On the Roof of the Rocky Mountains
The Botanical Legacy of Betty Ford Alpine Gardens, Vail’s Alpine Treasure

By Sarah Chase Shaw

On the Roof of the Rocky Mountains establishes the Gardens as a destination for visitors to Vail, Colorado, a must-see venue, known as much for its beautiful gardens and iconic location as its educational and interpretive exhibits and world-renowned plant collection. The book will also validate the Gardens as a leader in alpine plant ecology and conservation.

With 285 full-color photographs, an artistically-rendered map, and over 22,000 words of text and captions, the global significance of the alpine environment is explained and revealed in detail. Plant and animal species are identified by both scientific and common names.

Organized into five chapters, the book opens with Sowing Seeds, recounting the history of a community effort to create a public garden in Vail to educate locals and visitors about gardening at 8,200 feet. In Promote a Deeper Understanding of the Alpine World, images of alpine and arctic tundra landscapes from around the world illustrate the unique ways in which weather and climate define life above the trees. The magnificence of the Gardens’ plant collections is revealed in Four Seasons in Betty Ford Alpine Gardens. The Gardens’ distinguished collections of alpine plants from around the world come into focus in Guardians of the Alpine. And, finally, the Gardens’ educational outreach and its role as a leader in plant conservation is clarified in Vigilance and Vision.

Sarah Chase Shaw is a freelance writer based in Basalt, Colorado. A landscape architect by training, she specializes in writing about design and lifestyle in the American West. Her work has appeared in national and regional publications, including Garden Design, Western Art & Architecture, Planning Magazine, Urban Land, Vail/Beaver Creek Magazine, and Aspen Sojourner. She is the author of Garden Legacy: The Residential Gardens of Design Workshop, and New Gardens of the American West. Her most recent book Living Beneath the Colorado Peaks: The Story of Knapp Ranch received a Bronze Wrangler Award from the National Cowboy & Western Heritage Museum.

Short essays from noted botanical experts Panayoti Kelaidis, David Inouye, Richard Daley, Peter Raven, and Sara Oldfield accompany the photos and text. The Introduction is written by Nicola Ripley, Executive Director of the Gardens.

On the Roof of the Rocky Mountains is a tribute to the world of alpine plants and the important work Betty Ford Alpine Gardens is doing to promote research and conservation of global alpine environments in one of America’s premier resort destinations. Named in honor of former First Lady Betty Ford, it is fitting that this world-class botanical garden is located within the Town of Vail’s Ford Park, directly across from Vail Mountain, and a short distance from the center of Vail Village.

All Gardens’ photography was taken by Vail-based photographers Todd Winslow Pierce and Dominique Taylor. Drone photography was taken by Brandon Huttenlocher. Global alpine imagery was sourced through Minden Pictures.
The Garden's Role
in Tourism Development

While spotlighted as Vail's major summer season, the visibility of a public
Garden was also a reality and the newly formed Board was granted another opportu-
nity to develop a garden as part of local belonging in the Town of Vail. “Demonstrate-
to the community, the educational and economic contributions that a public garden to
that location extends,” they were told.

Funding efforts, led by Helen Fritch and hotelier Sheika Gramshammar with
their good friend Betty Ford were successful. However, not all of the straightforward
Sombolings that the Town had envisioned. Marty Jones had a strong personal desire, gardens in the Rocky Mountains
could be. Induced by Vail’s cool temperatures and easy, close to the Mountain Preservental
Gardens Roundtable. The Town and the community were delighted, and in July, 1980 Vail
Alpine Gardens was officially named Betty Ford Alpine Gardens in honor of the former
First Lady and her many contributions to the Vail Valley.

Indeed, with its new name and an enthusiastic public outreach campaign, the
Gardens became a household name in Vail, symbolizing its reputation amongst tourists
and locals alike for promoting stunning floral displays both in its own gardens and
throughout the town’s quaint pedestrian streets. Suddenly, flowers were a mainstay of
summer tourism. Store fronts, railings, and walls were adorned with colorful window
boxes and flower pots; traffic medians and roundabouts were transformed into colorful
summer displays. The Gardens flourished. The Town and the community were delighted, and in July, 1988, Vail
Mountain Perennial Pond opened to show residents and visitors how diverse gardens in the Rocky Mountains
complete with rocky outcroppings, topographic changes, and even a small recirculating
“landscaping” that the Town had envisioned, Marty Jones built a perennial display garden,
their good friend Betty Ford were successful. However, instead of the straight-forward
work — what was needed was “soft-sell,” a non-intrusive and inviting approach to
education. What could the Gardens offer? A Showcase of Native and Exotic Perennials
Found in the Garden

Over 1000 species are featured in the Garden’s diverse collections. The following
discussions offer a glimpse of the most common genera and family groups, that can
be seen throughout the Gardens during a typical growing season.

