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The Native Orchids of Nevada

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Pity poor Hawaii… Contrary to its lush image as the Orchid Capital of the world, Hawaii has only three native orchids. Hawaii, like poor Kansas, has the fewest native orchids in the United States. Nevada, on the other hand, with its sizzling, dry deserts and freezing, snowy mountains, the last place associated with orchids, boasts no fewer than THIRTEEN native orchids, two of which occur in two distinct varieties. Stand aside, Hawaii, as we strut our stuff.

It's not easy to be an orchid in Nevada; yet our resilient and resourceful native orchids have learned to make a living in any little microclimate that boasts a little water and a little shade. Professor Wes Niles, curator of the Herbarium at the University of Nevada, Las Vegas (UNLV), relates that under a dripping fountain outside the Chemistry Building, clumps of *Epipactis gigantea* started to grow, its seeds carried on the wind. In the drainage of a university swimming pool, additional stands grew and flowered just a couple of miles from the Strip.

In the steaming desert of Las Vegas in Clark County, where temperatures can range from nine degrees Fahrenheit to one hundred and nineteen degrees Fahrenheit in the same year, three orchids are found: *Epipactis gigantea* in many places in the Red Rock Recreational Area and elsewhere; *Platanthera dilatata* var. *leucostachys* in Kyle Canyon; and a common species *Platanthera sparsiflora* in several locations in the Spring Mountains including Kyle and Lee Canyons. In southern Nevada, including Clark, Nye and Lincoln counties, these and an additional four native orchids are found: *Corallorhiza maculata*, *Spiranthes diluvialis*, *Spiranthes infernalis*, and *Spiranthes romanzoffiana*. In all, Nevada has these seven and also *Corallorhiza striata*, *Listera cordata*, *Listera convallarioides*, *Spiranthes porrifolia*, *Piperia unalascensis*, *Platanthera dilatata* var. *albiflora*, and *Platanthera stricta*, thirteen in all. All our orchids are terrestrial, that is, they grow in the ground rather than clinging to the bark of a tree.

For the purpose of this article, an orchid is considered to be in Nevada if it was listed in herbaria at UNLV and the University of Nevada, Reno (UNR), or if it was listed as a Nevada orchid in the *Flora of North America*: *North of Mexico*, Luer's *The Native Orchids of the United States and Canada Excluding Florida*, Correll's *Native Orchids of North America - North of Mexico*, and/or in Brown's *The Wild Orchids of North America, North of Mexico*. There may be other orchids in other counties, but I thought that this was a reliable start to cataloguing the orchids of Nevada.

Corallorhiza maculata

Leafless, with heavily-spotted flowers, and devoid of green, this odd orchid gets its nourishment solely by being parasitic on its fungus hosts. This is one of those orchids that does not look like a 'typical' orchid. Known as the "spotted coral root," its fungus-infected roots have a knobby appearance like pieces of branched coral. Its three-lobed white lip, and often the sepals, petals and column are dotted with reddish to purplish spots. It is known as a "mycotrophic plant" because it relies on a special relationship with mycorrhizal fungi for food. All orchids start their lives dependent on fungi because orchid seeds have little or no endosperm or food tissue for the growing embryos. The little seed must land near the fungus that serves as its nanny providing food. As most orchids grow, they develop leaves and become self-supporting. *Corallorhiza maculata*, however, is like a teen-ager who never leaves home. It continues to feed off fungi throughout its life. In the absence of photosynthesis, it has no need for leaves or chlorophyll, and the leaves are reduced to tiny sheaths on the flower stem. The plants are devoid of green and exhibit, instead, attractive shades of brown, red and yellow. The strangely-shaped plants are just rhizome, stem and flowers, and appear above the ground only to bloom. Plants grow in the decaying leaf litter usually in dry, open forest between 6900 and 10,000 feet elevation; although they tolerate some moist environments, too. Because of the delicate relationship with the fungi, transplanting these orchids from the wild is out of the question, even if it were legal. This orchid is a favorite in folk medicine for breaking fevers by causing sweating. The Paiute and Shoshone Indians of Nevada made a tea to build up the blood in pneumonia sufferers.

Corallorhiza maculata
Photo: Ron Coleman

Corallorhiza striata* var. *striata* and *Corallorhiza striata* var. *vreelandii

Corallorhiza striata, with its riot of stripes, is easy to tell from all other coral-roots. About 16 inches tall, *C. striata* can bear more than 45 heavily-striped flowers on leafless stems. Each flower typically is ½ inch across. Like all coral-roots, it never produces its own food. A parasitic wasp pollinates this most striking and largest-flowered coral root.

Different color forms of *C. striata* have been given 'forma' names. In Nevada, the varieties "vreelandii" and "striata" have been noted in the *Flora of North America*. The variety "striata" is larger, brown to reddish-brown, and has sepals and petals that have

Corallorhiza striata
Photo: Ron Coleman

three to five, reddish to brown veins. The variety "vreelandii," with a light-tan to yellowish base color and dull-brown stripes, is slightly smaller and less bright than "striata." Blooming season is from May to July, and individual plants do not bloom every year. In a study lasting 29 years on a single colony, the number of blooming plants per year varied from 0 to 155.

Epipactis gigantea

In May 2000, over fifty of our orchid loving club adventurers hiked into the hills of Red Springs in the Red Rock Recreation Area to see the native, *Epipactis gigantea* with Dr. Patrick Leary, Chairman of Biology at the Community College of Southern Nevada. As we hung over the side of the cliff, we had the thrill of seeing for the very first time dozens of these orchids with their lips quivering in the breeze. In the shade of the sandstone cliff, where a spring wetted the earth, this little orchid had found a tiny, hospitable microclimate in which to flourish in the desert.

Epipactis gigantea
Photo: Ron Coleman

Epipactis gigantea is sometimes known as the "stream orchid" because it loves to grow in wet places from sea level to 7500 feet elevation. It is typically found in bogs, hot springs, road cuts and wet cliff faces. How strange to find it in the Mojave Desert with only 2-4 inches of rain a year! It is one of the most common native orchids in California and occurs throughout Las Vegas wherever there is water; for example, near First Creek, La Madre Spring, Ash Spring, Pine Creek, Icebox Canyon, Spring Mountain Ranch, Sandstone Spring, and Blue Diamond, to name some localities. However, springs in Blue Diamond, a small town west of Las Vegas, are being pumped dry, and there is worry that the orchid may not survive there.

This orchid is pollinated by the syrphid fly. The aroma of the orchid supposedly smells like the honeydew smell given off by aphids, which are the food for the syrphid fly larvae. Fooled by the little projections on the orchid that look like masses of aphids and by the sweet smell, the syrphid fly lays its eggs on the orchid while inadvertently pollinating the flower.

The term "*Epipactis*" comes from an ancient Greek word used by Theophrastus in 350 B.C. for a medicinal plant; "*gigantea*" means gigantic, although neither the plant nor the flower is gigantic. The plant grows to about three feet and produces 12 to 20 flowers per inflorescence. The flowers are about one-and-a-half to two inches across and usually face in one direction. The sepals are dark green, lateral lobes are yellow, and the lip usually is red with three lobes in the middle. A part of the lip is elongated and quivers in the breeze,

hence its other popular name, the "chatterbox orchid." The plant has ten or more green, alternating leaves, which die back in the fall. Come winter, you do not even know the orchid was there.

