alpine association of the Beartooth Plateau in Montana and Wyoming collecting quantitative data on plants found in native and disturbed areas for a colonization study.

Bio/West, Inc., Logan, Utah. 1977. Vegetation and wildlife inventory of the Big Springs area in Targhee National Forest, Idaho. Study included plant identification, an intensive bird and mammal sampling effort, and a preliminary species list and data analysis.

Bio/West, Inc., Logan, Utah. 1977. Vegetation and wildlife identification and quantitative inventory along 200 km of canals in the Uintah Basin of northeastern Utah. Study included collecting data for detailed vegetation mapping and transect sampling for the mammals and avifauna on the canals.

Bio/West, Inc., Logan, Utah. 1976. Plant inventory along the Colorado River from Loma, Colorado to the Utah border. Assisted with the mammal and avifauna identification and quantification inventory.

Bureau of Land Management, St. George, Utah. 1976. Botanical study of the Virgin Mountains in Mohave County, Arizona. Identified, photographed, and wrote descriptions of 174 species of wildflowers. The study area ranged from creosote bush to ponderosa pine community. Threatened and endangered plants were surveyed. During the work on the Arizona Strip District, I discovered a new species of *Townsendia*. The name given is *Townsendia smithii* Shultz & A. Holmgren.

Intermountain Forest and Range Experiment Station, Logan, Utah. 1974-1976. Collected and identified plants found on strip mines and prepared plant specimens for herbarium use. Worked in the alpine association of the Beartooth Plateau in Montana and Wyoming collecting data on plant phenology, water relations, and the micro-environment. Also conducted plant assessments in the Great Plains and installed demonstration plots on strip mines.

## PUBLICATIONS

Novelties in *Musineon* (Apiaceae) and *Ortocarpus* (Orobanchaceae) in the northern Wasatch Mountains of Utah and Idaho. 2018. *Madrono* 65:60-64 (with Leila M. Shultz).

Two new species of *Phacelia* (Hydrophyllaceae) from the southwestern United States. 2002. *Novon*. 12:18-26 (with N.D. Atwood and T.A. Knight).

Noteworthy collection. 2000. *Madrono*. 48:43 (with D. Pritchett and T.A. Knight).

A new perennial species of *Gilia* (Polemoniaceae) from Utah. 1989. *Great Basin Naturalist*. 49:461-465 (with E. Neese).

A new variety of *Mentzelia multicaulis* (Loasaceae) from the Book Cliffs of Utah. 1986. *Great Basin Naturalist*. 46:555-556 (with K.H. Thorne).

New *Haploppapus* variety in Utah (Compositae). 1983. *Great Basin Naturalist*. 43:371-372 (with S.L. Welsh).

Plants of the Virgin Mountains. 1980. U.S. Department of the Interior, Bureau of Land Management, Arizona Strip District, U.S. Government Printing Office, 1980=684-931/2280 (with L.H. Rentz)