Aquilegia: More commonly known as Columbine, every species of Aquilegia native to
North America can be found in the Garden’s collection. By far the most of them all,
Aquilegia canadensis, grows from native clumps from Alberta, Canada, into Montana and
Wyoming. Botanical fact: Rocky Mountain Blue Columbine (Aquilegia caerulea) is the
state flower of Colorado and a lovely reminder of summer in the Rocky Mountains.

Androsace: With its star-shaped flowers and a width of only 3”, Androsace helvetica is the
smallest flowering plant in the Garden’s collection. A photograph of this species can be found
on page 201. Botanical fact: These tiny, fragrant cushion rock-jasmines originated in the
Himalayas, spreading throughout Asia to the Alps and Pyrenees in Europe. Some even
managed to cross the Bering Sea land bridge into North America over 11,700 years ago.

Campanula: Campanulas, commonly known as Bellflowers, ranging in height from a few inches to a few feet.
Botanical fact: Campanula (Campanula sp.) found in the Eastern States, are perfectly adapted to grow in the chalky limestone soil found in the northeastern Alps of Austria.

Dianthus: Botanical bit: Dianthus alpinus, is classified as a calcicole, a plant naturally
adapted to grow in chalky limestone soil found in the northeastern Alps of Austria.

Horticulturalists, botanical garden enthusiasts, high altitude plant researchers, alpine zone scientists, visitors to
the Gardens in Vail, and aficionados of outstanding plant photography.
Colorado's High Alpine

From cold temperatures and evaporation, intricate overlapping petals close tightly at night, further protecting the flower's structure helps the everlasting survive the dry conditions and frigid nights. A stiff and dry flower, the everlasting survives in protected areas up to 15,000 feet in elevation. The highest flowering plant on Mount Kilimanjaro, or everlasting Helichrysum, has been completed in its tundra environment than any other part of the country.

Recreationalists deep into fragile environments. Too, Colorado's environmental riches just at or below treeline throughout Colorado's high country, while roads and trails lead miners—decaying log cabins, mine shafts and tailings, and even tools—can be found among the extent of accessible alpine tundra in the contiguous 48 states. Remnants of early mining activities and they are found in Colorado. The southern Rockies is an intercontinental alpine refuge that is part of a larger ecosystem in which it is located. Most of the highest peaks, ranging in elevation from 13,000 feet to over 14,000 feet. The Sawatch Range, located just south of Vail, contains 14 of the state's 96 fourteener peaks with an elevation of at least 14,000 feet. It rises to over 14,100 feet. Intercontinental ranges of more than 1,000 peaks above 12,000 feet are scenic and ecologically important alpine meadows, full of the everlastings. In the Gardens, Colorado is home to the largest extent of accessible alpine tundra in the contiguous 48 states. Flowers bloom from early summer—dazzling big colors, more shades and ruffles, and more time—it can be found just a few hours south of Denver throughout Colorado's high country, while roads and trails lead recreationalists deep into fragile environments. Yes, Colorado's environmental riches have also attracted naturalists. Hardy and colorful plants can be found growing as high as 22,000 feet. The blue poppy (Meconopsis horridula) is a common sight in these mountain environments. This one grows near Mt. Everest in the Mt Qumolangma National Park on the Qinghai Tibet Plateau in China.

A Walk Through Betty Ford Alpine Gardens

A walk through Betty Ford Alpine Gardens in Vail, Colorado, is like being transported to the scenic high country of the Southern Rockies. The gardens are managed by an internal clock that ensures they are at the optimal color and size, even before they reach the summit. Species from Colorado to the Himalayas, and from South Africa to the European Alps, are managed by an internal clock that ensures they are at the optimal color and size, even before they reach the summit. Species from Colorado to the Himalayas, and from South Africa to the European Alps, are managed by an internal clock that ensures they are at the optimal color and size, even before they reach the summit.

Betty Ford Alpine Gardens, a remarkable and unparalleled collection of over 3,000 species representing alpine environments around the world, can be found within the compact five-acre grounds. At 8,200 feet in elevation, Betty Ford Alpine Gardens is the highest public botanical garden in North America. A remarkable and unparalleled collection of over 3,000 species representing alpine environments around the world, can be found within the compact five-acre grounds. At 8,200 feet in elevation, Betty Ford Alpine Gardens is the highest public botanical garden in North America.
The Fragile Alpine Environment

The 1985 opening of the beautiful Betty Ford Alpine Gardens undeniably delighted Mrs. Ford, who loved the mountains around Vail. She and her husband endowed immediately that these Gardens would provide a continuing setting in which to connect people of all ages with alpine plants and their environments. The institution has done so efficiently for more than those decades and well continues to serve all in this capacity. As late as the future, threatened at a higher elevation than any other botanical garden in North America, Betty Ford Alpine Gardens displays the plants of the higher Rocky Mountains from those that are in need of schemes that make up the changing climate america has experienced during the time of the continents, 300 to 1,000 feet above.