American Indians used a medicine of the fleshy roots for internal use to combat severe illness or mania.

Listera convallarioides

Listera convallarioides
Photo: Ron Coleman

This is one of those beauties that requires a magnifying glass to truly appreciate. The term "*convallarioides*" means "like lily-of-the-valley," which the orchid is supposed to resemble. *Listera convallarioides* is easy to tell from *L. cordata* since the lip of the former is shallowly trilobed and of the latter is deeply forked. The genus *Listera* was named in honor of Martin Lister, an English botanist and scientist. It is a worldwide genus of 25 species, of which eight grow in the United States, including two in Nevada. Hard to find because of its small size, it reaches to just 10 inches and produces over 25 small, green or sometimes purple flowers. Some have said that the flower looks like a prehistoric bird or a mayfly. This orchid also has a special pollination device: a little projection from the rostellum that acts as a trigger firing pollen masses at visiting insects.

Listera cordata

An adorable, tiny plant just 4-10 inches tall, it bears up to 30 flowers that are deeply forked for half its length. The flowers look like tiny elves, with a forked lip looking like legs, small horn-like projection looking like arms, and petals and sepals spreading over the lip like the hat.

Listera cordata
Photo: Ron Coleman

This orchid is not listed in the *Flora of North America*, but there is an herbarium sample for it at UNLV. The plant was collected at Snake Creek in the Snake Range of White Pine County. *Listera cordata* is part of a genus commonly called "twayblades" (for having two leaves). With its heart-shaped, opposite leaves located halfway up the stem, it has earned the title "heart-leaved twayblade."

Fungus gnats, attracted by odor and nectar, visit the orchid and trigger three, pressure-sensitive hairs that eject a droplet of glue on the unsuspecting gnat. Then, the pollinia are dropped into the glue. The glue hardens like cement, and

the fly is stuck with carrying the pollinia to another flower.

Piperia unalascensis

Piperia unalascensis
Photo: Ron Coleman

This species is named for Unalaska, the Aleutian Island where it was first found. Commonly called "Alaskan Piperia" or "slender spire orchid," it has small, delicate flowers that are arranged in a spire that varies from 6 to 24 inches. The genus was named in honor of C.V. Piper of the Agricultural Experiment Station at Pullman, Washington. In the fall, *Piperia* forms new underground roots, one of which later forms a new tuber. The basal leaves appear in late fall to spring, and the flower spikes arise from late spring to early summer. The leaves become yellow and fall away before the flower opens, while the flowers last from four to six weeks. Nocturnally fragrant flowers attract moths with their unusual smell, which is sometimes described as musky, soapy, or honey-like.

Interestingly, when the flowers first open, the lip is held tightly against the column which forces the pollinator to remove pollen when searching for nectar in the spur. As the flower ages, the lip moves downward and exposes the nectary to allow pollen deposition. This clever strategy effectively prevents self-pollination by not making available the male and female parts at the same time.

Platanthera* (syn. *Habenaria*) *dilatata* var. *albiflora* and *Platanthera dilatata* var. *leucostachys

Platanthera dilatata
Photo: Ron Coleman

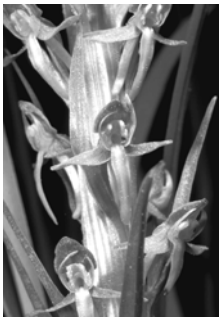
"The bog candle," "scent-bottle," or "white bog orchid," as *Platanthera dilatata* is commonly called, has a small flowering stalk with fragrant, white flowers. Plants typically are eight inches tall and look just like a little white candle. The first time I saw this orchid I was on the island of Newfoundland in Canada. The plants were growing wild in the streets. They grew along the roadsides, in front of houses, in ditches, in forest, under picnic tables - just about everywhere there were hundreds and hundreds of them. These orchids also grow in many counties in Nevada where they are variable in height and may have as many as 248 flowers.

There are two varieties of *Platanthera dilatata* in Nevada: *P. dilatata* var. *albiflora* and *P. dilatata* var. *leucostachys*. *Platanthera dilatata* var. *leucostachys* is treated sometimes as a distinct species. Both, however, have a spur which contains nectar to provide a reward for pollinators. The varieties are based on the differences in spur length which reflects different pollination pressures.

The long spurs and nocturnal fragrance of *P. dilatata* var. *leucostachys* indicate that it is specialized for moth pollination. The short spur on *P. dilatata* var. *albiflora* suggests a broad range of pollinators including bees or flies.

The flowers of *P. dilatata* var. *leucostachys* are very fragrant and smell like cloves. The petals trap the emerging lip so that the upturned lip offers access only to one side. Consequently, the visiting insect can take only one pollinia per visit. This strategy ensures that the flower will have several pollinators carrying genetic material and supposedly increasing long-term reproductive success. The plants bloom from May to September and have a wide tolerance of different elevations.

Platanthera dilatata has been used in folk medicine by the Thompson Indians of British Columbia. "Young men use it as a wash to make them lucky, good looking and sweet smelling. Women use the wash to attract a mate and to have success in love. Both sexes use it to obtain riches and property. While digging the plant, they chant: 'Friend, I want wealth and much property.' " Northwest Indians and Eskimos eat the corms that supposedly taste like potatoes (Coffey, 1993).



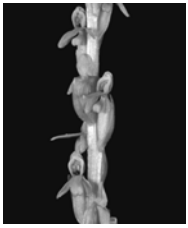
Platanthera sparsiflora
Photo: Ron Coleman

Platanthera* (syn. *Habenaria*) *sparsiflora

Flowering from April to September in wet meadows, marshes, stream banks and seeping slopes, *Platanthera sparsiflora* is commonly called the "sparsely flowering bog orchid." Often producing over 120 green to yellowish green, very fragrant flowers per plant, it is sparsely flowering only in comparison to *Platanthera dilatata*. The plants typically grow in wet ground at high elevations. It occurs at Mummy Springs in Mt. Charleston, and our club hiked up to see it in July of 2003. Flowers are easily recognized by the green color and a large column, which fills half the "hood" formed by the sepals and petals. The flowers are narrow and are thought to be pollinated by moths that pick up the pollinia on the proboscis.

Platanthera stricta

Sometimes called *Platanthera saccata* because of its "saccate" or purse-shaped spur, this two- to three-foot orchid can have up to sixty green flowers, which sometimes have a purple tinge. As a reward to the variety of insects that visit the flower, the orchid offers droplets of nectar on the flowers as well as nectar inside the spur. Blooming from May to early August in Elko County at 7500 feet, it is called the slender bog orchid. It is not mentioned in the *Flora of North America* but is mentioned in Correll's *Na-*



Platanthera stricta
Photo: Ron Coleman

tive Orchids of North America and in Luer's *The Native Orchids of the United States and Canada.* It is pollinated by a group of insects with short mouthparts. It has a bouquet of treats to attract pollinators: floral fragrance, a sparkling, shimmering appearance of the inflorescence, extrafloral glucose on the raceme, nectar in a spur, and a pollination chamber that can accommodate a variety of insects.

Spiranthes diluvialis

Of conservation concern, this rare orchid is a naturally-occurring hybrid of *S. romanzoffiana* and *S. magnicamporum*. Plants occur in moist to wet meadows, stream banks and marshes and bloom in July and August. Although it has been found in Colorado, Idaho, Montana, Nebraska, Utah, Washington and Wyoming, it is very rare in Nevada. It is commonly called Ute's ladies'-tresses and is pollinated by long-tongued bees, like bumblebees, seeking nectar.

James Morefield of the Nevada Natural Heritage Program says that it is listed as a threatened species under the U.S. Endangered Species Act. He further remarked in an e-mail on April 29, 2003:

> "One of my highest orchid priorities has been to establish whether or not *Spiranthes diluvialis* is still present in Nevada. The only record is from the 1930s, probably in the native hay meadow directly below (west of Panaca Spring on the northern edge of Panaca in Lincoln County). This meadow is privately owned, and so far the land owner has not been keen on allowing a State employee to determine whether or not a threatened orchid exists on their land."

James Coyner, a representative of the American Orchid Society to the Utah Orchid Society, is a member of the *Spiranthes diluvialis* recovery team. He recounts his frustration:

> "I also searched an area north of there in White Pine County in the general area of the Pony Express Route west of the Goshute Indian Reservation. The search was based on a ranch hand's report that he had seen such a plant growing there."

James did not find the orchids and would be very interested in anyone who has. It would be an interesting project for our club to try to re-locate this orchid. In July of 2004, the Greater Las Vegas Orchid Society will join with him to look for this elusive orchid.

Spiranthes infernalis

Ash Meadows in Nye County is an unlikely place to find an orchid. Hot and dry, just nine miles from Death Valley Junction, the ground is so thickly covered with salt that it looks like winter snow. Fed by a vast network of underground springs, the ground bounces like foam rubber when you walk on it. On June 25, 2003, seven hardy Greater Las Vegas Orchid Society conservation-enthusiasts braved the intense summer heat to participate in the orchid count of *Spiranthes infernalis* at Ash Meadows National Wildlife Refuge. *Spiranthes*

infernalis is found there and nowhere else in the world. We got up at dawn and drove 90 miles to make sure that the population of this endemic orchid was safe. Some invasive plants, like the noxious perennial herb *Acroptilon repens* (Russian knapweed) which probably was introduced in hay from Eurasia, now cover over 500 acres where there was none in 1990. The fear is that the introduced weeds will squeeze out the rare orchid.

The 22,000 acres at Ash Meadows are protected as a national wildlife refuge because they contain a greater concentration of unique species than any other location in the United States - 13 threatened and endangered species, and at least 24 plants and animals found nowhere else in the world - including our orchid. It is one of the few natural desert oases in the Southwest which also provides habitat for about 220 species of migratory birds.

The word '*Spiranthes*' is derived from two Greek words meaning "coil" and "flowers" for the coiled or spiraled flower spikes of this genus. Because of the supposed resemblance of the spirals to some hairstyles, *Spiranthes* are commonly called "ladies'-tresses." *Spiranthes infernalis*, Ash Meadows ladies'-tresses, was named in 1989 by Charles J. Sheviak and is endemic to the alkaline, moist soils of Ash Meadows. It looks similar to other *Spiranthes* with many small, white, spiraling flowers. In 1990, populations were estimated at between 730-1160 individuals. Until last year, counts for the species were around 1400 individuals. Surveys last year estimated 10,000 individuals, and this year, happily, the survey we took part in recorded 13,500 plants.

Spiranthes porrifolia

Spiranthes porrifolia
Photo: Ron Coleman

'Porrifolia' comes from two Latin words meaning "leek green" and "leaves," referring collectively to the color of the leaves. The beautiful flower spike has multiple spirals of over 100 creamy yellow flowers. Thoreau wrote of *Spiranthes*: "Its crystalline white flowers are arranged in a dense spiral cone like the thread of a screw." Others think the inflorescence resembles a girl's braids. Restricted in range, it grows in moist meadows and seeps mostly in California, Oregon and Washington, and its common name, "western ladies'-tresses," reflects its native range. Peak blooming season is in July and August and overlaps with that of *Spiranthes romanzoffiana*. This overlap might account for the existence of natural hybrids between the two.

Darwin described the pollination mechanism preventing self-pollination among *Spiranthes*. In freshly-opened flowers, the column is positioned close to the lip and blocks the stigma. The insect probing for nectar comes away with a load of pollen but cannot deposit it on the blocked female part. As the flower ages,

the stigma is revealed, and an insect can deposit pollen collected from another, younger flower.

Spiranthes romanzoffiana

Spiranthes romanzoffiana
Photo: Ron Coleman

This species is named in honor of Nicholas Romanzof, who was a Russian minister-of-state when the plant was discovered in Alaska (Alaska was a Russian territory at the time). The sepals and petals form a hood over the column and over the basal half of the lip, and the common name therefore is "hooded ladies'-tresses," and the "tresses" refer to the spirals of flowers. Flowers have a distinctive "pandurate" or a violin-shaped lip. In the Southwest, flowering plants in August are often between 4 and 16 inches tall and bear up to 60 flowers in three dense spirals. It is found in meadows as well as near springs in grassy, wet areas. The species is difficult to find when it is not flowering because grasses and other plants hide its short leaves.

Spiranthes romanzoffiana has a sweet aroma that has been described as that of sweet lilacs. At least eleven pollinators are attracted to its delightful fragrance, including six species of bumblebees, one cuckoo bee, one leaf-cutting bee, and three halictid bees. Bees visit several times over a long period, landing on the lowest flowers first and working their way up the inflorescence. It is reported that the lower flowers have the most nectar and are the most attractive to the bees. The tallest plants typically attract the most pollinators who pick up the pollinia on their tongues!

So there we have them, all thirteen. What a thrill it is for us to know that this many native orchids have found a home in Nevada!

The following orchids are mentioned in the *Flora of North America: North of Mexico* as growing in Nevada:
Corallorhiza striata var. *striata*, *Corallorhiza striata* var. *vreelandii*, *Corallorhiza maculata* var. *occidentalis*, *Listera convallarioides*, *Platanthera dilatata* var. *albiflora*, *Platanthera dilatata* var. *leucostachys*, *Platanthera sparsiflora*, *Piperia unalascensis*, *Spiranthes romanzoffiana*, *Spiranthes porrifolia*, *Spiranthes diluvialis*, and *Spiranthes infernalis*.

Platanthera stricta is not mentioned in the *Flora* but is mentioned as being from Nevada in *Native Orchids of North America North of Mexico* (Correll, 1978) and in *The Native Orchids of the United Stated and Canada* (Luer, 1975).

The following orchids are represented by dried specimens and are in the database at UNLV. I thank Professor Wes Niles and Kathryn Birgy for all their help.
Corallorhiza maculata, *Epipactis gigantea*, *Habenaria* (syn. *Platanthera*) *dilatata*, *Habenaria* (syn. *Platanthera*) *dilatata* var. *leucostachys*, *Habenaria* (syn. *Platanthera*) *sparsiflora*, *Listera cordata* (not mentioned in the *Flora*), *Spiranthes infernalis*, and *Spiranthes*

romanzoffiana.