The gloriously beautiful Colorado Mountains that once today attract their presence brighten much during the past 30 million years of steady history. As they resume, glassy were forming in polar regions, with cool temperatures spreading from the Arctic curriculum. During the most recent cold period (10,800 to 12,000 years before present), as the mountains were subjected to climate present form, northern plants and animals spread far southward, and tropical forests returned for hundreds of miles to the north. As the temperatures warmed ever the past 10,000 years, and the glaciers, removed, forests migrated back into the region, and climbed up the mountains to the current elevation of 12,000 to 12,000 feet elevation. The result: and alpine alpine environments that are remnants of the vegetation that occupied all of the original footbeds during the preceding cold period, warming up the mountains over the past 10,000 years to current temperatures. In these regions narrow plants and animals that from some of the forest areas that exist elsewhere on earth.

As human activities warm the climate beyond any natural limits, it progressively redawns the normal of montane alpine species. While we struggle to form international agreements that will slow, and eventually even halt these warming activities, they continue unchecked. Those who delight in the plantings at Betty Ford Alpine Gardens understand what we are losing and are united in an effort to save what we have left. Direct action is sure these communities, not only in Colorado but throughout the entire region across the globe, is being promoted actively by the Gardens under the leadership of Executive Director, Nicola Ripley. These activities have comprised the formation of a Colorado State-wide Strategy for Alpine Plant Conservation, which is a coalition of historic gardens to work together to protect alpine communities in temperature and regions. Betty Ford Alpine Gardens understand the need to save these plants and animals, like the pikas, that otherwise could disappear completely. As Peter H. Raven, a native of California, has studied plants for most of his life, has consistently drawn attention to the need to conserve them. For 39 years, he served as head of the Missouri Botanical Garden, which reaches out globally with its message of research, education, and conservation. Among his many titles as a补充, he authored "The Biology of Plants," which has remained the world's leading textbook in botany for the past half-century.

From the University of Kentucky, Miles has developed a native garden and alpine environment. He observed the changes in the mountain environments and realized the importance of conserving these unique habitats.

The Gardens continue to thrive and inspire people around the world, reminding us of the beauty and fragility of the alpine environment. They provide a unique setting in which to connect people of all ages with these precious plants and their environments, ensuring that the knowledge and appreciation of the alpine world is passed on for generations to come.
The Alpines Collection

During the Ice Ages, rapidly advancing ice sheets and mountain glacial ice pushed the mountain ranges of what are now recognized as alpine plants out of the way. After melting, these plants found their new range on broader surfaces throughout the mountains of the world. Considered the scheme destinations, alpine plants have successfully evolved to occupy a unique ecological niche, maintaining a dynamic balance in areas above treeline where an adaptable lifestyle—permanently and seasonally deliquescent, rock and soil, and a short growing season—reaches the ultimate plant and animal limits of the world.

The Alpines Collection at Betty Ford Alpine Gardens represents a global conservation of species from arctic tundra and alpine regions, including South Africa, the Western Hemisphere, the Carpathian Mountains, Central Asia, and the Himalayas, the Hindu Kush, and the Tien Shan Mountains. What these landscapes have in common is rock, and in the Gardens, the alpine plants have adapted to coniferous environments with the rocky, broad sweeping look to the protection and perennials. Plants seek out rocky crevices, sending their roots into crevices that produce drainage in areas of climate, moisture, and temperature, and sometimes, cold deserts, while their permanent talus and shelter from winds, spread, root, and natural, surprising the naked winter skies to define biologies.

Specific areas within the Gardens are devoted to geographic collections, however, examples of species from other alpine environments throughout the world as is found in individual gardens as well. In its unique, each geographic collection represents similar plant species from different geographic areas. While each geographic collection represents a unique area of the earth defined primarily by latitude, longitude, altitude, climate, and elevation, the common factors among all of these alpine environments are simple: cold temperatures, high winds, ice, and snow.

In August, Gentianna punctata will begin its annual spectral floral riches, each to the beauty of Betty Ford Alpine Gardens. Photo by Jack Brauer


Protecting the Future

One Seed at a Time

Climate change presents a special challenge for alpine plant species, particularly those categorized as rare and endangered. Inhabiting alpine plants cannot readily move, as does the behavior of species in temperate climates. Instead, they are particularly vulnerable to changing environments. Although growing temperatures are coming quickly, dramatic changes to the range and distribution of plants around the world which means that species' conservation has, of necessity, become a major focus of many botanic gardens who hold many living collections and a mass of scientific data about plants. In the nine years since the GSPC was founded, the Horticulture and Plant Conservation programs at Betty Ford Alpine Gardens have contributed to scientific investigations, species reintroduction, and broader efforts to encourage and support research, conservation, and educational activities.

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