The following species are dried specimens and in the database at UNR. Thanks to Arnold Tiehm and Christy Malone for the help.

> *Corallorhiza maculata*, *Epipactis gigantea*, *Habenaria* (syn. *Platanthera*) *dilatata*, *Habenaria* (syn. *Platanthera*) *dilatata* var. *leucostachys*, *Habenaria* (syn. *Platanthera*) *sparsiflora*, *Listera convallarioides*, *Spiranthes porrifolia*, and *Spiranthes romanzoffiana*.

In the herbaria at UNR and UNLV, the following orchids are represented by county (starting from Southern Nevada and going north).

CLARK: *Epipactis gigantea*, *Platanthera* (syn. *Habenaria*) *dilatata* var. *leuchostachys* (This orchid is NOT represented at the herbaria. However, Dr. Patrick Leary, an expert on plants of the area, asserts that it was collected by Ira Stokey in Kyle Canyon.), and *Platanthera* (syn. *Habenaria*) *sparsiflora*.

NYE: *Corallorhiza maculata*, *Epipactis gigantea*, *Platanthera* (syn. *Habenaria*) *sparsiflora*, *Spiranthes infernalis*, and *Spiranthes romanzoffiana*.

LINCOLN: *Platanthera* (syn. *Habenaria*) *sparsiflora*

ESMERALDA: *Platanthera* (syn. *Habenaria*) *sparsiflora*

MINERAL: None

DOUGLAS: *Corallorhiza maculata*, *Epipactis gigantea*, *Platanthera* (syn. *Habenaria*) *dilatata* var. *leucostachys*, *Platanthera* (syn. *Habenaria*) *dilatata* (no variety listed), and *Listera convallarioides*.

LYON: *Platanthera* (syn. *Habenaria*) *dilatata* (no variety listed)

CARSON CITY: *Platanthera* (syn. *Habenaria*) *sparsiflora*, *Platanthera* (syn. *Habenaria*) *dilatata* var. *leucostachys*, and *Listera convallarioides*.

CHURCHILL: None

STOREY: *Platanthera* (syn. *Habenaria*) *dilatata* var. *leucostachys*

LANDER: *Platanthera* (syn. *Habenaria*) *dilatata* var. *leucostachys*

EUREKA: None

WHITE PINE: *Corallorhiza maculata*, *Platanthera* (syn. *Habenaria*) *dilatata* (variety not mentioned), *Platanthera* (syn. *Habenaria*) *dilatata* var. *leucostachys*, *Platanthera* (syn. *Habenaria*) *sparsiflora*, *Listera convallarioides*, and *Listera cordata*.

WASHOE: *Corallorhiza maculata*, *Listera convallarioides*, *Platanthera* (syn. *Habenaria*) *dilatata* var. *leucostachys*, *Platanthera* (syn. *Habenaria*) *dilatata* (variety not mentioned), *Platanthera* (syn. *Habenaria*) *sparsiflora*, *Spiranthes porrifolia*, and *Spiranthes romanzoffiana*.

PERSHING: None

HUMBOLDT: *Epipactis gigantea* and *Platanthera* (syn. *Habenaria*) *sparsiflora*.

ELKO: *Corallorhiza maculata*, *Platanthera dilatata* (variety not mentioned), *Platanthera sparsiflora*, *Spiranthes romanzoffiana*, and *Platanthera stricta*.

Author's note:
I could not have done this little article without the help and guidance of Ron Coleman. I never appreciated how much time and effort went into his books until I started writing this tiny shadow of his work. Much of the information in the article comes from his books (Coleman, 1995; Coleman, 2002). Thanks, too, to Dr. Patrick Leary, southern Nevada plant expert, for his help with the local orchids and for showing them to us. I am grateful to Dr. Wes Niles of the UNLV Herbarium for the time he spent with me at the herbarium as well as to Kathryn Birgy for her help with the database. At UNR, I am indebted to Arnold Tiehm and Christy Malone for information about the herbarium. Thanks to Gina Glenn of the U.S. Fish and Wildlife Service for allowing me to take part in the *Spiranthes infernalis* orchid count. I much appreciate the input by e-mail from James Coyner of the *Spiranthes diluvialis* recovery team and from James Morefield of the Nevada Natural Heritage Program, as well as from Dr. Lucy Jordan and from Marilyn Light, Chairperson of North American Regional Orchid Specialist Group. In addition, I appreciate all the leads from David McAdoo, President of the Native Orchid Conference, a great organization.

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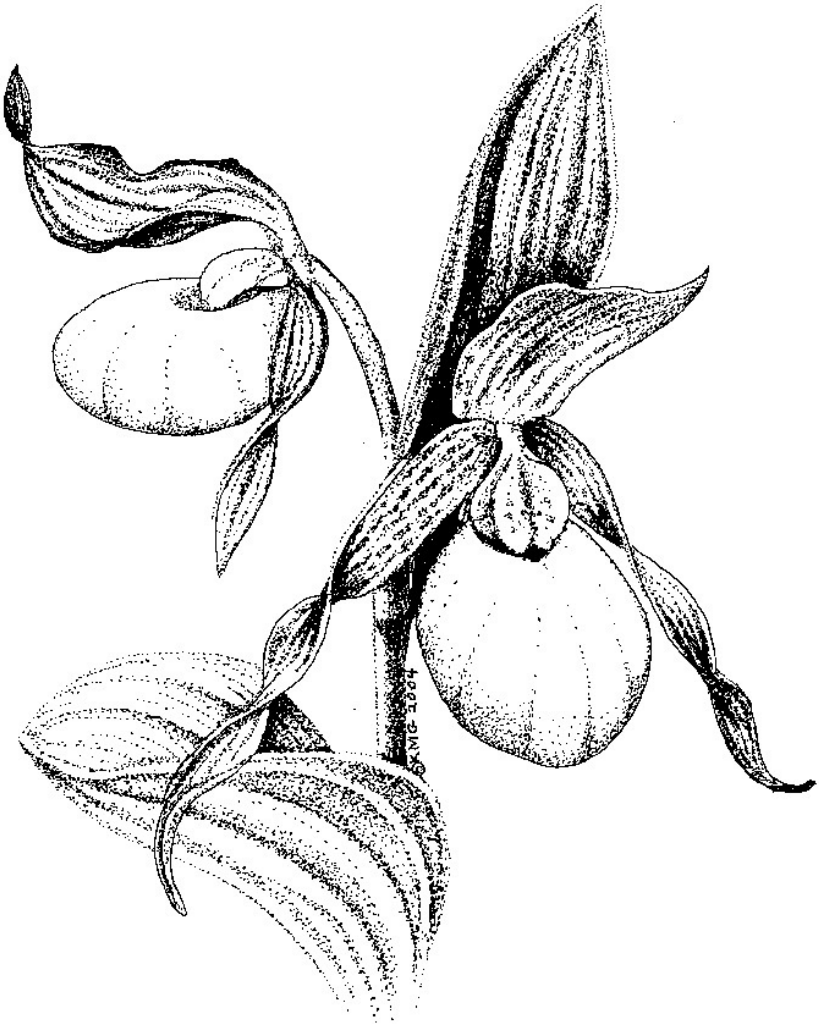
My fascination with *Cypripedium candidum* and other native orchids led me on a circuitous journey through science to art. I had been growing orchids for over twenty five years - tropical orchids, that is, and also was pursuing a career in commercial art. I took a break from both to raise a family. I reduced my collection to a manageable size, devoting those years to helping with homework, doing laundry, earning a Masters in Religious Education and pursuing a Botanical Art certificate and the Naturalist Certificate at Morton Arboretum in Lisle, IL. As my son grew, we went further into nature studies, going camping and getting involved in scouting. One day I discovered Fred Case's book, *Orchids of the Western Great Lakes Region* (1987; Cranbrook Institute of Science), and later, Michael Homoya's *Orchids of Indiana* (1993; Indiana University Press). At Morton Arboretum I purchased Brown's *The Wild Orchids of North America, North of Mexico* (2002; University Press of Florida). I was fascinated to learn that Illinois, where I live, was home to 43 species of native orchids! I resolved to do what I could to study and help protect them.

There are many notable organizations in the Chicago area that promote conservation. Probably two key ones are the Audubon Society, and Chicago Wilderness, which is a coalition of agencies, museums and gardens, along with hundreds of volunteers. I became a volunteer to help with conservation and restoration efforts, including documenting rare plants of the area. One of these plants was *Cypripedium candidum*, the small white lady's-slipper orchid. Michael Homoya calls this plant 'the aristocrat of cypripediums.' Its delicate beauty, sweet fragrance and endangered status inspired me to eventually draw and paint a series of illustrations showing its habit and growth cycle. The plant inhabits wet calcareous prairie remnants and fens. It is often seen in the company of *Zizia aurea*, *Silphium terebinthinaceum*, *Dodecatheon meadii* and *Smilacina racemosa*. It needs full sun for best growth, so volunteers cut brush, do controlled burns, and remove invasive species to preserve the few remaining populations of this natural treasure. *Cypripedium candidum* once numbered in the millions, a common sight on the prairies before the advent of the steel plow. It was recorded in sixteen states and three Canadian provinces. Illinois, with the nickname 'the Prairie State,' now has less than one-tenth of one percent of its original prairie: small, unfarmable pockets of land, settlers' cemeteries, and a few areas rescued by accident or on purpose from development.

Someone once said, 'Work is love made visible.' Because we love these plants, and want to keep their populations vigorous for all future generations, we don't begrudge the many hours spent cutting buckthorn and dogwood, pulling sweet clover and other invasive species, filing paperwork, getting permits to conduct burns, and educating the public, all while keeping the known populations secret. I feel privileged to be able to do so, and I encourage all of you who love orchids, to make your love for them visible in your own unique way.



Cypripedium candidum
Illustration: Kathleen Garness

The Everglades in March 2003-4

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The Everglades National Park (ENP) is located in southern Florida, USA. The park covers over 2200 square miles, and when first encountered, it gives the appearance of a very large prairie. The park is part of a river system flowing from Lake Okeechobee, and the main beneficiary of the water system is the Miami conurbation. Urban growth is a great threat to the ecosystem of the park. The area is in a sub-tropical zone and consequently, a great variety of flora and fauna of the USA often is found here at the most northerly or southerly limits of their natural distribution. Looking for orchids in the ENP is not as easy as it may sound as the 37 species recorded for the park mostly are tropical and are on the edge of their range. The plants are few and scattered, and some probably have been mis-identified or mis-recorded. Because of the warm climate different orchids bloom through the year, and several visits would be necessary to see all species.

My wife Carol and I made a few excursions into the park during March 2003 after touring from the north of the state via Corkscrew Sanctuary and the Fakahatchee Preserve. We often stay outside the ENP in Homestead because there typically is a good choice of hotels. Furthermore, the small motel at Flamingo in the ENP is located at the far end of the park and often is fully booked. However, when Homestead and Florida City were flattened a few years ago by a hurricane, the only motel available in the area was at Flamingo.

For a trip to the area in early March 2003, I met up with Russ Clusman who is now renowned for his battle with an alligator in the past. We found our first orchid just outside the visitor-center in the grass. The plant was *Spiranthes vernalis* (spring ladies'-tresses), which is reasonably common on the verges in several areas in the park. We had seen this one before so it was good to continue to Long Pine Key where we managed to find in the crevices *Platythelys sagreana* (Cuban ground orchid), a small white flowered orchid next to *Eltroplectris calcarata* (spurred neottia) that had bloomed earlier. *Eltroplectris calcarata*, even in seed, had an appearance of birds flapping their wings. In the area there also were several rosettes of *Oeceoclades maculata* (African spotted orchid), an alien orchid with spotted leaves that seems to be spreading rapidly in Florida and is found regularly by us. Some conservationists want this one destroyed but that would be a pity for such a pretty newcomer. Further on we found the budding *Oncidium floridanum* (Florida oncidium) with its

Oncidium floridanum
Photo: David McAdoo

large, linear leaves and long flower stem leaning over the path. As a terrestrial it would present quite a show in April during the blooming period.

We carried on until we reached the Ingram highway and found *Beloglottis costaricensis* (Costa Rican ladies'-tresses) hiding amongst the undergrowth. This is an orchid that was previously included in the *Spiranthes* group. The small white flowers with green veins and loose appearance hardly look like a *Spiranthes*, although the rosettes are similar. Further on near the lake were dead flower heads of *Galeandra bicarinata* (two-keeled galeandra), a pretty, autumn-blooming orchid that has greenish white flowers. An autumn visit would be needed.

Bletia purpurea
Photo: David McAdoo

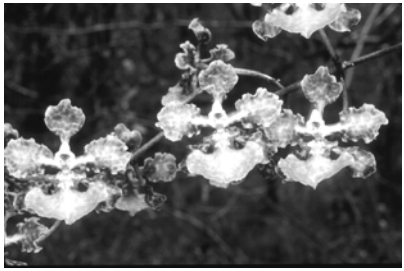
Our second visit to the ENP occurred on 20 March 2003 after I attended a Native Plant Conference in Miami. We attended several lectures at this conference, including talks by the renowned orchid enthusiasts Chuck McCartney and Roger Hammer who gave me a few tips for orchid-finding in Florida. At the ENP, we went further down the Flamingo highway near Pa-hay-okee on an unmade road toward a lake. Here we found *Bletia purpurea* (pinepink), an orchid very similar to *Cephalanthera rubra* in color and shape of the flowers. Further down the road closer to the lake there was one *Bletia* with some open flowers. On the opposite side of the road we saw *Calopogon tuberosus* var. *simpsonii* (grass pink) with pinkish red flowers; this variety is much taller and blooms earlier than the normal type. We had to watch out for alligators basking by this lake where the elusive Carters orchid (*Basiphyllae corallicola*) is sometimes found.

Our third visit to the ENP was arranged in late March 2003 with Russ Clusman, Saul Friess, his wife Iris, his friend Gladys, Mike Owen, and Karen Relish. We went mainly to see if *Trichocentrum maculatum* (mule eared orchid) had survived last year's hurricane. We arrived somewhere near Coot Bay, and to get to the wet prairie, took a path over a very deep channel that houses alligators and possibly crocodiles (which unlike alligators do not have a natural fear of humans). The mosquitoes were awful and were biting even through our clothes. It was good that we had put on a lot of spray and cream as I would hate to think what they would have done to us if we had not taken such precautions. Some of the members had come prepared to combat mosquitoes and were wearing nets over their faces. At least I now knew what to do the next time. Above us the swallow tailed kites were having a field day eating all the insects and swooping over our heads regularly. As we walked through the

prairie I was told not to touch anything I did not recognise as a very poisonous plant known as machineel grew in the area and could damage our health. I just wondered if anything else could possibly do us harm when I spotted a snake on the track next to some cactus plants!

Further into the wet prairie we came up to a forest of stunted trees and then on a bare branch I saw my first orchid of the day - *Encyclia tampensis* (Florida butterfly orchid). The orchid was in full bloom showing an array of colors from copper red to white. I was pleased to see this orchid even though it is reasonably common in Florida and normally flowers April onward. It can be found in most places in the ENP, especially on the trees in the visitor-center's car park as well as by the bird and alligator spotting paths. This was the first time I had seen it in flower in the wild and liked it even better because the flowers were at eye level. Further on two more orchids were pointed out to me – *Polystachya concreta* and *Prosthechea boothiana* var. *erythronioides* (Florida dollar orchid), the latter showing the pseudobulb in the shape of an old dollar coin. Although these two species of orchids were clear to see in fruit, they normally bloom in autumn.

It was then that we heard the howls of the leaders of the expedition telling us that they had made two great finds in full bloom: *Cyrtopodium punctatum* (cowhorn orchid), and the elusive, mule eared orchid (*Oncidium luridum*). There were two plants of each species on stunted trees where one could get some very good pictures if the mosquitoes left you alone. *Cyrtopodium punctatum* has bright, yellowish-orange-brown coloring, and it can have hundreds of flowers. This was very pleasing as I had seen this orchid in bloom only in high canopy once before at Corkscrew. The 'cowhorn' name comes from the shape of the new stems that are shaped in this fashion. *Oncidium luridum* also has large flowering stems and can have hundreds of flowers. The flowers we saw had a brown to yellow green color and hovered over us like an umbrella. We also saw the large and conspicuous mule-ear-like leaves that seemed too big to belong to an orchid. We were all very happy to have seen the orchids but were pleased when we had finally made our way out to the cars as the mosquitoes were now telling their friends where they could get a very nice meal.



Cyrtopodium punctatum
Photo: David McAdoo

It was during the following year (2004) that I again met the gang, which by now was known as 'The Fakahatchee gang.' This time we were invited to trek through the ENP around Pine Key to find an orchid that was thought to have

been extirpated since the widening of a fire track a few years ago. We were lucky because a research team had been in the area and had re-discovered *Ponthieva brittoniae* (Britton's shadow witch). After starting at about 9:30 AM at the visitor-center we eventually reached our quarry at about mid-day by walking through tangles of undergrowth and proceeding slowly to avoid the sink holes in the area. We each carried a large pole to feel our way to prevent any accidents. My friend Saul said he had fallen in one last year and had to be rescued. Apparently, in the absence of hand grips it can be extremely difficult to get out of these holes, which can sometimes be more than 20 feet deep. And goodness knows what lies beneath the surface.

Regardless, we were delighted when we first found flowering plants of *Ponthieva brittoniae*. There was one in a sink hole and another just on the surface under some undergrowth. Most all flowers had gone over and some plants were in seed, so the future of this species might be secure. Its cousin *Ponthieva racemosa* (shadow witch) is reasonably common in Florida and has much larger flowers. We all took our turns to take photographs of the plants, especially of the one down in the sink hole as we could climb near it to see the orchid at eye level. Nearby, there were some plant of *Bletia purpurea* with fully open flowers, and we saw several *Spiranthes vernalis* plants. The weather was ideal as it was not too hot and the 'mossies' were mostly quiet. So, after eating our sandwiches we headed back to the park entrance for some well-deserved milk shakes. By this time it was about 5:00 PM; it had been a long day!

Upon return I was given an old picture, taken probably in the 1920s, of an area in the ENP wherein two horses and carts were loaded with hundreds of orchids to be sold on the market. Thank goodness that places like the Everglades and the Fakahatchee are now preserved for all to see these wonders in their truly wild state.

Orchid Conservation - What Can We Do To Help?

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Loss of native orchid species and their habitat is a significant environmental problem in Manitoba as it is throughout the world. Habitat loss is one of the primary threats to native orchids. Most orchids in Manitoba grow in or adjacent to wetlands, and we have lost 70% of the wetlands since early 1900s. Another critical orchid habitat, especially for our three endangered species, is the Tall Grass Prairie. We have less than 1% of the Tall Grass Prairie remaining. Agriculture and housing developments, resource extraction such as logging and mining, and wetland drainage are all major causes of habitat destruc-

tion. Consequently for orchids, failure to thrive, including an inability to reproduce sexually due to pollinator loss, disease and environmental stress, are phenomena related to habitat loss and/or modification. When one adds to this the relentless digging up of attractive species like lady's-slipper orchids for transplanting into home gardens, or worse, for sale, one begins to appreciate just how threatened these plants are. It is a big problem, but there are things we can do.

The amateur naturalists who belong to our group, Native Orchid Conservation Inc., try to address such problems in several different ways. We believe that public education is the only thing that will ultimately save these orchids, so we work this into all of our conservation activities. The only way we will get effective protection for native orchid species and their habitat is to get the general public on our side and this requires a change in attitude. Subsequently, we put on displays in shopping malls and at the annual Manitoba Orchid Society show to address the need for wetland conservation and protection. We talk to people about the need to protect orchids by not picking or digging them. We also show them a list of places where they can buy lab-propagated orchids from nurseries that we know to be reputable.

We typically conduct six or more field trips for our members each summer. As we take them out to see orchids in their natural habitat, it is especially gratifying to see their attitude change towards wetlands. At first they think of wetlands as unpleasant, mosquito ridden, scary wastelands. But once you have shown them a beautiful orchid like the dragon's mouth (*Arethusa bulbosa*) or the delicate pink rose pogonia (*Pogonia ophioglossoides*) growing in the bogs and swamps, they often change their minds. As for the Tall Grass Prairie, no one fails to be impressed by the sight of thousands of brilliant white spikes of the western prairie fringed orchid (*Platanthera praeclara)* shining in the sun.

Many people feel helpless when they hear about environmental destruction, global warming, etc.; they feel the problems are so large that nothing can be done and they stop trying. People tend to think they should leave everything to the "experts." Our organization empowers people because it gives them a chance to help with conservation projects and other related activities. With this commitment, comes the chance to do something positive for the environment and to experience the good feelings that result from these actions. In other words, small conservation organizations such as ours tend to scale the huge problem down to manageable chunks people feel they can handle.

Platanthera praeclara
Photo: Jyotsna Sharma

Our group often is involved in research to conduct botanical surveys for rare plants and to identify their habi-

tat. An official botanical survey has not been conducted for Manitoba since Scoggan's work in 1950. Many things have changed since that time. In the last three years, we have surveyed timber sale areas in the southeastern part of the province to catalogue native orchids and other species of special concern. Timber sale areas cover more than 500-square-miles in the region. We visit the areas in winter by following the frozen logging roads to cutting areas. Once there, we look for native orchids and their habitat. Yes, we do it in the winter! Species of trees, density of the forest, and companion plants often indicate when we are in likely orchid habitat. By scraping back the snow, we look for remains of plants or their seedpods. If we find a likely area, we mark it off with flagging tape to alert the cutters and record the location by using the Global Positioning System (GPS). The following summer we come back into the bog or swamp with amphibious, all-terrain-vehicles to find the marked locations. At that time, we look for plants in bloom and often find them in large numbers. If large populations are located, we mark off the area, plus a buffer zone with flagging tape and then fill out special plant-forms for the Manitoba Conservation Data Center. We then notify the forestry department so they can use this information when making their harvesting plans to possibly avoid the marked areas. The information we provide to the Data Center on locations of rare plants helps them in tracking populations and in making recommendations for rare-plant conservation. We have a similar arrangement with the peat moss companies and have received much cooperation (and some funding) from the provincial government, federal government, timber companies such as Tembec and moss companies such as Premier Horticulture and Sungro Horticulture. As a result we have managed to have hundreds of hectares of orchid habitat protected from destructive activities. We also have identified more than 60 new locations for plant species at risk, including locations for many native orchid species. At present we are conducting similar surveys in the northern and western parts of the province.

We also have been conducting research to assess the effects of selective cutting on understory plants in the Sandilands Forest Reserve, which is about 50 miles east of Winnipeg. This is a cedar swamp that is home to 13 species of native orchids. In the past six years we have monitored the growth of orchids and other understory plants in test plots. These plots were established within a two-acre area which was cut selectively in 1997. We measured the amount of light, tree growth, orchid growth, and species composition; we also recorded flower and seedpod production in orchids. Our final report was finished in May 2004 and may be seen on our website at www.nativeorchid.com.

Our group status and research results help us in promoting the setting-up of more protected areas in the province. For some time now, we have been trying to secure Ecological Reserve status for a wetland called the Brokenhead Wetlands, which is about 50 miles north of Winnipeg. The proposed ecological reserve would be 820 hectares in area. Part of this wetland contains a rare, rich

calcareous fen. This wetland is home to 28 native orchid species as well as to many other rare plants. We originally started by conducting a botanical survey so we could write a proposal for its protection. Now we find ourselves part of a committee to secure protected status for this wetland. The committee is led by the representatives of the adjacent Brokenhead Ojibway First Nation community and includes people from the provincial government ecological reserves board as well as from the Manitoba Model Forest, and from other first nation communities in the southeast tribal unit. Obtaining protected area status for a site in southeastern Manitoba is a lengthy process because there are many stakeholders to be consulted. However, we are encouraged by the recent progress and hope to see it protected soon. We conduct tours to a small part of this wetland for a limited number of people each summer and are working with the committee to get boardwalks installed to avoid damaging the plants and their special habitat.

Another problem for orchids of Manitoba, especially lady's-slippers, is their destruction during ditch work and road construction. There has not been much road construction lately, but ditch work is very prevalent! Any orchids in the way are bound to be destroyed so we have tried to move the plants on occasion, as a last resort. We managed to get a small grant from the Winnipeg Foundation to assist with this salvage work because it involves bringing the plants in from the country to the City of Winnipeg. We then transplant them into parks or other public areas in the city where suitable habitat might exist. While we have had modest success moving species of *Cypripedium* even in June, the common practice of doing ditch work in the winter leaves no chance for an orchid salvaging project. Showy lady's-slipper (*Cypripedium reginae*) and yellow lady's-slipper (varieties of *Cypripedium parviflorum*) transplant and survive fairly well, but we have had no luck with moccasin-flower (*Cypripedium acaule*). Our climate is harsh and very few people can get *Cypripedium acaule* to survive here even in their gardens. Moccasin-flower and several other orchid species do not transplant well so habitat protection is their only hope. Although people may be able to get the plants to grow in a suitable, wild habitat by direct seeding or some other technique, I am not aware of this having been done successfully in Manitoba as yet. Our group does not do orchid seed propagation, habitat restoration, or recovery work at present but these are all viable options for people with time and expertise.

During the summer of 2003, for the first time, we designed and put up a sign to protect a valuable wetland that is home to hundreds of ragged fringed orchids *(Platanthera lacera)*. The area had no protection so we put up a sign advising the general public of the reasons it needed to be protected and asking for their cooperation and advising visitors not to drive all-terrain-vehicles when hunting, etc. The last I heard the sign was still standing and had not been shot full of holes! Ragged fringed orchid has no protected status in our province even though it is uncommon. The only protected species in Manitoba are the three

endangered ones: western prairie fringed orchid (*Platanthera praeclara*), small white lady's-slipper (*Cypripedium candidum*), and the great plains ladies'-tresses (*Spiranthes magnicamporum*). The other 33 species have to manage on their own. Currently we are developing a field guide to the orchid species of Manitoba and hope to have it published early in 2005.

In conclusion, although our organization is not large (approximately 175 members) we believe we have had a positive impact on the environment and native orchid species in particular. You can too.

For more information on our projects or our organization please view our website at www.nativeorchid.com or contact me at 1-204-231-1160.

A Meeting with the Ladies on Memorial Day Weekend

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Spring is prime time for lady's-slipper orchids in the northeastern United States. However, when I left our Massachusetts home on the morning of May 25, it was not for an orchid hunt in New England. My mind was set for lady's-slippers in Oregon, and Logan airport was my destination. I arrived in Portland, from where I continued my journey by rental car to the southwest corner of Oregon. The last stop of the day was Grants Pass. The city, located in the heart of the Rogue River Valley, is a gateway to the Siskiyous. This region is well known for the many endemics that have adapted to a mineral rich serpentine soil. Orchids are common here and three lady's-slippers are known from the area. The California lady's-slipper, *Cypripedium californicum*, is one of the endemics that is restricted to the serpentine seepage slopes of the region, while the clustered lady's-slipper, *Cypripedium fasciculatum*, and the mountain lady's-slipper, *Cypripedium montanum*, are woodland plants found locally in many of the western states.

In preparation for my trip I had contacted Penny Latham, who is a local nature conservationist. Thanks to her, I was equipped with detailed maps that would lead me to locations of *Cypripedium fasciculatum* (CYFL) and *Cypripedium montanum* (CYMO) in the mountains that surround Grants Pass. I started my excursions the next morning with a short drive to the Whitehorse Park area. Here, a colony of CYFL and a few plants of CYMO were growing together on a wooded slope just above a dirt road. The peak blooming season of CYFL is mid May and I was rather late to see this lady's-slipper in bloom. Thus, it was not surprising that all the CYFL were past bloom. However, I was a little disappointed when I discovered that the same was true for CYMO. The latter was probably in peak a week earlier, and the unusually warm spring may have

shortened the blooming period. While I did not see my lady's-slipper on this May 26 morning, I was still lucky and spotted several plants of a white flowering *Piperia*. The plants resembled both *Piperia candida* and *Piperia unalascensis* and perhaps were a variant of either of these closely related species, or were a hybrid between the two. Leaving Whitehorse Park with a spirit for more, I proceeded through Grants Pass to interstate 5 and continued south. Near the town of Wilmer was the other mixed stand of lady's-slippers that I was going to visit that day. I followed a forest road uphill to an intersection. Here, I left my car and hiked a short distance until a red flag marked the entrance to a trail. I walked up the wooded hill and turned left to finally get to the ridge. Along the mountain slope under a dying manzanita, there it was: a large population of CYFL joined by a smaller stand of CYMO. Although the location was several hundred feet higher than Whitehorse Park, all of the CYFL were past blooming and only one of the CYMO was still in full bloom. I eagerly took pictures of the only plant that had not faded prior to my arrival. Further explorations of the area showed me that at least five CYMO and many more of the CYFL had flowered just one or two weeks ago, and that some species of *Piperia* will bloom here in June. I swiftly decided not to give up and moved on to Galice and the scenic Rogue River Valley. My destination was a CYFL site at Taylor Creek adjacent to the Briggs Valley road. At this location, the plants grow in shaded, moist woodlands very close to the creek. I was hoping that the cool, moist environment would delay or extend the flowering period of CYFL in comparison to the drier and sunnier locations at Whitehorse Park and Murphy Creek. My intuition was correct, and I indeed found the orchids in full bloom at this low elevation site. Most of the brownish flowers were past peak but a few hung on and provided me with a first experience of a blooming clustered lady's-slipper. Nearby, a large colony of *Calypso bulbosa* var. *occidentalis* was in fruit and several plants of *Corallorhiza maculata*, the most luxurious I had ever seen, had just opened their flowers. *Corallorhiza striata* and *Goodyera oblongifolia* are two other orchids that can be found here but bloom either earlier (*Corallorhiza striata*) or later (*Goodyera oblongifolia*). With my expectations met for the day, I returned to the Rogue River Valley and headed west for the Pacific Ocean. The Rogue River Valley and its tributaries offer great scenery that will captivate all audiences and not only the orchid enthusiasts. After driving for several hours along the Pacific coast, I finished my day in Humboldt County, CA with an excellent dinner and a good glass of wine.

The second day in the West would bring me deeper into Humboldt County. I followed Route 36 to Dinsmore, following Ron Coleman's directions. Just before the township, I turned onto Buck Mountain Road and proceeded for several miles on dirt roads. The hillsides are very steep in this area and they are severed by deeply eroded streambeds. I was searching for one of those streams. A white marker told me that I had finally found the spot. Ron had seen a large colony of clustered lady's-slippers blooming near the streambed

many years ago. While I was searching for the plants, I realized that most of the population had been washed away. A large landslide on the left side of the creek had taken its toll on the colony. However, I still found eight scattered clumps with 3 to 10 plants on both sites of the creek. There was only one plant in full bloom; all others were past their prime. Surprisingly, I found many plants of *Calypso bulbosa* var. *occidentalis* that were still in peak condition. I continued to search the nearby woods and discovered *Cephalanthera austiniae* in large numbers. The pure white stems gave the plants a ghostly appearance in the coniferous woods. Up and down the road there were hundreds more, and one already was blooming. Other orchids that were common here included species of *Piperia*, and *Corallorhiza maculata*. The Dinsmore location was very impressive with the many species it supports and the sheer number of plants that thrive on the forest slopes. Having seen two of the three Western lady's-slippers by now and with only one day left for excursions, I made my way back to the California/Oregon border in search for the California lady's-slipper.

I stayed overnight in Crescent City and enjoyed some local seafood for dinner. Although the city may be best known as a fishing community, I was rather struck by the number of strip malls, fast food joints, and motels. The next day, I headed for the Redwood Highway, Route 199, and continued on this windy road to the town of Gasquet. Here, I took a left turn through the township and passed a bridge spanning the Smith River. I continued to a trailhead that gave me access to Stony Creek. This area is part of the Smith River drainage system that has spectacular river canyons carved out from the serpentine rock that dominates the area. Serpentine rock is also the preferred soil of the California lady's-slipper. It only took a short hike to discover the first colony of *Cypripedium californicum*. Among the red-rock canyon, luxurious clumps of this lady's-slipper flourished in a seepage area surrounded by *Darlingtonia californica* and fragrant azaleas. I wasn't very lucky this morning and most of the plants were past prime. Fortunately, Stony Creek was not the only place along Route 199 that harbors the lady's-slippers. I returned to the car and drove about an hour northeast to the town of O'Brien. From there I continued to the Whiskey Creek along the Wimer road that once was the main passage between this area and California. The climate is considerably cooler at this site than it is at Stony Creek, and supports a later blooming period for the California lady's-slipper. This site is at a higher elevation and *Cypripedium californicum* was just perfect here. The site also had hundreds of *Platanthera sparsiflora* plants.

Lastly, I visited another site along the Onion Mountain Road in SW Oregon. I had found this site three years ago and it now had flowering *Sarcodes sanguinea* plants, *Calypso bulbosa* var. *occidentalis*, *Listera caurina*, and *Corallorhiza mertensiana*. Species of *Piperia*, and *Goodyera oblongifolia* were emerging. At another place, I saw several *Spiranthes porrifolia* that needed

probably two more weeks to start blooming. Overall, I saw a good mixture of species that were at the end of their blooming season and those that just started it. I cannot complain. This year certainly was a very warm year with an early blooming season, but a very good orchid year, overall (as it appeared to me).

A Few Words from the President

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I am sorry to report that Dr. Robert Ferry has resigned from the position of editor of the Journal. We appreciate the work that he did to help us launch this publication. While we look for a new editor, the Publication Committee will be responsible for the Journal.

The 2004 conference will be held at the Coastal Carolina University in Conway, South Carolina. Hopefully by now you have gotten a flyer and registration form in the mail.

We will hold meetings on Saturday August 7 and Monday August 9, with field trips on Sunday the 8th and Tuesday the 10th. An optional field trip will be offered on Thursday the 12th to the mountains northwest of Roanoke, VA. Wednesday has not been scheduled so as to allow for a travel day from the coast. I hope that you will be able to join us for a wonderful time.

I suspect that by now you are like me and are amazed by the talent and knowledge that our fellow members display. I would love to be able to draw like Kathleen Garness. She has the honor of creating our first "centerfold" with her fantastic drawing of *Cypripedium candidum*. As far as I am aware, Carol Siegel's article is the first time there has been something published covering all the orchids of Nevada .

I know that there are others of you who have information to share. It could be about studies that you are doing, trips to great locations that you have made, or cultivation successes that you are having. Don't be bashful! Write an article and send it to Jyotsna Sharma to be published in an upcoming journal.

Respectfully,

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